STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

NOTICE OF MUNICIPAL PLANNING TRIBUNAL MEETING OF STELLENBOSCH MUNICIPALITY FRIDAY, 2026-03-27 FROM 10:00 - 15:00

VOLUME 2

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

APPLICATION FOR REZONING, SUBDIVISION, STREET NAMING AND NUMBERING: FARM NO. 468/28, STELLENBOSCH DIVISION

CONTENT

ANNEXURES	PAGE NUMBER
VOLUME 2	
APPENDIX 3 Motivational Report	**2-1177**

APPENDIX 3

Motivational Report

MOTIVATION IN SUPPORT OF LAND DEVELOPMENT APPLICATION FOR:

STELLENBOSCH

FARM WELMOED ESTATE NO. 468 PORTION 28



Consultant: J Samson Consultancy o.b.o Virdus Works (Pty) Ltd &
Client: Uniqon Developers (Pty) Ltd

27 May 2024

CONTENT

Executive Summary

1. BACKGROUND 6

1.1 Introduction 6
1.2 Title deed 7
1.3 Site context 8

2. LAND DEVELOPMENT APPLICATION 14

2.1 Proposed development 14
2.2 Land development application 21

3. MOTIVATION 24

3.1 Decision-making criteria 24
3.2 Desirability 26
3.3 Applicant's findings on impact 37
3.4 Best practicable environmental option 41
3.5 Investigations carried out in terms of other laws relevant to the application 43
3.6 Consistency with SDF 44
3.7 Spatial consideration issues 48
3.8 Provincial planning 51
3.9 SPLUMA principles 52
3.10 Engineering services 56
3.11 Specialist assessments 56
3.12 Urban development concept 58

4. CONCLUSION 59

List of figures

Figure 1: Portion 28 of Farm No. 468, Stellenbosch locality 6
Figure 2: Locality of Portion 28 of Farm No. 468, Stellenbosch in context 8
Figure 3: Eerste River Valley heritage resource map 10
Figure 4: Locality of Portion 28 of Farm No. 468 in scenic route context 11
Figure 5: Slope analysis for Portion 28 of Farm 468 12
Figure 6: DEA screening result of agricultural potential on site and surrounds 13
Figure 7: Proposed Site Development Plan (Urban Studio, March 2024) 16
Figure 8: Road access points (extract TIA – UDSAfrica, April 2024) 18
Figure 9: Comprehensive Integrated Transport Plan for Stellenbosch Mun. 18
Figure 10: Extract from Stellenbosch MSDF, 2023 28
Figure 11: Lynedoch node development, Stellenbosch MSDF 2023 29
Figure 12: Affordability profile for the development 30
Figure 13 Land use around Portion 28 36
Figure 14: Extract of the 2019 (and 2023) Stellenbosch SDF showing the Lynedoch concept 45
Figure 15: Extract of Table 29 from Stellenbosch Municipality IDP, 2023 47
Figure 16: MERO 2022 extract showing population trends 48

List of Tables

Table 1: Proposed list of street names 20
Table 2: Land use, phasing and zoning 22
Table 3: Impact assessment 37

LIST OF ANNEXURES

ANNEXURE A: LOCALITY
ANNEXURE B: APPLICATION FORM
ANNEXURE C: APPLICATION AUTHORISATION / POWERS OF ATTORNEY
ANNEXURE D: TITLE DEED
ANNEXURE E: CONVEYANCER'S CERTIFICATE
ANNEXURE F: SG DIAGRAMS
ANNEXURE G: MARKET ASSESSMENT STUDY
ANNEXURE H: SITE DEVELOPMENT PLAN
ANNEXURE I: LANDSCAPE FRAMEWORK
ANNEXURE J: SUBDIVISION PLAN; LAND-USE & PHASING PLAN AND STREETNAMES PLAN
ANNEXURE K: TRAFFIC IMPACT ASSESSMENT
ANNEXURE L: ENGINEERING SERVICES REPORT
ANNEXURE M: SERVICES SERVITUDE PLAN
ANNEXURE N: STORMWATER MANAGEMENT PLAN
ANNEXURE O: ELECTRICAL ENGINEERING REPORT
ANNEXURE P: VISUAL-CULTURE LANDSCAPE IMPACT ASSESSMENT
ANNEXURE Q: AGRICULTURAL POTENTIAL ASSESSMENT
ANNEXURE R: PROPERTY OWNERS' ASSOCIATION CONSTITUTION
ANNEXURE S: ENVIRONMENTAL DRAFT BASIC ASSESSMENT REPORT

EXECUTIVE SUMMARY

MOTIVATION IN SUPPORT OF LAND DEVELOPMENT APPLICATION FOR: **PORTION 28 OF FARM WELMOED ESTATE NO. 468, STELLENBOSCH** **SG Code: C06700000000046800028 / Location: Lat: 33° 58' 48.986" S | Lon: 18° 46' 02.834" E**	
Project Proponent: **Uniqon Developers (Pty) Ltd** Reg. no. 1997/021737/07 Represented by: Mr Etienne Coetzer Phone: +27 12 809 0262 Cellular: +27 83 442 5799 E-mail: etienne@uniqon.co.za Address: 17 Catherine Road, Shere, Pretoria East, 0084	**Project Consultant:** **Virdus Works (Pty) Ltd** Reg. No. 2018/585747/07 Represented by: Ms Jacqueline Samson SACPLAN: A/3401/2023 Cellular: +27 82 467 3748 E-mail: jacqui@jsamsonconsultancy.com Address: 17 St Thomas Road, Claremont, Cape Town, 7708

Uniqon Developers (Pty) Ltd acquired Portion 28 of Farm Welmoed Estate No. 468, Lynedoch, Stellenbosch for urban development purposes in keeping with the inclusion in the urban edge and urban designation thereof in the approved Stellenbosch Municipality Spatial Development Framework. Portion 28 is located west of Baden Powell Drive and the Cape Town – Stellenbosch railway line, around Lynedoch Village. It has an area of 45,5 ha, all of which is inside of the delineated urban edge of Lynedoch. Access to Lynedoch Village and the various functions of the Sustainability Institute is through and across the property. The Village was established on a subdivided portion of Portion 28 in 2003.

The property contains a main dwelling and farmyard, as well as labourers' dwellings, but no agricultural buildings and infrastructure. It is no longer effectively maintained or productively used for agricultural purposes, with only 29ha of uneconomical vineyards retained on the property.

The application is for consideration of a phased development, by rezoning and subdivision of the property to provide for mixed uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential units, inclusive of a retirement village, blocks of flats, group housing, townhouses, inclusionary housing, private roads, and renewable energy structures;
- private open space zone for conservation of the natural features, access and circulation, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone for the establishment of a small retail outlet, restaurant, medical consulting rooms, and offices to support an integrated self-sustaining community;
- community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities amongst others to complement the existing facilities and functions of the Sustainability Institute and Lynedoch Village; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the proposed development.

This is primarily an application in keeping with Section 15 of the Stellenbosch Municipality Land Use Planning Bylaw, 2023. The application covers the following aspects:

(1) Application in terms of Section 15 (2)(a) for a rezoning; and
(2) Application in terms of Section 15 (2)(d) for subdivision, inclusive of consideration of cancellation and creation of servitudes for various purposes.
(3) Application in terms of Section 29 for the establishment of owners' association.
(4) Application in terms of Section 98 for approval of streetnames.

There are no title deed restrictions preventing the proposed land developments or use. Servitude pipelines and irrigation infrastructure systems are registered across the property, all of which will be incorporated in the planning and adjusted accordingly.

Bulk and external services will be developed and provided in conjunction with the recommendations of the GLS Consulting (Pty) Ltd report dated March 2024, and in consultation with the Stellenbosch Municipality. This includes provision for road access, currently taken off Lynedoch Road, or then the Baden Powell services road that runs parallel to the western side of the railway line.

The application triggers activities listed in terms of Section 38 of the National Heritage Resources Act, 1999, Act 25 of 1999 (NHRA) and thus an authorisation application is required.

The application triggers activities listed in the Environmental Impact Assessment Regulations made in terms of the National Environmental Management Act, 1998, Act 107 of 1998 (NEMA) and related legislation, therefore an authorisation application is required.

The property is still subject to the Subdivision of Agricultural Land Act, 1970, Act 70 of 1970 (SALA), and an application will be made to the Department of Agriculture, Land Reform and Rural Development, in this regard.

1. BACKGROUND

1.1 Introduction

Uniqon Developers Pty (Ltd) is in the process of acquiring Portion 28 of Farm Welmoed Estate No. 468, Lynedoch, Stellenbosch from the Billy Visser Trust. Portion 28 is located west of Baden Powell Drive and the Cape Town – Stellenbosch railway line, around Lynedoch Village. It has an area of 45,5075ha which is inside of the delineated urban edge of Lynedoch and is intended to accommodate more growth over time, in keeping with the urban designation thereof in the approved Stellenbosch Municipality Spatial Development Framework (dated 2023), albeit with specific policies regarding the development and use thereof. The Lynedoch Railway Station abuts the property and forms the nucleus of the designated node.

The property is zoned Agricultural and Rural Use in terms of the Stellenbosch Municipality Zoning Scheme Bylaw, 2023. The property does not have any additional use rights and was used solely for wine grape harvesting. It is no longer effectively maintained or productively used for agricultural purposes, with only 29ha of uneconomical vineyards retained on the property. It has an irrigation water allocation of 4,2ha. The produce of the dry land vineyards is sold to local wineries for wine-making, as the farm contains no agricultural infrastructure for product beneficiation. The property contains a main dwelling and farmyard, as well as labourers' dwelling, but no agricultural buildings and infrastructure.

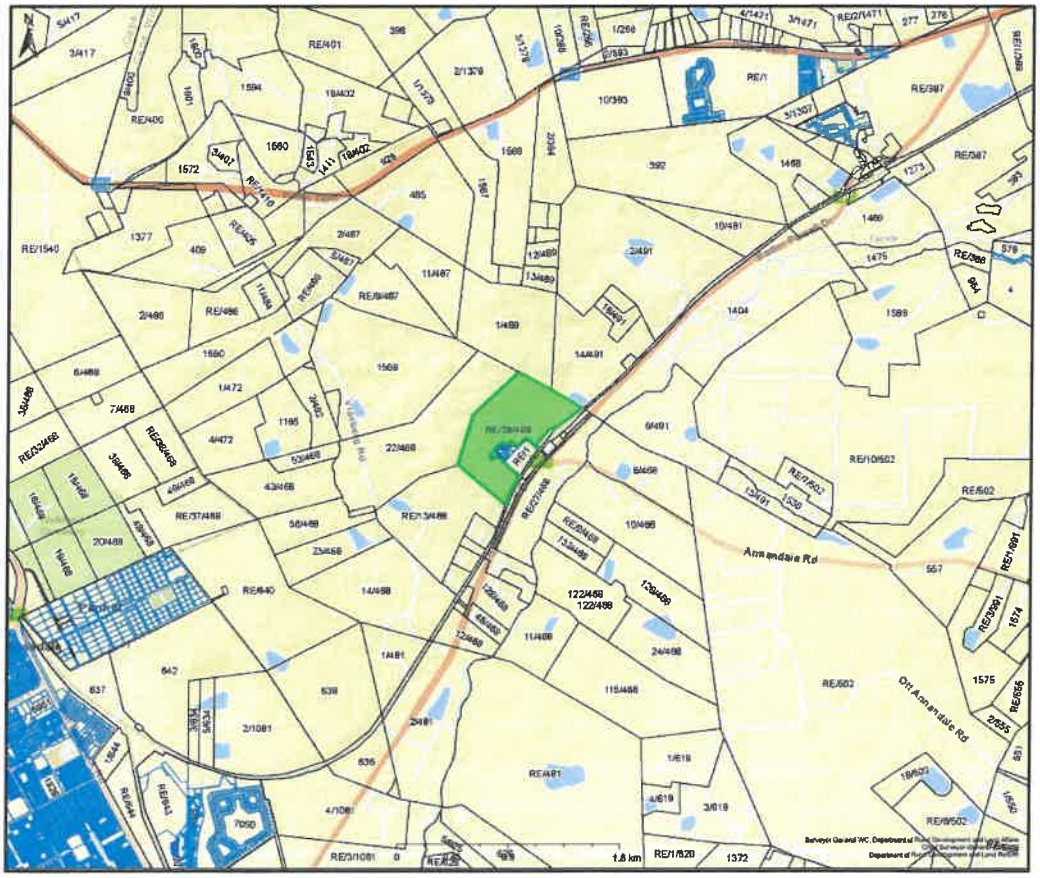


Figure 1: Portion 28 of Farm No. 468, Stellenbosch locality

Access to the property is off Vlottenburg and Vlaeberg Road via Lynedoch Road which is indicated as a service road for Main Road 168 (Baden Powell Drive), and a private road over Portion 28 that is shared by Lynedoch Village (partially Erf 74, Lyndoch). The Surveyor General survey records for Lyndoch (township) show the status of Erf 74 as a public road, while that portion of Portion 28 used for access is a private road. Further public pedestrian access to Lynedoch Village occurs through the vineyards from the south and the west, mostly by children and local residents attending the school and other social programs in Lynedoch.

1.2 Title deed

The property is held jointly with Portion 27 under Title Deed T24050/2019, owned by the Billy Visser Trust, which has granted power of attorney to Uniqon Developers Pty (Ltd) for the preparation and making of applications for the future use of the properties during the process of transfer. Through a company resolution, Uniqon has granted the PoA to Virdus Works for the land-use application. The various Power of Attorney documents are attached as Annexure C. The Title Deed is attached as Annexure D and the Erf diagrams are attached as Annexure E

A conveyancer's certificate, attached as Annexure E was issued by Couzyn, Hertzog and Horak Attorneys and Conveyancers, indicating that there are no title conditions which would prevent a land development application as envisaged on the property. Portion 28 is subject to the following conditions contained in the title deed:

1.2.1 Subject to a servitude note contained in T9028/1933 which relates to servitude rights for fishing, roads, water, and furrows which were reported by the conveyancer not to affect any development proposal.

1.2.2 Subject to the conditions as referred to in Deed of Transfer number T595/1931, which were reported by the conveyancer not to affect any development proposal.

1.2.3 Subject further by Notarial Deed of Servitude number K123/1989 to a pipeline servitude, whereby the owners of the dominant tenements shall be entitled to lead water across this property by means of a pipeline, situated in a servitude area 3 metres wide along the eastern boundary which was reported by the conveyancer not to affect any development proposal.

1.2.4 Subject further by Notarial Deed of Servitude number K366/2000S to a servitude for a water pipeline in favour of the Cape Metropolitan Council (now City of Cape Town), along the north eastern boundary, 12,00 metres wide. This servitude has an effect on the use of the land given its extent and nature. No development will be permitted over the servitude pipeline, in view of its size and nature.

1.2.5 Subject to a water pipeline servitude by Notarial Deed K165/2019 which was reported by the conveyancer not to affect any development proposal.

Cognisance must be taken of the road expropriation as indicated in paragraph F in the title deed. It appears that registration of the expropriation has not occurred, hence the area of the road (0,1790 ha) is still included in the total extent of the property. The expropriation is along the southeastern boundary of the property for widening of the service road.

Cognisance should further be taken of the road access to Lynedoch Village, shown on the survey records as a private road, the status of which is confirmed by the Surveyor General and the area of which is still included in the total area of the farm.

1.3 Site context

The property is located along the Baden Powell transport corridor, at the intersection with Annandale Road, around Lynedoch Village.

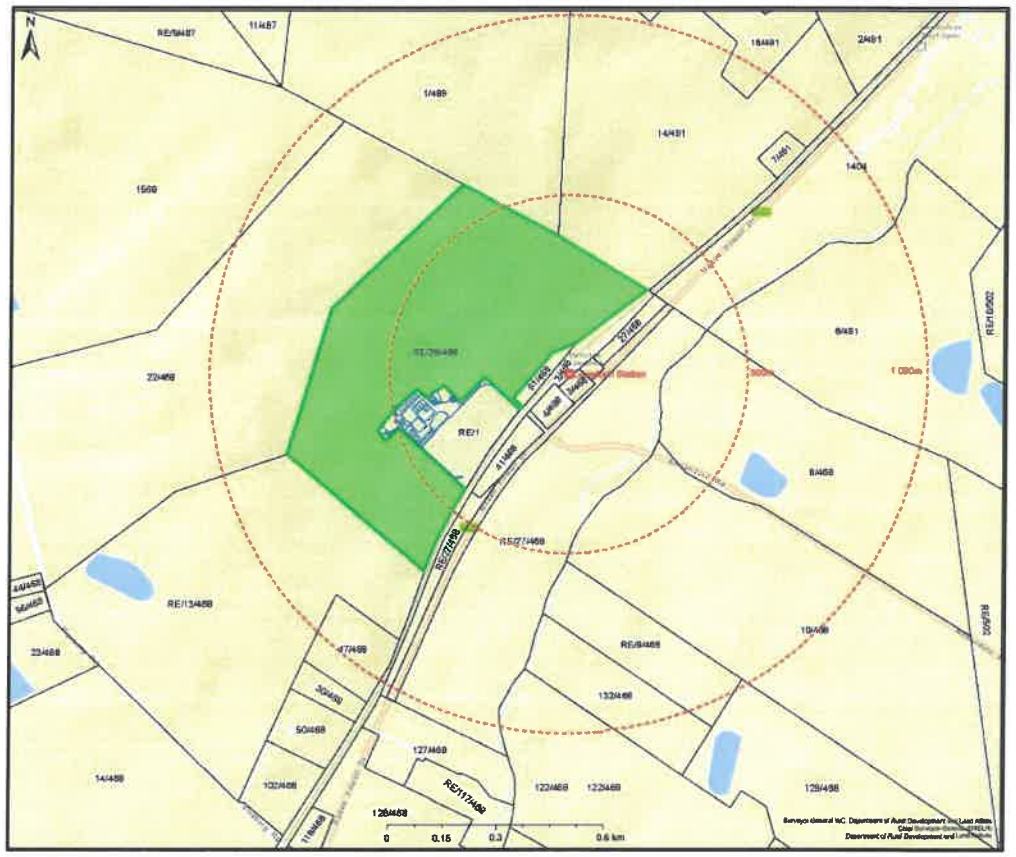


Figure 2: Locality of Portion 28 of Farm No. 468, Stellenbosch in context

The site is located adjacent to the Lynedoch EcoVillage which is described as "*the first ecologically designed socially mixed intentional community in South Africa*" (http://www.sustainabilityinstitute.net/lynedoch-ecovillage10/detailed-story). It was established around the Drie Gewels Hotel, which was a student hangout and party place into the early 1990's. The hotel facilities were converted with the development of the Village in the early 2000's to accommodate a guest accommodation establishment, the Sustainability Institute, and the Lynedoch Primary School that accommodates up to 500 children, mostly from farm worker families in the surrounding area. The Village also contains a pre-school and other community facilities aimed at serving the surrounding and broader community.

Lynedoch EcoVillage, which contains 40 dwelling units in addition to the aforementioned facilities, does not receive full municipal services and relies mostly on its own resources for the provision of infrastructure services (potable water, internal roads, sewerage, solid waste, electricity, and storm water). It is managed by a non-profit company that, with the Sustainability Institute, focuses on creating and maintaining a sustainable socio-economic living environment through innovation, and community development.

Prior to the closure of the at-grade level crossing at the Lynedoch Station in 2014, the Lynedoch node and urban edge was inclusive of land to the east of the railway line and amongst others Portion 27 of the farm, up to the Eerste River. The node forms part of the so-called "string of pearls" of settlements occurring along the transport corridors through the Stellenbosch municipal area. The entire property is within 750m of the railway station and the erstwhile level crossing, and major road intersection, which is the reason why in the first instance the node was identified as one of the "pearls" in the "string" and why it was designated as an urban node of secondary significance.

The National Heritage Resources Act, 1999, Act 25 of 1999 (NHRA), requires that all heritage resources be graded in order to assign appropriate management responsibility to a sphere of government, i.e., local, provincial, or national for a heritage resource and to indicate its significance. Significance is key to assessing grading and is the primary tool in defining heritage management responsibility.

The property together with the existing Lynedoch Village and surrounding area is mapped as being part of the Baden Powell Road scenic route / corridor and the Eerste River Valley landscape character unit in the Stellenbosch Municipality Heritage Inventory, 2019. Its situation is described as having particular significance due to its correspondence to the landscape unit and is consequently indicated to have a Grade IIIb heritage significance.

The Heritage Survey notes the complex environment within which decision-making must occur and in this instance and amongst others notes that "*The existing rail networks present an opportunity for a new typology of integrated development around stations, effectively connecting new development sites to the historic core of the towns and villages of Stellenbosch Municipality*" as for the "string of pearls" approach. It further indicates that "*Historic settlement patterns associated with the development of the railways should be respected*" and "*The potential of the railway network as an existing but underutilised transport system to and within the Winelands could enhance the cultural significance of the landscape, if harnessed effectively*".

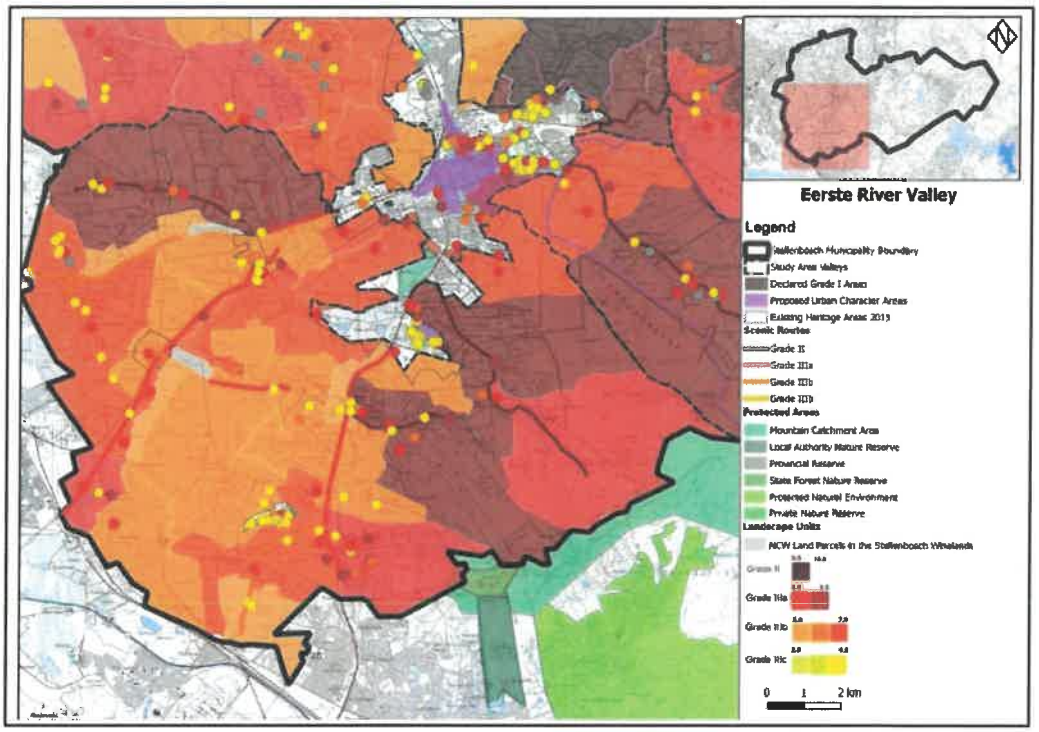


Figure 3: Eerste River Valley heritage resource map

General conservation principles are derived from the vision for the Stellenbosch cultural landscape and should influence all decision-making throughout the Stellenbosch Municipal Area, i.e., the heritage assessment of the capacity of the area to absorb a development as proposed will play an important role in the decision-making. The Heritage Survey points to three possible outcomes, namely:

- *Conserve (Maintain) existing character: This may require both protection and maintenance of the significant elements and features as well as appropriate development thereof. It includes the promotion of these landscapes and places for the appreciation and continuity of their cultural significance.*

- *Enhance (Manage) landscapes and townscapes: By improving land parcels or places which are in decline, by strengthening or reinforcing characteristic elements and features, or by regenerating landscapes through introducing new elements or features, or adapting them in order to revive lost fabric and bring new life to heritage environments.*

- *Intervene (Change) in a deliberate, planned way: To accelerate change towards a new or strengthened character. This approach may be appropriate where the landscape or townscape has declined beyond the point where enhancement is possible; or rehabilitation of the site's previous character is appropriate. The resilient heritage landscapes in Stellenbosch, in which development and intervention is most desirable, are those landscapes or units that historically (and almost sporadically) underwent change, but continued to form a new typology of equal aesthetic within the landscape, strengthening existing spatial patterns.*

Section 31 of the NHRA provides Heritage Areas as a mechanism to manage areas of heritage significance, it is proposed that the landscape units identified as having heritage significance in the Stellenbosch Municipal Heritage Inventory (i.e., graded II, IIIa, IIIb or IIIc) be managed through the provisions of the Stellenbosch SDF and Zoning Scheme Bylaw through Special Overlay Zones. Such provisions have not been created and consequently the decision-making occurs at provincial sphere of government as will be detailed below.

The property is located along and in the 500m-wide corridor of the Baden Powell Road Scenic Route (see Figure 4 below). The distance of a property away from the scenic drive, together with its landscape features are considered in the decision-making process in all authorisation processes, e.g., heritage in terms of the NHRA, environmental in terms of the Environmental Impact Assessment Regulations made in terms of the National Environmental Management Act, 1998, Act 107 of 1998 (NEMA) and land use management in terms of the Stellenbosch Municipality Land Use Planning Bylaw, 2023.

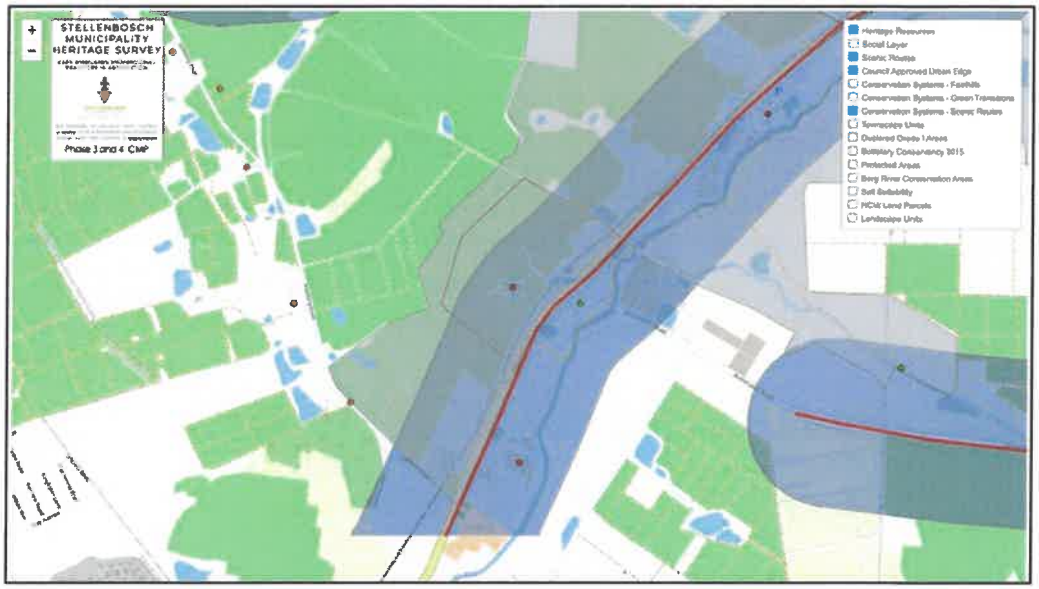


Figure 4: Locality of Portion 28 of Farm No. 468 in scenic route context

Some of the landscape features include the slope as indicated on the slope analysis in Figure 5 below.

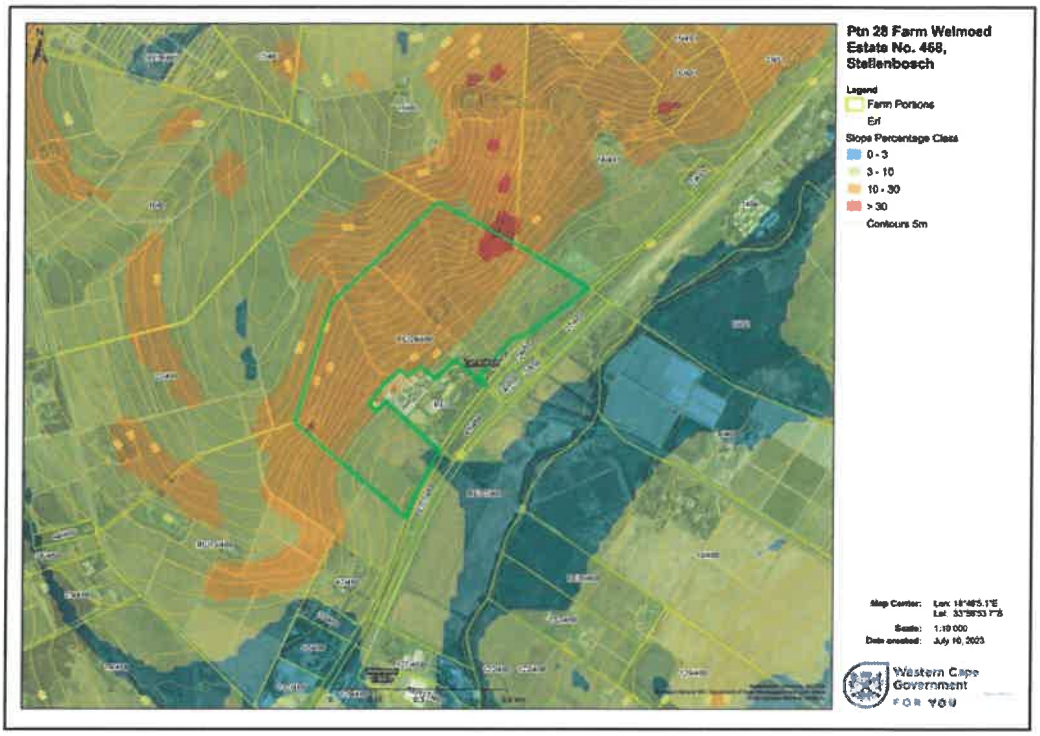


Figure 5: Slope analysis for Portion 28 of Farm 468

1.3.1 Agriculture sector context

The context and situation of the property and its capacity to absorb the proposed development is assessed by various specialists, including of the agricultural potential of the property. These assessments will be submitted as part of the suite of authorisation applications to the local authority, the provincial government and where required to the national government to allow for the proposals to be considered by the competent authorities.

As indicated in the extract from the environmental screening, the property is indicated to include agricultural medium, high and very high sensitivity land. An agricultural specialist assessment has therefore been undertaken to determine the value of the resource from an agricultural perspective.

"The combined potentially arable land on the property amounts to ±32.5 ha. Most of this area (28.9 ha) are being used for wine grape production at present, although many of the vineyards are at the end of their productive lifespan. Field A (3.2 ha) was used for wine grape production until circa 2008, while a small portion (0.4 ha) of Field D was also planted under wine grapes until 2012. However, as the profitability of wine grapes decreased systematically over the past two decades, no replacement of vineyards has been done after uprooting.

There is no economic reason (or benefit) to retain an unproductive farm that incurs costs and cannot generate economic benefit for the owners or the immediately surrounding community. Moreover, with limited irrigation water and agricultural infrastructure available, the farm cannot be re-purposed for commercially viable agricultural use without significant capital input. Such capital input could theoretically be gained from the sale for development purposes of that portion of the land that is designated for urban development, leaving less than 21 ha of agricultural land for re-purposing. As indicated above, the applicable policy confirms that such small portion of land without any irrigation water or infrastructure cannot be farmed commercially viable even if consolidated with Portion 27 abutting thereto. The two portions of land are not interconnected, and the lack of interconnectedness would make joint farming thereof unattainable."

The agricultural impact assessment concludes that *"(t)he proposed development is of semi-high density and will establish almost 35 residential opportunities per hectare. Being a wine grape farm, the land does not directly contribute to food security, but do provide meaningful job opportunities at present and in the near future. It has been demonstrated that the current farming activities are not sustainable, unless an additional source of irrigation water can be secured. It is believed that a development on this site will contribute to the retention of higher value agricultural resources elsewhere in the Stellenbosch or surrounding municipal areas and is therefore supported."* [1]



Figure 6: DEA screening result of agricultural potential on site and surrounds

[1] Extract from report Agricultural Impact Assessment, Francois Knight for Agri Informatics Development Trust, August 2023

A simultaneous application will be made to the Department of Agriculture, Land Reform and Rural Development for a subdivision in terms of the Subdivision of Agricultural Land Act, 1970, Act 70 of 1970 (SALA).

1.3.2 Environmental assessment context

The land is located inside of the urban edge, as designated in the Stellenbosch Spatial Development Framework, but outside of the urban area[2] as defined in the NEMA EIA Regulations. Its development will thus be subject to prior consideration of an environmental authorisation application in terms of said Regulations. Simultaneously, all related off-site activities related to the provision of services for the proposed development would be subject to prior authorisation if such activities exceed the thresholds requiring environmental authorisation in said Regulations.

2. LAND DEVELOPMENT APPLICATION

2.1 Proposed development

The application is for consideration of a phased development at Portion 28 of the Farm Welmoed No 468. The proposed urban development application in terms of the Stellenbosch Municipality Land Use Planning Bylaw, 2023 is but one of a suite of authorisation applications as indicated above. The application in terms of the Planning Bylaw entails rezoning and subdivision of the property to allow for uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential units, inclusive of a retirement village, blocks of flats, group housing, townhouses, inclusionary housing, private roads, and renewable energy structures;
- private open space zone for conservation of the natural features, access and circulation, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone for the establishment of a small retail outlet, restaurant, medical consulting rooms, and offices to support an integrated self-sustaining community;
- community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities amongst others to complement the existing facilities and functions of the Sustainability Institute and Lynedoch Village; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the proposed development.

The purpose of the application is for the long-term phased development and the planning of the property is to be proactive in planning the future shape and form of Lynedoch Village in a certain population growth scenario.

---

[2] Amendment of the Environmental Impact Assessment Regulations Listing Notice 1 of 2014, Regulation No. 327, 07 April 2017: *"urban areas" means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated within the edge of built-up areas;*

The current land use management system is a reactive system, that reacts to urban challenges, rather than a proactive system that creatively plans for the future shape and form of settlements and predetermines a vision and development pattern inclusive of the required infrastructure to sustain the settlement. With a growing urban population, proactive planning can and must play an important role in creating environmentally sustainable communities.

The phased development of Portion 28 will occur over a period of at least 10 years or as dictated by market forces. Currently the demand exceeds the supply (Housing Market Studies for Intermediate Cities / Larger Towns in the Western Cape, Stellenbosch Town Report, August 2022, Department of Environmental Affairs and Development Planning). The socio-economic impact and market assessment (Demacon) as in *Annexure G* herewith, provides a good estimate of the demand over time. Any development will be phased to limit capital expenditure not recoverable through short term supply to the market and therefore continued use of the remaining (undeveloped) land for agricultural purposes.

2.1.1 Site development plan.

The attached concept site development plan (Urban Studio, Welmoed Context and Concept, dated March 2024) as per *Annexure H*, provides a graphic description of the development concept and some of the proposed design details, e.g., development densities, land uses, public and private roads, and developmental elements. The urban design concept is further enhanced and supported by the landscape strategy and plan as prepared by Terra+ Landscape Architects and included as *Annexure I*

Due to the need to maximise the use of the scarce land resources, development densities of up to 80 dwelling units per hectare are planned for the area. A residential development with integrated community facilities is planned on an area of about 29 ha, with servitudes, storm water run-off detention facilities, and site constraints such as slopes steeper than 1:4, which limit the developable area. The proposed residential development consists of 884units, with planned densities of up to 80 units per hectare inside of individual blocks. The average residential density is 30.5 units per hectare. The balance of the site is allocated to detention/ stormwater area, communal private open space, indigenous vegetation areas and internal roads, which take up about 16 ha.

The internal roads are planned as a grid with due consideration of the slopes and the need to design the development in such a way that it can be accommodated in the landscape without significant negative visual effect. Densities of development will be highest in proximity of the main transport infrastructure, while higher lying development will be structured to avoid skyline effect and allow for significant terrace forming. As a result of the site characteristics and grading of the development, and the need for affordable and inclusionary housing in the area, nett densities of development on the lower-lying areas and abutting the public facilities (school, railway station, commercial use) will be up to 80 units per hectare.

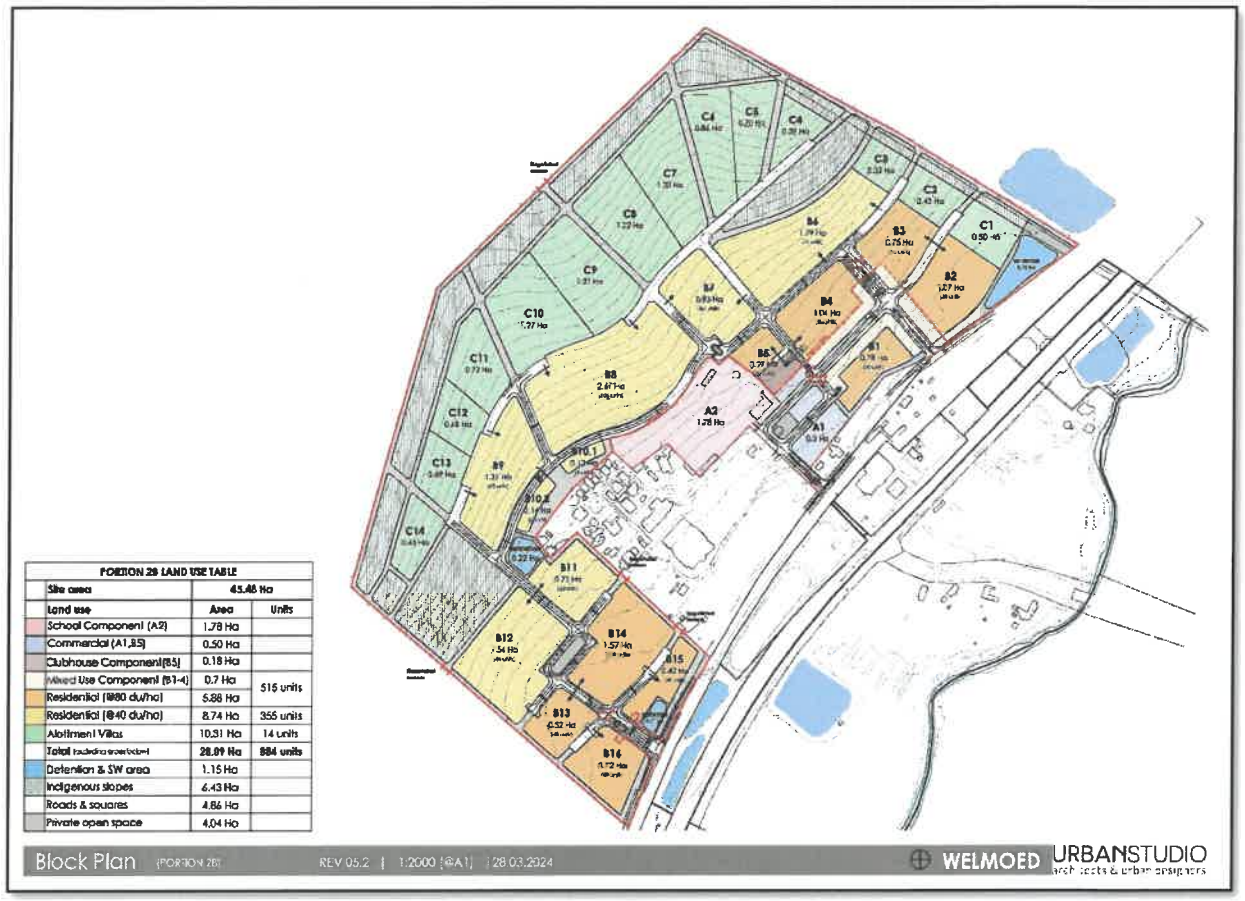


Figure 7: Proposed Site Development Plan (Urban Studio, March 2024)

2.1.2 Subdivision.

The application is for a rezoning to subdivisional area for different land uses and zonings, from which the first phase and road access subdivision will occur within the permitted time period as provided for in the Planning Bylaw. Further subdivisions will occur to create phases and erven for the different uses and where necessary servitudes for infrastructure services. The subdivision plan and supporting plans are included as Annexure J with the detailed plans as follows:

- The Subdivision Plan is attached as Annexure J-1.
- The Land use, Zoning and Phasing Plan is attached as Annexure J-2.
- The Streetnames Plan is attached as Annexure J-3.

2.1.3 Residential development.

The residential component will consist of clusters of group housing, townhouses, three storey walk-ups and four storey apartment blocks. Although the different block clusters might in future be on separate erven, each block is holistically planned, and the layout includes open space, access and parking as integrating elements. Parking and open space are planned with due cognisance of the zoning requirements as reflected in the Municipality's zoning scheme bylaw.

While a total of 884 dwelling units is planned in the residential component, the ideal would have been between 1 250 and 1 500, as a critical threshold number. The provision of educational facilities to also satisfy a demand in the surrounding area, public transport, healthcare, and a sustainable community require minimum population thresholds, which in this instance is determined at between 1 250 and 1 500 households. The surrounding area within which the Sustainability Institute provides community and educational services, approximately in a radius of 3,5km, already accommodates an estimated 100 – 150 households, with 40 in the Village and 884 planned.

As will be apparent from the services reports, significant upgrading of the municipal services infrastructure in the area, primarily storm water infrastructure, waste water / sewerage, and road upgrading will be required to accommodate the proposed additional users, with a focus on proactively planning and designing systems for the long-term growth of the node which is a certainty.

The existing residents of the area will benefit from the proposed mixed-use development, reducing the need to travel for daily and weekly requirements such as food, and access to community facilities. The major benefit of the development is however the provision of affordable housing to those seeking residence in Stellenbosch but who cannot afford it in the major centres / nodes.

Although the node is not identified in the Stellenbosch Municipality housing pipeline as an area earmarked for social or subsidy housing development, inclusionary housing is included in the planning in accordance with the Municipality's policy (Inclusionary Zoning Policy, 2023). In terms of the Policy, 20% of the proposed residential units (176 units) need to be set aside for inclusionary housing. The Policy states that: "*Inclusionary zoning is mandatory for all new development applications under the jurisdiction of Stellenbosch Municipality that request additional development rights from the municipality within their new residential or mixed-use developments*". The value of the inclusionary housing units still needs to be determined, but it will fall into the categories as defined in the Policy and related documents. The following quote from the Policy is indicative: "*Based on the aforementioned standard definitions of affordability and the evidence gathered through the Stellenbosch housing market study, affordability in the Stellenbosch Municipality context refers to the following market segmentations – affordable (R300 000 – R600 000), conventional (R600 000 – R900 000), and high-end (R900 000 - R1.2 million)*".

2.1.4 Access

Access to the proposed development will be obtained along Lynedoch Road. The said road is accessed from Vlaeberg Road and Vlottenburg Road, both of which are accessed via Baden Powell Drive and Polkadraai Road.

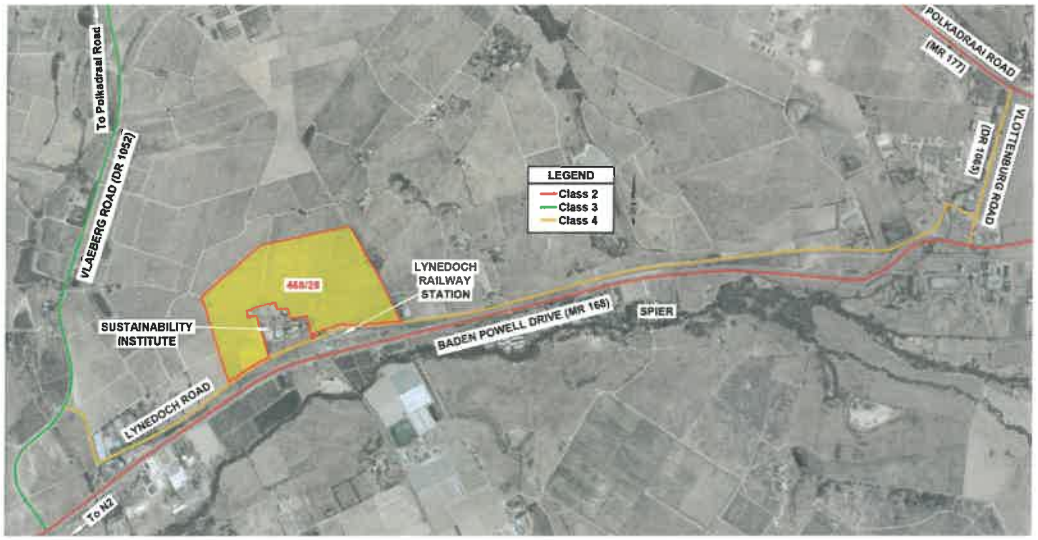


Figure 8: Road access points (extract TIA – UDSAfrica, April 2024)

Figure 9: Comprehensive Integrated Transport Plan for Stellenbosch Mun.

Table 3.1: Modal Split for Stellenbosch

Description	Percentage
Train	4
Bus	0.5
Taxi	63
Car/bakkie/truck/lorry driver	28
Car/bakkie/truck/lorry passenger	2
Walk	1
Total	**100**

Accessibility is a major consideration. The ideal would be to make use of the existing rail network, which is being re-introduced and supposedly will become operational within the initial phases of the development. A public transport system, other than the railway line, does not exist. It is evidenced by the large numbers of day labourers working on the strawberry and high intensity production farms along Annandale Road, waiting daily at the intersection of Baden Powell for passing minibus taxis and other opportunities to travel in a southerly direction. The 2023 review of the Comprehensive Integrated Transport Plan for Stellenbosch Municipality (CITP) confirms this situation as shown in the inserted extract (Figure 9), with 63% of the commuter population making use of minibus and other taxi services and 30% using private motor vehicles.

Limited bus services are provided by Golden Arrow Bus Service along Baden Powell Drive, for which non-motorised transport (NMT) connectivity will be an essential element, as passengers would have to cross the existing railway line in a safe and usable manner. The current pedestrian bridge over the railway line is not functional. It would also be required to provide appropriate bus stops along Baden Powell Drive.

As the peak flow traffic volumes increase with the development, certain upgrading of the transport infrastructure will be required. The proposals promote rationalisation of access and splitting of modes, but in the initial phases of the development, until a public transport system is available and can be sustained with a minimum threshold population, the focus will be on the primary modes as indicated in the CITP. The Traffic Impact Assessment is attached as *Annexure K.*

2.1.5 Municipal services infrastructure

The engineering services reports will determine the extent of the required services infrastructure. Lynedoch is not serviced by municipal services and all services have to be planned in conjunction with the municipality's requirements. The civil engineering report dated April 2024 (*Annexure L),* was prepared by UDSAfrica. A capacity analysis was completed in March 2024 by GLS Consulting (Pty) Ltd for the proposed development, which informs the infrastructure structure planning for the development. All aspects of infrastructure provision will be confirmed in the detail design stage of the project, in consultation with the municipality's engineering department.

As part of the application process, the engineering specialists have consulted with the Stellenbosch Municipality Directorate: Infrastructure Services, which indicated that the proposed development must be connected to the municipal infrastructure as determined in the relevant master plans. The Engineering Services Report, as prepared by UDSAfrica, is provided as *Annexure L.*

No on-site waste water treatment facilities would be accepted by the Municipality and the potable water supply has to provide for sufficient pressure to the development on the higher lying parts of the subject property. Connections to the infrastructure as per the master plans require the installation of external services, across public and private properties owned by parties other than the Municipality or the developer, and for which registered servitudes over other properties will be required. The servitude plan indicating servitudes external to the application area and traversing other properties was prepared by UDSAfrica and is included as *Annexure M.*

Cognisance is taken of the existing servitudes and infrastructure on the site, with the layouts done to accommodate these in access ways and open spaces.

2.1.5 Off-site activities.

Storm water retention and filtering, waste water treatment, potable water infrastructure, solid waste disposal, and road access all occur partially off-site. The details of the off-site activities are better described in the Stormwater Management Plan (*Annexure N)*

The off-site activities cause the establishment of services servitudes, as the services infrastructure occur on land not owned by the Municipality or the applicant.

2.1.6 Electrical services

The Electrical Services Report is attached as *Annexure O.* The development is expected to be fed from Lynedoch substation via Lynedoch Farmers 1 feeder. Additional capacity or upgrades will be provided as the development progresses. The initial analysis of supply and demand proposes that alternative energy sources such as gas and PV Solar will be used for the development. LED street lightning recommended. This will reduce the annual energy consumed from the grid.

2.1.7 Street names and numbers.

Section 98 of the Land Use Planning Bylaw requires of an applicant to submit an application for the naming and numbering of streets in the proposed development. The Municipality must approve the naming of streets and must allocate a street number to each of the erven or land units located in such street or road. A list of street names for use in the development and street numbers is proposed as an overlay of the proposed plan of subdivision as per Table 1 below.

Table 1: Proposed list of street names

Street No	Preferred name	Alternative name	Name derivation
1	Lynedoch Street		Existing access street with name as appears in documents and on maps.
2	Welmoed Avenue	Welmoed Road	Name of relevance to the original farm name.
3	Meerlust Avenue	Meerlust Road	Name of relevance to the name of an abutting farm awarded to the original farm owners.
4	Cellar Street	Kelder Street	Name relevant to the old wine cellar on the farm.
5	Spier Avenue	Farm Road	Name of relevance to the name of an abutting farm, the owners of which made significant contribution to the Sustainability Institute.
6	Granite Avenue	Pluton Road	Names referring to the rocky outcrops, which are the only portions not cultivated or transformed.
7	Drie Gewels Avenue	Institute Road	Name relevant to the existence of the main built features of Lynedoch Village.
8	Uniqon Square Avenue	Hendrich Square Road	Names of relevance to the developer.
9	Avalien Street	Anika Street	Names of relevance to the developer.
10	Marcell Street	Carla Street	Names of relevance to the developer.
11	Olive Street	Renosterbos Street	Name of relevance to the vegetation on the farm.
12	Windpomp Street	Windmill Street	Name of relevance to a windmill standing on the farm.
13	Varney Street	Glen Eagles Street	Name of relevance to the name of one the original farm owners responsible for establishing the hotel, and the initial name thereof.
14	Oakleaf Street	Villafontes Street	Names of the two major soil types found on the property.
15	Spring Street	Fontein Street	Name of relevance to the spring that used to provide the farm with water.
16	Bendeman Street	Christelle Street	Names of relevance to the developer.
17	Cabernet Street	Vineyard Street	Name of relevance to the viticulture on the farm.
18	Christiaan Close	Stella Close	Names of relevance to the developer.

There is no common theme for the proposed street names. Instead, the proposed names are derived from the history and geography of the area in compliance with the relevant policy of the Municipality.

The above street names (*Table 1*), with alternatives included, are proposed for the development. It is requested that the names or the alternatives be approved by the Municipality. The names are primarily derived from the history and geography of Lynedoch and the Stellenbosch area, some of which might be duplicated elsewhere in the municipal area, but not in Lynedoch, the characteristics of the property, and the developer.

The street reference numbers are shown on the Subdivision Plan with Street names attached as Annexure J-3

2.2 Land development application

The application is in keeping with Section 15 of the Stellenbosch Municipality Land Use Planning Bylaw, 2023, for a rezoning and subdivision of Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch RD, 45,5 ha in extent, to permit a mixed-use and multi-unit residential development with a subdivision into a 53 portions as per Subdivision Plan *(Annexure J-1)*.

As per the requirements of the services infrastructure, provision is made for new services servitudes over surrounding properties en route to the sewer pump and water reservoirs, which is not municipal property or property owned by the applicant.

2.2.1 Rezoning

Application is made in terms of Section 15(2)(a) for a rezoning of the entire Portion 28 to Subdivisional Area and applicable zoning, to allow for the uses as indicated in the Land use plan *(Annexure J-2)*

2.2.2 Subdivision

Application is made in terms of Section 15 (2)(d) for subdivision of the property into 52 portions and Remainder Road, as shown on the Plan of Subdivision, Annexure J-1. and Figure 9, namely:

- Erf 1 to 52, comprising 45,3341Ha;
- Rem Portion 28 of the Farm Welmoed 468 comprising 0,1734 Ha

The following table (Figure 9) illustrates the land use and phasing of the proposed development as well as zonings that would ultimately be given to the different subdivided portions on subdivision thereof.

Table 2: Land use, phasing and zoning

Subdivision (Erf) reference	Land use	Phase	Zoning
1	Private open space, street, place of assembly	1	Private Open Space
2	Educational, school	1	Education Zone
3	Commercial, business	1	Mixed-use Zone
4	Residential, business, mixed-use	1	Mixed-use Zone
5	Private open space, street	2	Private Open Space
6	Private open space, outdoor sport, stormwater management	6	Private Open Space
7	Residential, business, mixed-use	2	Mixed-use Zone
8	Residential, business, mixed-use	3	Mixed-use Zone
9	Private open space, street	4	Private Open Space
10	Residential, business, mixed-use	4	Mixed-use Zone
11	Place of assembly, business, mixed-use	4	Mixed-use Zone
12	Residential	5	Multi-unit Residential
13	Private open space, outdoor sport	6	Private Open Space
14	Private open space, street	7	Private Open Space
15	Residential	7	Multi-unit Residential
16	Residential	8	Multi-unit Residential
17	Private open space, street	9	Private Open Space
18	Private open space, outdoor sport, stormwater management	9	Private Open Space
19	Residential	10	Multi-unit Residential
20	Residential	10	Multi-unit Residential
21	Residential	11	Multi-unit Residential
22	Private open space, outdoor sport, stormwater management	9	Private Open Space
23	Residential	12	Multi-unit Residential
24	Private open space, outdoor sport	14	Private Open Space
25	Residential	13	Multi-unit Residential
26	Residential	19	Multi-unit Residential
27	Private open space, street	15	Private Open Space
28	Residential	16	Multi-unit Residential
29	Residential	17	Multi-unit Residential
30	Residential	18	Multi-unit Residential
31	Private open space, outdoor sport, stormwater management	15	Private Open Space
32	Private open space, outdoor sport	17	Private Open Space

Subdivision (Erf) reference	Land use	Phase	Zoning
33	Private open space, outdoor sport	20	Private Open Space
34	Private open space, street	21	Private Open Space
35	Private open space, street	21	Private Open Space
36	Residential	22	Conventional Residential
37	Residential	23	Conventional Residential
38	Residential	24	Conventional Residential
39	Residential	25	Conventional Residential
40	Residential	26	Conventional Residential
41	Residential	27	Conventional Residential
42	Private open space, outdoor sport, street	28	Private Open Space
43	Residential	29	Multi-unit Residential
44	Residential	30	Conventional Residential
45	Residential	31	Conventional Residential
46	Residential	32	Conventional Residential
47	Residential	33	Conventional Residential
48	Residential	34	Conventional Residential
49	Residential	35	Conventional Residential
50	Private open space, outdoor sport, street	36	Private Open Space
51	Residential	37	Conventional Residential
52	Private open space, outdoor sport, street	38	Private Open Space
Remainder Road	Public road	1	Public Roads and Parking

2.2.3 Subdivision (servitudes)

Application is made in terms of Section 15 (2)(d) for creation of the following services servitudes, shown on the engineering services servitude Plan (Annexure L).

- 5m wide servitude (gravity sewer)
- 3m wide servitude (water)
- 5m wide servitude (rising main sewer)

2.2.4 Application for Property Owners' Association

Application is made in terms of Section 29 for the establishment of a property owners' association. The proposed constitution is attached as *Annexure R*.

2.2.5 Street names

Application is made in terms of Section 98 for naming and numbering of streets in the proposed development as per *Annexure J-3*.

3. MOTIVATION

3.1 Decision-making criteria

Any land development application must be evaluated in terms of Section 49 of the Western Cape: Land Use Planning Act, 2014, Act 3 of 2014 (LUPA). Section 49 provides that, when a municipality considers and decides on a land use application, it must have regard to at least -

- the applicable spatial development frameworks;
- the applicable structure plans;
- the principles referred to in Chapter VI;
- the desirability of the proposed land use; and
- guidelines that may be issued by the Provincial Minister regarding the desirability of proposed land use.

Further thereto, Section 65 of the Land Use Planning Bylaw deals with the "General criteria for consideration of applications" and requires that, when the municipality considers an application, it must have regard to the following matters as set out in the table below:

65. When the Municipality considers an application, it must have regard to the following:	**Motivation report reference:**
(a) the application submitted in terms of this Bylaw;	Entire application submission.
(b) the procedure followed in processing the application;	Process followed by the Directorate: Planning and Economic Development as determined in the Bylaw.
(c) the desirability of the proposed utilisation of land and any guidelines issued by the Provincial Minister regarding the desirability of proposed land uses and which relevant desirability considerations for the assessment of the proposed use or development of land includes the -	
(i) socio-economic impact;	See 3.2.1
(ii) compatibility with surrounding uses;	See 3.2.2
(iii) impact on the external engineering services;	See 3.2.3
(iv) impact on safety, health and wellbeing of the surrounding community;	See 3.2.4
(v) impact on heritage;	See 3.2.6, 3.5.2, 3.11.2 & 3.11.3
(vi) impact on the biophysical environment;	See 3.2.7, 3.5.1, 3.11.1 & 3.11.4
(vii) traffic impacts, parking, access and other transport related considerations; and	See 3.2.8 & 3.10.1
(viii) whether the imposition of conditions can mitigate an adverse impact of the proposed use or development of land.	See mitigation measures recommended in all specialist reports and applications made in terms of other legislation.

(d) the comments in response to the notice of the application, including comments received from organs of state, municipal departments and the Provincial Minister in terms of section 45 of the Land Use Planning Act;	To be undertaken during the public participation process.
(e) the response by the applicant, if any, to the comments referred to in paragraph (d);	To be undertaken during the public participation process.
(f) investigations carried out in terms of other laws that are relevant to the consideration of the application;	See 3.5
(g) a written assessment by a registered planner appointed by the Municipality in respect of an application for—	Municipal process to follow after public participation.
(i) a rezoning;	
(ii) a subdivision of more than 20 cadastral units;	
(iii) a removal, suspension or amendment of a restrictive condition if it relates to a change of land use;	
(iv) an amendment, deletion or imposition of additional conditions in respect of an existing use right;	
(v) an approval of an overlay zone contemplated in the zoning scheme;	
(vi) a phasing, amendment or cancellation of a subdivision plan or part thereof;	
(vii) a closure of a public place or part thereof;	
(h) the impact of the proposed land development on municipal engineering services;	See 3.10
(i) the integrated development plan, including the municipal spatial development framework;	See 3.6
(j) the integrated development plan of the district municipality, including its spatial development framework, where applicable;	See 3.7
(k) the applicable local spatial development frameworks adopted by the Municipality;	No applicable LSDF.
(l) the applicable structure plans;	None.
(m) the applicable policies of the Municipality that guide decision- making;	Inclusionary Zoning Policy – See 2.1.3 and others.
(n) the provincial spatial development framework;	See 3.8
(o) where applicable, a regional spatial development framework contemplated in section 18 of the Spatial Planning and Land Use Management Act and provincial regional spatial development framework;	See 3.7
(p) the policies, principles and the planning and development norms and criteria set by the national and provincial government;	See 3.8
(q) the matters referred to in section 42 of the Spatial Planning and Land Use Management Act;	See 3.9
(r) the principles referred to in Chapter VI of the Land Use Planning Act;	See 3.9
(s) the applicable provisions of the zoning scheme;	See 2.1
(t) any restrictive condition applicable to the land concerned; and	See 1.2
(u) the impact of the proposed land development on any heritage resources as defined in the National Heritage Resources Act, 1999 (Act 25 of 1999).	See 3.2.6, 3.5.2, 3.11.2 & 3.11.3

The motivation report is structured according to the above criteria.

3.2 Desirability

As referred to above, the LUPA and the Planning Bylaw obligate the Municipality to have regard (amongst other things) to at least the desirability of the proposed land use when it considers and decides a land development application. A municipality should refuse an application if it does not comply with the stated minimum threshold requirements or is inconsistent with a spatial development framework. Both aspects are addressed below, the first being whether the proposal for the development of Portion 28 lacks desirability.

The relevant legislation does not define "desirability". Instead, it refers to the impact of the proposed development on the environmental (social, economic, and bio-physical) aspects as listed in the table above. In the previous statutory regime (Land Use Planning Ordinance, 1985, Ordinance 15 of 1985 (LUPO), desirability was an issue considered by the Western Cape High Court, in Hayes and Another V Minister of Finance and Development Planning, Western Cape 2003 (4) SA 598 (C). The judgment included amongst others that: "*The test of desirability is conclusive – in terms of s 36(1) a departure application 'shall be refused solely on the basis of a lack of desirability'. Though the test is phrased in the negative, it lays down a positive test: the test is the presence of a positive advantage which will be served by granting the application*". Thus, if it can be shown that the granting of the application would result in positive effects and advantages for the broader community, then it would not lack desirability. This position was also held in the judgment of Booth NNO v Minister of Local Government 2013 (4) SA 519 (WCC). In this judgment, Judge Rogers states the following: "*The function of Section 36(1), in my view, is to make lack of desirability and effect on existing rights the only bases on which a decision maker may refuse an application*". The judgement confirms that it is incumbent on the applicant to show substantively that the proposed development, if approved, will not impact adversely on the larger community. Desirability further relates to compatibility of a proposed development with the intent of a plan or policy depicting a desirable or acceptable spatial development pattern for the future.

In reading of the aforementioned (and other) cases, it is clear that the concept of desirability relates to the type of development being proposed in a specific place and its impact (positive or negative) on the larger community, i.e., more than the immediate neighbours. In the environmental legislation it is a matter of illustrating that the proposed development is the best practicable environmental option for the property concerned. The relevant guidelines for the consideration of "Need and Desirability" determines that: "*the construct of "need and desirability" must also be informed by the sum of all the impacts considered holistically. In this regard "need and desirability" also becomes the impact summary with regard to the proposed activity*". In view of the aforementioned, the applicant will motivate the proposed development of Portion 28 from a desirability perspective.

Consideration is therefore given in the application motivation as to who would be adversely or positively affected by the proposed development activities if the application should be approved.

The question is whether Portion 28 is the right place for the proposed development, considering the nature and scale thereof, and its impact on infrastructure services.

As indicated below, there are no municipal infrastructures services readily available for the proposed development and the existing Lynedoch Eco Village is largely independent in its provision and use of infrastructure services. It relies on its own waste water treatment system, it relies heavily on rain water harvesting, water storage, and has a single communal municipal connection shared by all properties. It has a separate or dual water circulation system for treated effluent to be used for flushing and irrigation. The Village operates a waste reduction and recycling system in conjunction with a private contractor, with minimal waste going to landfill. Eskom provides the electricity to the Village, with all houses supplementing their energy requirements in different manners, mostly through the use of micro solar systems and some houses connected to gas derived from bio-digesters. Road access is off Lynedoch Road, a service road constructed parallel to Baden Powell Drive following the closure of the level crossing at the Annandale Road intersection.

Thus, when a development of Portion 28 is being considered, it must be considered simultaneously with a full (municipal) services infrastructure plans and designs. Such new infrastructure might be beneficial to the existing Village, but it would certainly not have any negative effects on the Village, as it would not cause a reduction in the existing standards and levels of service. Two new access roads with intersections on the service road are proposed, to avoid congestion at the existing main entrance to the Village at the station, while the existing main access road, which is substandard and without any sidewalks for pedestrians, will be upgraded.

The next matter to be considered when assessing the desirability of a development is its reasonableness. Because it is not possible to give a universally accepted definition of desirable development, it assists with determining what constitutes desirable development, to consider what is reasonable in a particular situation. A reasonable development would be one that balances the mutual rights of neighbours. The must be able to use and enjoy their properties in a manner that does not unreasonably impinge on the equivalent rights of the other. It implies a degree of "mutual sacrifice", by accepting that the change in the receiving environment will occur with some discomfort, inconvenience, or annoyance which may need to be endured. The developer, while providing for the demand (need), on the other hand has to ensure that the change occurs within limits of acceptability, while putting the scarce land resource to the best possible use to the good of the larger community and not only a select few who can afford to buy exclusivity and privilege.

According to the available information, the Village residents use the property for informal recreation, by walking their dogs, for hiking and in general outdoor recreation, even if not by agreement with the owner. The residents of the surrounding community, who make use of the services offered by the Sustainability Institute, gain access to the Village across the farm, using it for direct access rather than trying to access it on foot via existing formal roads which are significantly lengthier and riskier, with no walkways or even space for pedestrians. Both of these uses, namely accessibility and recreation are addressed in the application and planning, allowing for formalisation of the pedestrian access across the land, by the

creation of pedestrian walkways along the public roads where possible and within limits of acceptability in terms of the current legislation, and the creation of green lanes and trails for Village (and future) residents to enjoy the outdoors.

TYPE	SDF ELEMENT	SPATIAL PROPOSALS	RELATED NON-SPATIAL PROPOSALS
PROTECTIVE ACTIONS	CBAs, ESA's, PROTECTED AREAS	• Maintain and improve the nature areas surrounding settlements along Baden Powell Drive. • Work to increasingly connect and integrate nature areas, also with the urban green areas, to form an integrated green web or framework across the municipal area.	• Implement management actions contained in the EMF.
	WATER COURSES	• Improve public continuity, access, and space along the stream corridors.	
	AGRICULTURAL LAND	• Retain and improve the relationship between settlements along Baden Powell Drive and surrounding agricultural land.	
	URBAN EDGE	• As a general principle, contain the footprint of small settlements along Baden Powell Drive as far as possible within the existing urban edge.	
	SCENIC LANDSCAPES, SCENIC ROUTES, SPECIAL PLACES	• Retain the strong sense of transition between agriculture and human settlement at the entrances to small settlements along Baden Powell Drive.	
	HISTORICALLY SIGNIFICANT AND CULTURALLY SIGNIFICANT PRECINCTS AND PLACES	• Maintain the integrity of historically and culturally significant precincts and places (as indicated in completed surveys)	
CHANGE ACTIONS	INFORMAL SETTLEMENTS TO BE UPGRADED	• Prioritise informal settlements for upgrading and service provision.	
	AREAS FOR RESIDENTIAL DENSIFICATION AND infill	• Focus infill development on undeveloped land within the urban edge.	
	AREAS FOR MIXED LAND USE AND IMPROVED ECONOMIC OPPORTUNITY	• Maintain the scale of mixed used and economic opportunity areas to reflect the current role of settlements	
	IMPROVED ACCESS AND MOBILITY	• Pro-actively improve conditions for walking and NMT within and between small settlements along Baden Powell Drive.	• Ensure that the design of all roads within and surrounding the settlements provides for appropriate NMT movement.
	COMMUNITY / INSTITUTIONAL USE	• Cluster community facilities together with commercial, transport, informal sector and other activities so as to maximise convenience, safety and socio-economic potential. • Maintain Lynedoch as a focus for education and training (with various focus areas and "levels" of education).	• Actively support the shared use of community facilities.
	IMPROVED LANDSCAPING AND PUBLIC AMENITY	• As far as possible, focus investment in parks, open space, and social facilities accessible by public and NMT, in this way also increasing the surveillance of these facilities.	• Actively involve local communities in the development and management of public amenities.
NEW DEVELOPMENT ACTIONS	SIGNIFICANT NEW MIXED USE DEVELOPMENT	• Over the longer term, Vlottenburg, Spier, and Lynedoch along the Baden Powell-AdamTas-R304 corridor could possibly accommodate more growth, and be established as inclusive settlements offering a range of opportunities. However, these settlements are not prioritised for development at this stage. • Explore the feasibility of changing/complementing the rail service along the Baden Powell Drive Adam Tas R304 corridor to a system providing a more frequent, flexible service better integrated into the urban realm. Alternatively, a regular bus service should be explored serving the same route.	• Support private sector led institutional arrangements to enable joint planning and development.
	SIGNIFICANT NEW RESIDENTIAL DEVELOPMENT		
	SIGNIFICANT CHANGE TO ACCESS AND MOBILITY PROVISION		

Table 27: Plan Elements and Proposals for Vlottenburg - Spier - Lynedoch

Figure 10: Extract from Stellenbosch MSDF, 2023

As for the desirability of the development of the land for urban purposes from a regional perspective, it is necessary to consider the history of it being indicated as an urban node. The spatial planning strategies for the land in the approved 2023 version of the SDF indicate that a portion of the land is set aside for urban development purposes, even if the entire property is shown to be inside of the urban edge. The intention is a low density development which allows for the retention of green space around an urban node focused on "*further growth with an education focus and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community*".

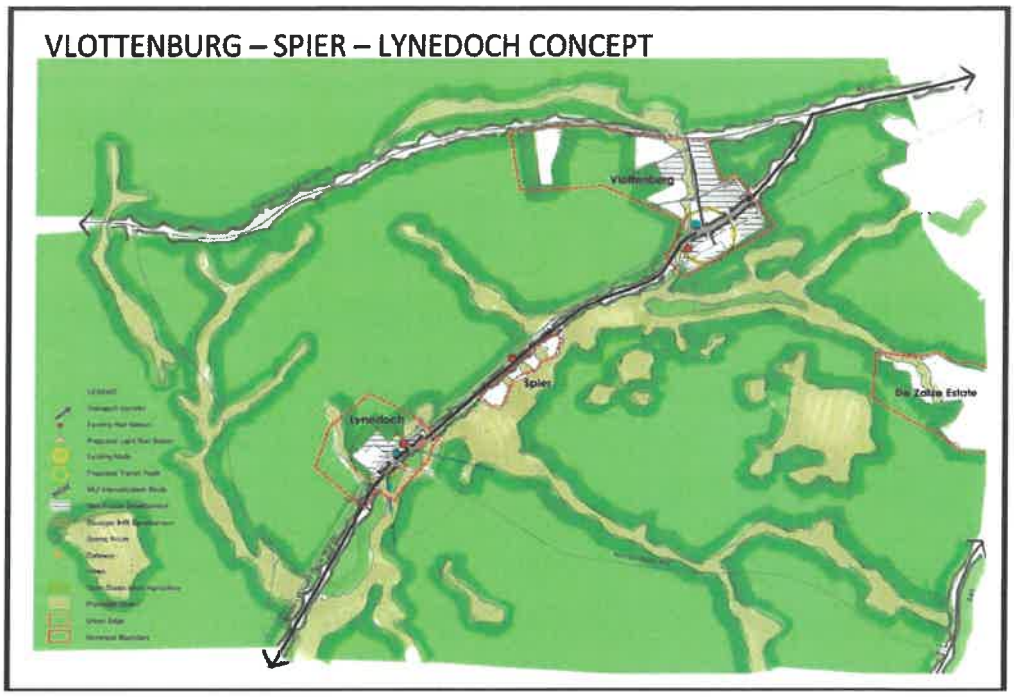


Figure 11: Lynedoch node development, Stellenbosch MSDF 2023

In 2018 the land was however shown as being designated for full urban development, together with Portion 27, on the eastern side of the railway line, i.e., at the time it was indicated as being a desirable location for a nodal development. In 2019 and 2023 SDF, the proposed urban development footprint was reduced, still indicating the desirability of an urban node on the land, albeit that the overall extent and scale was reduced. As will be motivated below, a reduced urban footprint and scale is an irrational approach to the establishment of an urban node in an environment where the population is growing, where land is a scarce resource, and where a node can be established around a transit node, in keeping with the policy to maximise the use of land around such transit nodes.

3.2.1 Socio-economic impact

The socio-economic impact and need were assessed by Demacon in the Lynedoch Mixed-use Market Study, September 2023 (*refer Annexure G*)

According to the study a total of 38,78 hectares could be developed and taken up over a 10-year timeframe. This includes 88,7% (34,41 ha) for residential uses and 11,3% (4,37 ha) for non-residential uses. The site, albeit smaller than the area needed, is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. "*Take-up is forecast to accelerate as the development gains traction in the market. Considering, the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45,48ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development*".

According to the study there is a current demand for approximately 322 medium density residential dwelling units, the property fitting as a desirable location from a market perspective with a score of 73,2%.

Take-up of units over time is estimated as:

- Short to medium term (3 to 5 years): 100 – 150 units;
- Medium to longer term (5 – 10 years): 431 additional units up to 750 units; and
- Long term (10 – 15 years)): up to 1 500 units.

The market assessment further indicated that there is a need for a small retail component to serve the development and surrounding market area, defined as the area within 10 minutes' drive time from the property. Offices, automotive services, and private healthcare are also listed as being in demand for the area. The estimated land requirement for the activities and uses highlighted in the study as appropriate for the area is 38,78 ha.

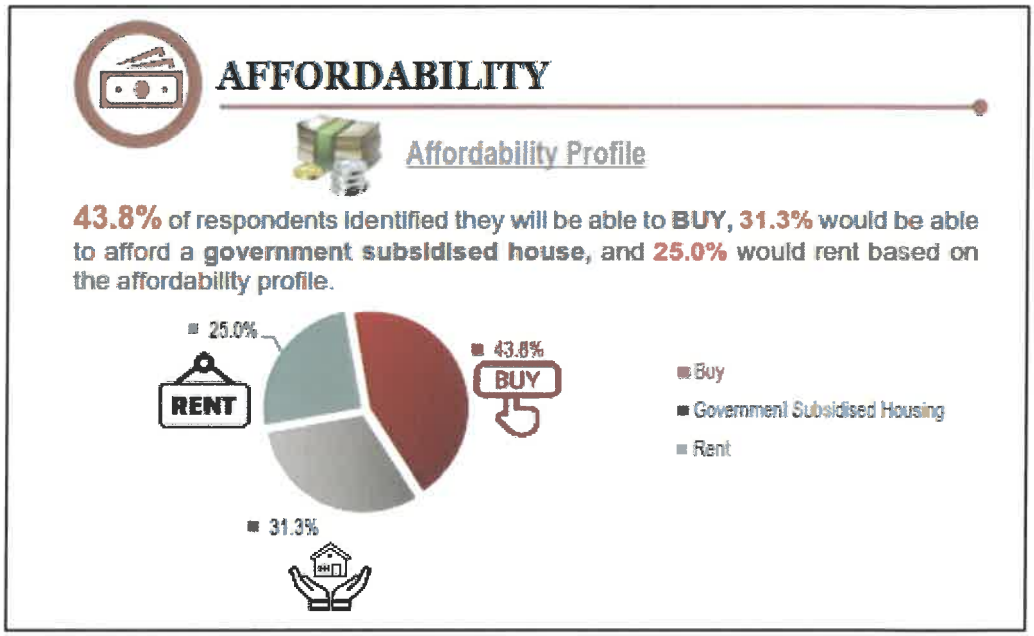


Figure 12: Affordability profile for the development

The affordability profile in the study provides guidance on the implementation of the Stellenbosch Municipality Inclusionary Zoning Policy, 2023.

According to the current Stellenbosch MSDF (p38), the economic opportunities will not grow at the same rate as the population growth, resulting in the Municipality not being able to meet the demands of the growing population. Private sector investment is therefore required to facilitate the opportunity for revenue generation.

3.2.2 Compatibility with surrounding uses

The Constitution of the Republic of South Africa Act, 1996, Act 108 of 1996 (The Constitution) obligates the State, inclusive of municipalities, to promote justifiable economic and social development (Section 153). It requires striking a balance between the competing interests in the ecological, economic, and social elements of the environment, while ensuring efficient, economic, and effective use of resources (Section 195). It continues to require that public administration must be development-oriented, and that people's needs must be responded to, and the public must be encouraged to participate in policy-making.

The need for development must be determined by its impact (positive and/or negative) on the environment, sustainable development, and social and economic interests. The duty of municipalities is to integrate these factors into decision-making and make decisions that are informed by these considerations. The needs of the broader community, as highlighted in the above referred socio-economic impact assessment, must therefore be considered together with the opportunity costs and distributional consequences in order to determine whether or not the development is justified.

The proposed development on Portion 28 will obviously have positive and negative effects on the receiving environment, while also responding to existing identified needs. As will be shown below, Stellenbosch Municipality is becoming more urbanised, currently with more than 74% of the population residing in urban areas, and a definite need for housing, especially for affordable housing, in the Stellenbosch Municipal area. While there is land available for settlement in Stellenbosch, Franschhoek, and Klapmuts, there is not sufficiently located or affordable land available. Except for Stellenbosch, there is insufficient bulk infrastructure services available to accommodate the expected development in Franschhoek and Klapmuts. When providing for settlement needs, the developer (public or private) must be cognisant of the needs of the people in respect of location. Locating all settlement in Klapmuts is not a solution for those who work in the Stellenbosch, Somerset West, or Blackheath areas, as these residents would be forced to commute over long distances and through notoriously bad traffic congestion, to their places of employment. Not only that, but the social networks of the residents play an important role in their selection of places of residence, as children have to attend school, the families are part of social networks, and people generally prefer to have a choice of where they would like to reside if they have to purchase property. Much of the available land for development in Stellenbosch is brownfields development, where the land is currently used for other purposes and where redevelopment must occur. The proposed brownfields developments in Stellenbosch will be too costly for the majority of people seeking affordable housing and the Municipality has not been able to provide any significant subsidised housing for those who do not qualify for full state subsidies. Low and middle income earners are excluded from the housing market in Stellenbosch. The SDF recognises this shortcoming, and it states amongst others that it is necessary to focus on: "*Broadening of residential opportunity for lower income groups, students, and the lower to middle housing market segments*".

Expansion of the Lynedoch urban node and urban development of Portion 28 will not have any significant negative effect on the surrounding agricultural uses. Surrounding land is predominantly used for viticulture, all of which accessed from the surrounding farms. The likelihood of the urban development for middle income homeowners having any negative effect on the viticulture is very low, as experience in Stellenbosch has shown over many years. Likewise, the occurrence of agriculture and viticulture in particular is seen as an asset for residents on the edge of urban settlements, although there are examples of residents complaining about seasonal agricultural activities, such as crop spraying, weed control, and night time picking. Such occurrences are however limited in duration and distribution and the potential negative effects on the urban settlements are limited.

The community of Lynedoch Village, which is a close-knit, small, and integrated community, will most likely be most affected by a development. Where currently 40 households are settled in the Village, the number will more than double if the minimum area shown in the SDF is used for urban settlement and grow more than tenfold if the full extent of the urban area is used for settlement as proposed, albeit over an extended period of not less than 15 years. Such influx of new residents and households changes the social structure of a small settlement as Lynedoch Village. This change is however inevitable and the need for affordable housing that can feasibly be satisfied around the Village versus the value of retaining the existing social structure should be a factor to be considered, but it cannot be a reason to refuse the application for the development, as that would mean a departure from all of the criteria determined for where the "string of pearls" should be developed. Instead, the proposed settlement should be structured as is the current Village, with an open, integrated community where social inclusivity and environmental sustainability are key focuses. Such structure is indeed proposed by the developer, amongst others by the development of inclusionary housing and secondly by the gradual development of the settlement inclusive of educational and other community facilities.

3.2.3 Impact on external engineering services

External engineering services for the development is lacking. As stated above, Lynedoch Eco Village is self-reliant for the provision of services but for an Eskom electrical connection and a limited potable water connection from the Stellenbosch Municipality. An entirely new infrastructure services network and system would have to be provided for the proposed development, meaning a waste water treatment, potable water, solid waste management, storm water, road access, and electrical or household energy supply system. The engineering services reports herewith address these infrastructure needs and solutions in detail and are discussed in more detail below.

As indicated in the Stellenbosch SDF and IDP, the Municipality is planning for population growth and further urbanisation. The bulk supply of landfill for waste management, for raw water supply and treatment, for road access, for electricity and energy, and for waste water treatment is thus factored into the Municipality's plans and budgets, as is the case for the entire Cape Winelands and greater Cape Town Metropolitan area, where significant growth is expected amongst others due to "semigration". The Municipality's budget for the provision of infrastructure services focuses on Klapmuts, Stellenbosch and Franschhoek as the three growth centres. The Municipality will not make any investment in the provision of services for a settlement outside of the focus areas and the development would have to be largely self-sufficient, as is the current Village. As indicated above, the Municipality's approach does not recognise the need to provide a choice in affordable settlement and assumes all people moving to the municipal area can and will be settled in Klapmuts or can afford to settle in Stellenbosch town. This strategy is not workable, and alternatives would have to be considered (as also indicated in the SDF). In view of the planned private infrastructure development, the impact on infrastructure services is low and within the overall framework for accommodating growth in the Cape Winelands and Greater Cape Town Metropolitan area.

3.2.4 Impact on safety, health, and wellbeing of surrounding community

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics.

On the one hand the development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community. On the other hand, these negative effects will be the result of all development within existing urban areas or designated urban edges where there are existing resident communities, i.e., the negative effects cannot be avoided. These are necessary "evils" to cater for a growing population.

There are however positive effects as a result of the establishment a larger resident community, e.g., the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities, to mention a few. The wellbeing of the community is thus likely to be improved by a larger settlement.

3.2.5 Contextual assessment

The decision-maker must be satisfied of a few factors before it can approve a development application. It must first determine whether the proposal is consistent with the SDF. If not inconsistent, then the application can be further assessed contextually. As will be shown below and as already indicated above, the development proposal is not inconsistent with the SDF. The SDF states as a strategic objective that: "*Over the longer term, Vlottenburg, Spier, and Lynedoch along the Baden Powell-Adam Tas-R304 corridor could possibly accommodate more growth, and be established as inclusive settlements offering a range of opportunities. However, these settlements are not prioritized for development at this stage*" and that the Municipality must:" *Support private sector led institutional arrangements to enable joint planning and development*".

Thus, when deciding on whether to approve an application, the decision-maker must apply its mind to the effect of the proposed development on the receiving environment and the character of the surrounding area. The intention with the required contextual assessment of the development is to allow the decision-maker to prevent a development that will be unreasonably intrusive, overbearing or otherwise unsightly or objectionable. The development must not have an inappropriate visual or other impact on sense of place or existing rights, which brings the factors addressed below, namely: heritage, and bio-physical into consideration.

As for the development proposal, it is apparent from the above and will be from apparent from the contextual assessment that a development of the entire Portion 28 is consistent with the SDF, desirable, needed, and without significant negative effect on the receiving environment, i.e., it will not be unreasonably intrusive, overbearing or otherwise unsightly or objectionable.

The development proposal is specifically structured as a long-term development that must occur over time (as indicated in the SDF) with due cognisance of the cost of and demand for infrastructure and other services as recognised in Principle 3 of the SDF Preamble. It is simply not feasible or rational to plan for a small-scale short-term development, knowing that over time the node will (and must) grow to reach maturity in the provision of services to the community. Not a single urban node in the Western Cape has not grown in the last three decades and arguing that planning should not provide for growth is irrational. Planning should be pro-active and in a cost effective manner provide for long term growth, rather than cost inefficient incremental growth. The SDF indicates that: "*Engineering services also support the principle that development in these secondary areas should only be supported once appropriate public transport services are available*". This approach is however not sustainable; as public transport relies on threshold populations to make the service more feasible (although it seldom becomes financially viable). Unless there are large populations, densely developed along transport corridors or around transit nodes, public transport systems cannot be sustained. The focus should be on the provision of services making the development of dense transit oriented settlements possible, for which public transport could be provided in a socio-economically justifiable manner. The spatial development strategy for focussing development along transport corridors developed in the old order "Guide Plans" (Urban Structure Plans) prior to 1994 and became dominant in the 2010 planning process leading to the 2013 SDF, that promoted development along rail routes, main roads, and at intersections ("string of pearls" concept). As indicated above, this was confirmed with the 2018 approval of the SDF showing a full urban development on Portion 28, but with a reduced area in the 2019 and 2023 SDF, seemingly without due cognisance of the need to establish external services. External services, especially water storage reservoirs and linear services (potable water pipelines and sewer mains) cannot be incrementally developed or upgraded. They are designed for a specific capacity and upgrading that capacity would require a duplication of the infrastructure or replacement of the existing infrastructure, with obvious financial consequences. Thus, the argument that planning of the node should be based on the long term view of Lynedoch being a sustainable transit oriented node with an appropriate threshold population to warrant the provision of public transport for the node.

> **3.** ***Third, within developable areas – areas not set aside for limited development owing to its natural or cultural significance – allow future opportunity to build on existing infrastructure investment, on the opportunity inherent in these systems when reconfigured, augmented or expanded.*** *Infrastructure represents significant public investment over generations, not readily replicated over the short term. It represents substantial assets for enabling individual and communal development opportunity of different kinds. From a spatial perspective, movement systems are particularly significant. Elements of the movement system, and how they interconnect, have a fundamental impact on accessibility, and therefore economic and social opportunity. Specifically important is places of intersection between movement systems – places which focus human energy, where movement flows merge – and where people on foot can readily engage with public transport.*

The development has been planned based on indicators designed to address the nature of a development on the land, to ensure that the development has the least visible effect on the surrounding environment. As reflected before, any form of development will cause change to the receiving environment, regardless of where it occurs. The crucial point is whether the development can be undertaken such form that it is not unreasonably intrusive, overbearing or otherwise unsightly or objectionable. Much of this is a subjective point of view and objectors will almost certainly opine differently. The specialists assessing the development proposals have found that, subject to implementation of the heritage indicators, the development "*reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley*".

An urban design framework has been developed for the development. According to the urban design framework, 884 residential units could be established on the farm, in different densities, form and orientation. The design was done on the basis of implementing the development indicators provided in the Visual-Cultural Landscape Impact Assessment conducted by Claire Abrahamse in 2023, *(refer Annexure P)*. In terms hereof, provision is made for high density housing in proximity of the transport infrastructure, where inclusionary housing will also be provided. Further from the transport infrastructure and on the steeper slopes, the development will become oriented along the contours, with tree lines, green corridors, and streets breaking the blocks and allowing for passage of the existing pedestrians across and over the site. Overall densities of development range between 1,35 (allotment villas) and 80 (apartments) dwelling units per hectare. The allotment villas are designed to fit the indicators requiring a low density development landscape on the more visible parts of the site. Lower down, on those parts less visible and adjacent to the transport infrastructure, the development is planned for multi-unit residential blocks varying from double to four storey high buildings. The central area includes a school building, which would be the largest single structure on the site.

3.2.6 Impact on heritage

The conclusion of the heritage impact assessment is that: "*an appropriate residential and educational development that considers the recommendations, heritage indicators and guidelines contained in this report, will benefit the area and uplift the R310 scenic drive. The site has been consistently included within the urban edge, in both heritage surveys and planning documentation and sensitive and appropriate development will encourage local economy without further damage to the rural aesthetic of the cultural landscape. The success of the Sustainability Institute's model should be taken as guidance and a village node, with similar aesthetic and impact should be encouraged and will improve the experience of this historically and scenically significant cultural landscape*".

Considering that the landscape has changed over time and will continuously change, in view of the environmental changes experienced in the area, the planning of the development must be sensitive to, but not inhibited by the heritage aspects.

From the point of view of the local community and those with strong bonds to the Lynedoch Village, the landscape is not only observed. It is part of their frame of reference, perceived to be part of their social assets. On the other hand, there is the growing population in need of housing and social infrastructure. Therefore, in planning an area which is designated as a cultural landscape, to which an existing community has specific feelings, while simultaneously located in proximity of significant infrastructure such as the public transport node and an identified urban node, the planning should strive to create a human habitat that provides existing and future residents with balance. The balance must be between retention of some of the landscape features dear to the existing community, while providing for future activities dedicated to work and those which are dedicated to relaxation for the envisaged larger community. In this instance the integration of natural and cultural perspectives of the landscape into the envisaged human habitat seeks to create the balance, knowing that reasonable development has to occur in a justifiable location.

The way in which the settlement is planned with due cognisance of the heritage indicators shows that the developer seeks to mitigate any negative effects on the existing community, while creating opportunities for citizens seeking a place to live.

3.2.7 Impact on biophysical environment

The entire property has been disturbed over a period of more than fifty years for agricultural purposes, leaving two small portions of the land with granite outcrops in semi-natural state. The agricultural specialist reported that dryland (rain fed) wine grape vineyards with a total area of 28,9 ha, two houses, two sheds, and two cement dams with some irrigation infrastructure occur on the farm. The total disturbed agricultural area amounts to more than 39 ha, with the remainder being the rocky outcrops, run-off lines, roads, and infrastructure (raw water pipeline along the northeastern boundary).

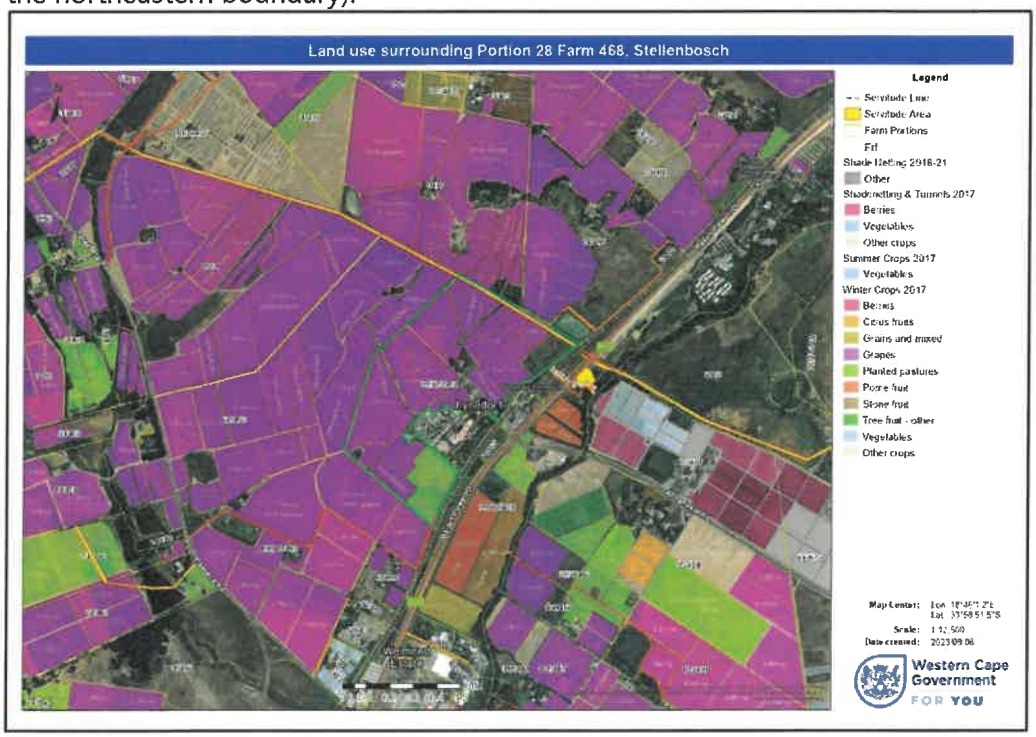


Figure 13 Land use around Portion 28

All surrounding land has been equally or more disturbed, with the majority used for vineyards, high intensity agriculture, and public transport infrastructure. Inside of the land is the Lynedoch Village, itself an urban settlement with an environmental sustainability focus, as is the intended development on Portion 28, albeit at significantly larger scale. The intention of the development is to create green corridors through the development to soften the visible effect of the urban development and linking the development to the minute remaining natural features. These will also be used to manage run-off and ensure that the run-off is retained sufficiently to allow for polishing prior to release thereof into the Eerste River system. There is no negative effect on the natural bio-physical environment, while the effect on the overall agricultural system is addressed in a specialist report below.

3.2.8 Traffic impacts, parking, access, and transport related considerations

The proposals in the Traffic Impact Assessment report considers both the motorised and non-motorised access and traffic requirements to support the development.

The 'middle/central' access will be situated on the subject property (portion of existing panhandle), however, shared with the neighbouring Sustainability Institute (currently being used as their main access). As far as could be established, a formal right-of-way servitude does not currently exist for the said use of the access across the subject property. Should the shared access arrangement as proposed not be acceptable to the neighbouring property, alternative access to the neighbouring property will have to be taken from Lynedoch Road, at an acceptable position between the two proposed accesses east and west thereof. Internal roads are proposed to be private.

3.3 Applicant's findings on impact

The following table summarises the impact assessment as is more fully described below.

Table 3: Impact assessment

Potential impact	Development issue / Activity	Potential effect	Remedial / mitigation measure
Quality of life of citizens	Rural setting to change to an urban setting. Loss of "freedom to roam" by informal use of under-utilised agricultural holding.	Loss of uniqueness of Lynedoch Village with perceived effect on property values.	Plan settlement with elements of the existing landscape and assets retained. Phase growth over time to systematically effect change.
Health and well-being of citizens	Disturbances during construction. Change in environment post construction.	Dust, noise, and emissions which could lead to health issues. Houses and assets could be affected by dust. Citizens could be affected by noise.	Construction and operational management plans to be prepared and implemented. Planning and development to incorporate features

Potential impact	**Development issue / Activity**	**Potential effect**	**Remedial / mitigation measure**
		Sense of place could be lost, and existing residents could feel negative about it. New residents would feel positive about finding a place to settle in a desirable environment. Feeling of ruralness and open space will be lost for existing residents, while new residents will enjoy the relative ruralness of the setting.	that would create an attractive human habitat and environment for all residents.
Disintegration of community	Small integrated community becomes a larger, less integrated, and cohesive community.	Management of the home owners' association and Village becomes more difficult and complex.	Establish home and /or property owners' associations to assist in managing the social and other aspects of the new urban environment.
Change in built environment	Existing community / Village becomes surrounded by urban development.	Micro-climatic changes.	Plan settlement with elements of the existing landscape and bio-physical assets retained. Phase growth over time to systematically effect change.
Loss of agricultural resource	Removal of vineyards and fields which provided a rural setting, but no meaningful economic opportunities.	Seasonal agricultural activities no longer have a negative effect on the citizens. Insignificant loss in productive capacity of the area.	No mitigation required. New development brings economic opportunity for more employment seekers.
Loss of natural resource	Land surrounding the Village becomes an urban environment with altered bio-physical characteristics.	Increased surface run-off and loss of habitat for fauna that survived in the agricultural setting.	Planning of the development must ensure sufficient greenery and vegetation to in corridors to enhance the urban environment and create storm water retention ponds.
Loss of cultural landscape	Vineyards deemed of cultural significance are converted to an urban setting.	Stellenbosch area and Baden Powell Drive become less attractive as a tourist destination.	Establish an attractive settlement with features that produce a desirable human habitat.
Municipal administration and service delivery	Additional ratepayers and residents to be provided services. New connector services infrastructure for maintenance.	Additional revenue and expenditure to local authority.	Manage the settlement through a property / home owners' association and reduce the administrative demands on the Municipality by also managing services infrastructure.

Potential impact	**Development issue / Activity**	**Potential effect**	**Remedial / mitigation measure**
Services infrastructure	New services infrastructure required as existing Lynedoch was designed only for the Village. Municipal services need to be extended to provide appropriate connections.	No negative effect on existing community. Additional extent of municipal (link) services infrastructure.	Operational management of internal services becomes a property owners' association function, while only external services are municipal.
Roads and access	Major road upgrading on and off site required. Non-motorised transport facilities such as sidewalks for pedestrians to be created and Lynedoch (service) Road to be upgraded.	Increased traffic in and around the Village. Better access to the Village and the Station area. Effect on the abutting bio-physical environment.	Create alternative entrances and access to the settlement and improve the existing deficient roads with no sidewalks for pedestrians.
Traffic	Increased traffic on access roads.	Increased risk for pedestrians and farm traffic.	Improve road layout and design to create safe NMT facilities where permitted by relevant authorities.
Security and vulnerability of citizens	A larger community means a less connected community with more uncertainties and less control, a greater sense of insecurity for existing residents. Shorter distance to destination for new residents improves their sense of security and vulnerability.	Need for increased security and integration measures in the community.	Establishment of a property owners' association could mitigate the effects.
Pressure on educational facilities	A larger population increases the demand for educational and social facilities, with limited investment in such facilities by government.	Overcrowded schools.	Provide additional private educational facilities and attract a private operator.
Pressure on social facilities	A larger population increases the demand for health and social facilities, with limited investment in such facilities by government.	Overcrowded facilities.	Consider provision of a club house which includes space for social facilities and where private practitioners can provide services without having to develop own offices and rooms.
Air quality	A change in use from agriculture to urban settlement will lead to increased traffic.	Lower air quality.	Reduce the need for vehicle use inside of the settlement by provision of mixed use space where retail and other needs can be met.

Potential impact	**Development issue / Activity**	**Potential effect**	**Remedial / mitigation measure**
Affordable housing provision	Inclusionary and other forms of affordable housing to be provided.	More housing for lower income families subsidised by government in the consumption of services.	Provide inclusionary housing as per the Municipality's policy.
Economic impact	Urbanisation is proven to be a contributor to economic growth.	Increased economic opportunities in the community. Loss of or effect on the landscape character will not have any proven significant effect on tourism.	Settlement will provide more opportunities than the current agricultural use.

The proposed development will have an impact on the use and enjoyment of the environment by the residents of Lynedoch Village. The surrounding agricultural environment which they used freely, albeit informally and without expressed consent for recreational purposes, will be converted into an urban area. What is now a small urban community where every resident knows every other resident, will change into a large community where residents are largely unknown except to neighbours and where the erstwhile sense of security will change to one of uncertainty. Given the extremely small number of residents in the Village, any development in keeping with the spatial development policies to create nodes in proximity to transport interchanges, will have a similar effect. To mitigate the expected negative effects, the development should be phased over time to allow the new residents to become part of the current Village social structures and community. Moreover, by maintaining a private (but not gated) development, under the management of a home owners' and / or property owners' association, a community structure will be created through which the residents can be integrated. The establishment of another school, over and above the existing school in the Village will further contribute to the establishment of a more integrated community.

Accessibility and movement to and from the Village and the Sustainability Institute will be improved, with the establishment over time of a threshold population large enough to warrant a public transport system. This will be a benefit for the existing community and the surrounding rural community which makes use of the services offered by the Institute.

The sense of place enjoyed by the existing Village residents will change and instead of a small rural node, the Village will become a small urban node with a focus similar to that envisaged by the existing residents, being a place where a socially integrated community can live with educational and community facilities within walking distance. In addition to the educational and other community facilities which will be added as a result of the development, there will be retail and other commercial facilities and opportunities as well, providing a benefit by reducing the residents' reliance on transport to access such opportunities.

The slope and aspect of the area and relative location of the Village will cause the residents not to lose any of the views and overall experience they currently enjoy, as the proposed development is mostly higher lying or located outside of their general eastward field of view. The feeling of openness and freedom experienced by the current Village residents will however be negatively affected. This is however a natural outcome of population growth, as development to accommodate the population seeking appropriate housing must occur somewhere. In this instance it is proposed in an identified node, where the current residents have been aware of the proposals for the extension of the node at least since 2010.

As an entirely new services infrastructure system is being planned and will be developed, the Village will not experience any negative effect on the availability or use of their (private) services infrastructure. Moreover, issues relating to the management of run-off from the farm into the Village, especially with changing rainfall characteristics, where more intense shorter period rainfall is experienced, will be resolved and the run-off will be managed so as not to affect the current residents.

3.4 Best practicable environmental option

The concept of using the best practicable environmental option stems from the accepted definition of sustainable development namely "meeting the needs and the aspirations of the present generation without compromising the ability of future generations to meet their needs". In the context of the application, it is putting the land delineated in the urban edge to its best use for settlement purposes over time, rather than allowing a low density development with no prior planning and appropriate infrastructure development to cater for the inevitable future growth that would occur around the node.

It is necessary to consider what the elements of the environment are, when seeking the best practicable environmental option. It consists of three elements, namely: bio-physical, social, and economic. The best practicable environmental option will be the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term. It will ensure that the scale, density and nature of activities or developments are harmonious and in keeping with the sense of place and character of the area.

For the proposed development there are broadly four options, namely:

- no development;
- partial development within the SDF footprint;
- full development of the land within the urban edge; and
- phased development within the urban edge.

The effects, costs, and benefits of the different options are particularly relevant in instances where resources are limited. Land within the urban edge for development to satisfy the need for affordable housing is a scarce resource in Stellenbosch. Capital (public funds) for development of affordable housing, public transport, and municipal infrastructure services is a scarce resource. Land for viticulture is an abundant resource, as is wine, of which there is a surplus in South Africa.

Capital for upgrading and economic redevelopment of the farm for agricultural purposes is a scarce resource. Potable water is a scarce resource in the Western Cape and in particular in the Greater Cape Town Metropolitan Area.

It is clear that the no development option cannot be sustained, as there is no economic reason (or benefit) to retain an unproductive farm that incurs costs and cannot generate economic benefit for the owners or the immediately surrounding community. Moreover, with limited irrigation water and agricultural infrastructure available, the farm cannot be re-purposed for commercially viable agricultural use without significant capital input. Such capital input could theoretically be gained from the sale for development purposes of that portion of the land that is designated for urban development, leaving less than 21 ha of agricultural land for re-purposing. As indicated above, the applicable policy confirms that such small portion of land without any irrigation water or infrastructure cannot be farmed commercially viable even if consolidated with Portion 27 abutting thereto. The two portions of land are not interconnected, and the lack of interconnectedness would make joint farming thereof unattainable.

A partial development of the land within the urban edge, within the urban footprint as indicated since 2019, will lead to a small-scale development and a node that does not have the threshold population to sustain a public transport system, or socio-economic facilities, e.g., expanded educational and commercial facilities. The small-scale development will require the installation of infrastructure services (with limited capacity), sufficient only for the development, i.e., not providing for continued population growth as being experienced over the entire Province. It will change the environment around the Village, and lead to a low density and intensity of use of the land, leaving much of it for open space purposes in excess of what is rationally required to provide for the needs of the residents. The growth will cause changes to the social cohesion of the Village, as will any development that adds a significant sized new resident population.

The proposed full development of the land within the urban edge will constitute the best use of the available resources (i.e., the best practicable environmental option). A planned full development of the property over time will provide for a growing population in need of housing in proximity of places of employment and existing (potential) commuter transport infrastructure. In terms of our understanding the best practicable environmental option should address inter alia the following:

- It must be located in an area identified as a node for urban development.
- The development proposal must be responsiveness to the area's sense of place.
- It must maximise the use of land as a scarce resource.
- It means creating an environment with mixed uses, which gives people reasons to be on the streets at different times throughout the day and maximise the significant health benefits of active modes of transport, such as walking and cycling, that walkable neighbourhoods can provide.
- Flexible urban design and services infrastructure capable of accommodating future growth and deliver the appropriate health and environmental outcomes.
- The health and wellbeing of current and future residents.

There is a broad consensus that the place where a person lives or works, should not expose them to hazards that could have negative effects on their health. Health aspects alone however are insufficient to deliver on the need for an environment that is good for a person's health and wellbeing. A successful urban area, as is planned in this instance, should be one that stimulates and reinforces the self-esteem of those who live and work there. It should be a place that is welcoming, safe, and aesthetically attractive and includes adequate amounts of good quality facilities and open space. Commercial facilities, such as cafes, medical and dental rooms, personal services, and shops, and community facilities, which serve the community are responsible for establishing much of the character of an urban area and provide the opportunities for social interaction and contribute to the wellbeing of the residents. The centres of nodes are important as the location of such services and planning for easy access to these (without the need for a car) can improve the experience of the area and physical health of those who live and work there.

The best practicable environmental option has been proposed in the urban design and the supporting studies and documents, all of which make up this application.

3.5 Investigations carried out in terms of other laws relevant to the application

3.5.1 Environmental Management

The proposed development triggers an authorisation application in terms of the National Environmental Management Act, 1998, Act 107 of 1998 (NEMA). The Basic Assessment Report is attached as Annexure S.

A summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development and is described below:-

- Agricultural: Land is not suitable for economically viable agriculture. Make best use of land to reduce demand elsewhere.
- Socio-economic: Need is for medium and high density affordable housing. 1 500 units to be developed on the land over time.
- Visual: Certain parts of the land are highly visible or sensitive landscapes. Development to be planned according to indicators.
- Archaeological: The proposed development will not negatively impact on the archaeological heritage resources.
- Heritage: Cultural landscape is sensitive. Development to be planned and undertaken according to indicators.
- Landscaping: Landscaping can be used to mitigate the visual effects of the proposed development. Wider road reserves and visual focus areas are required to allow for appropriate landscaping.
- Traffic: Road infrastructure requires upgrading. Intersections and access off Vlottenburg service road to be upgraded.
- Geotechnical: Some parts of land are "made ground", i.e., filled, with limited granite intrusions and no groundwater intersections. Earthworks and foundation preparation to be cognisant of soil conditions.

- Freshwater: The external services infrastructure will cross three freshwater streams. One is in a near natural state and requires special construction mitigation measures, while the other two are significantly transformed and can be improved by construction.

3.5.2 Heritage

The proposed development requires authorisation in terms of Section 38 of the National Heritage Resources Act, 1999, Act 25 of 1999 (NHRA). An application for a heritage permit has been submitted and the following is an extract from the application.

The anticipated visual-cultural impacts of the proposed development need to be addressed. The conceptual site development plan has been informed by the heritage-based design indicators, as described in the Visual-cultural Landscape Impact Assessment (*Annexure P*). The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley. The site has consistently been included within the urban edge, in both heritage surveys and planning documentation. The study recommends that the heritage-based design indicators be integrated into the design proposal as far as possible, to achieve the "education focused... compact, pedestrian oriented, child friendly community" that was envisioned for this site in the 2019 and 2023 Stellenbosch Municipality Spatial Development Framework.

3.6 Consistency with SDF

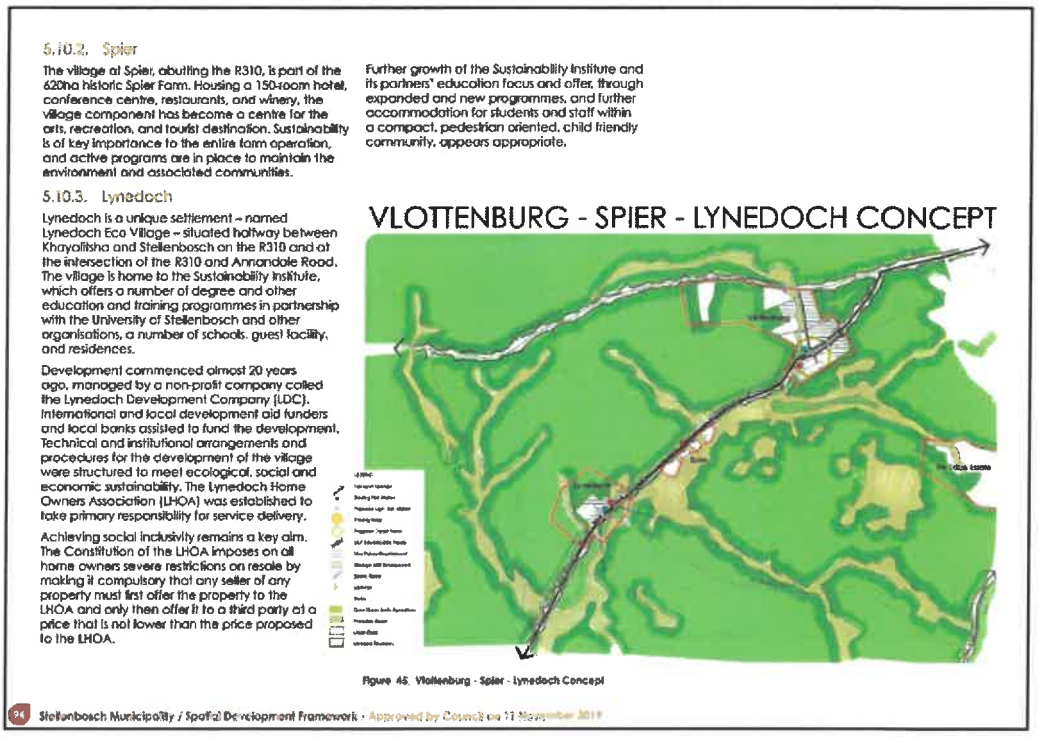
The 2023 approved Stellenbosch Municipality Spatial Development Framework (SDF) indicates that: "*over the longer term, the Muldersvlei/ Koelenhof and Vlottenburg/Lynedoch areas can potentially develop into significant settlements.*" The settlements are identified "*as balanced, inclusive communities ... to fulfil a role in containing the sprawl of Stellenbosch town, threatening valuable nature and agricultural areas. Importantly, they should not grow significantly unless parallel public transport arrangements can be provided.*"

The SDF indicates the Lynedoch Node as being a rural node with social inclusivity as the aim thereof together with the expansion of the education and training facilities. The policy is for the gradual expansion of the "*unique development model based on sustainable living and education.*" The policy further and importantly determines that:" Over *the longer term, these expanded settlements ... should not grow significantly unless parallel public transport arrangements can be provided.*"

As a consequence of the policy, an integrated community with limited need for the use of private transport is envisaged over the long term. The public transport systems are non-existent and will not be operational or functional within the foreseeable future and only if economies of scale and appropriate threshold populations can be established to make use of such public transport.

The spatial policy states that the relevant authorities must: "*Support private sector led institutional arrangements to enable joint planning and development*" of the node, thus a cooperative and facilitative approach to the land use planning process is foreseen.

The Stellenbosch SDF should be based on properly defined and consistently applied assumptions. On the one hand the SDF assumption is that the economy will not grow faster or stronger than at present and that the land demand for settlement will be in the "*middle of the road/ consensus development scenario.*" On the other hand, the transport assumptions are for the "*transport specific strategies to manage travel demands ... providing a choice of alternative modes of travel to enable shifts to occur. ... future growth is enabled by the introduction of shared transport options, formal public transport and for the shorter journeys provision for safe cycling and walking.*" The transport demand scenario is thus significantly more optimistic than the land demand scenario, indicating significant growth in demand.



5.10.2. Spier

The village at Spier, abutting the R310, is part of the 620ha historic Spier Farm. Housing a 150-room hotel, conference centre, restaurants, and winery, the village component has become a centre for the arts, recreation, and tourist destination. Sustainability is of key importance to the entire farm operation, and active programs are in place to maintain the environment and associated communities.

5.10.3. Lynedoch

Lynedoch is a unique settlement – named Lynedoch Eco Village – situated halfway between Khayelitsha and Stellenbosch on the R310 and at the intersection of the R310 and Annandale Road. The village is home to the Sustainability Institute, which offers a number of degree and other education and training programmes in partnership with the University of Stellenbosch and other organisations, a number of schools, guest facility, and residences.

Development commenced almost 20 years ago, managed by a non-profit company called the Lynedoch Development Company (LDC). International and local development aid funders and local banks assisted to fund the development. Technical and institutional arrangements and procedures for the development of the village were structured to meet ecological, social and economic sustainability. The Lynedoch Home Owners Association (LHOA) was established to take primary responsibility for service delivery.

Achieving social inclusivity remains a key aim. The Constitution of the LHOA imposes on all home owners severe restrictions on resale by making it compulsory that any seller of any property must first offer the property to the LHOA and only then offer it to a third party at a price that is not lower than the price proposed to the LHOA.

Further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate.

Figure 45 Vlottenburg - Spier - Lynedoch Concept

Figure 14: Extract of the 2019 (and 2023) Stellenbosch SDF showing the Lynedoch concept

Due to there being no infrastructure services to support an urban development at Lynedoch, significant expenditure needs to be incurred to provide such infrastructure for a development on Portion 28. It must have sufficient capacity to accommodate the long term development vision for the node, which, according to the approved spatial development framework, is an urban node. Moreover, the indicated linking of the node via public transport to the surrounding urban areas further support a long term growth vision that would create a threshold population to make the provision of public transport and infrastructure services feasible.

The primary assumption in this application is that the national, regional, and local economies will not grow any faster or stronger in the coming five years than at present and that therefore the provision of public transport will not improve, but that the demand for affordable housing and demand for employment opportunities will remain the same, which is high. It is further assumed that the agricultural sector would need to be strengthened and supported if it is to overcome the effects of settlement development for large unemployed communities and climate change. The farms in the area range in size from small to well above the municipal average. The crops that are produced are varied and the water demand for the continued production of vegetables, vineyards, and irrigated grazing is increasing, while the supply of irrigation water is not growing, and climatic conditions are requiring increased irrigation or crop protection through shade netting and cover, albeit both climate change responses are not acceptable and desired in the approved Stellenbosch Heritage Survey, 2019.

The Stellenbosch Rural Area Plan (RAP) already indicated in 2016 that Stellenbosch Municipality experienced significant population growth at a rate of 3,7% per year. The Integrated Development Plan (2023) estimates current population growth at 2% per year, which equates to approximately 4 000 new residents annually. The average household size is 3,6, i.e., the estimated number of new households establishing in Stellenbosch is 1 110 per year. As will be shown in the socio-economic impact assessment and demographic assessment of the development proposal, the population growth and socio-economic situation, including urbanisation trends, require a growth in residential accommodation units in excess of 1 100 units per year. There is an existing shortfall in accommodation for daily commuters to Stellenbosch, for which provision should also be made, in addition to the expected population growth.

The RAP and the Urbanisation Strategy (2016) indicated that the Municipality became more urbanised, with more than 73%, up from 70% in 2011, then residing in urban areas, while the IDP indicates that about 75,5% of the population currently resides in urban settlements. There is therefore a definite need for housing in the Stellenbosch Municipal area, and more so for affordable housing.

The demographic trend highlights the need for proactive planning of sustainable urban settlements:

- It requires planning for access to community facilities and services.
- Such services are difficult to provide in dispersed rural populations and requires rural residents, who can mostly least afford it, to travel to urban settlements.
- Without efficient (or non-existent) public transport, essential travel creates challenges for the relevant authorities and the residents in need of services, as well as those affected by congestion.
- Small population nodes cannot function efficiently as the low population numbers do not warrant sustainable service delivery.
- It requires planning for and the provision of municipal infrastructure services, whether publicly or privately supplied, which cannot grow incrementally due to the prohibitive cost of replacement of redundant infrastructure.

The IDP lists a number of spatial challenges, as indicated in the extract inserted below. Of note is the reference to the need to adapt to climate change, with

reference to the current agricultural use of the property, which is no longer sustainable, and the need for the provision of planned urban settlements for those who cannot afford to live in the low density unaffordable residential neighbourhoods of the major towns.

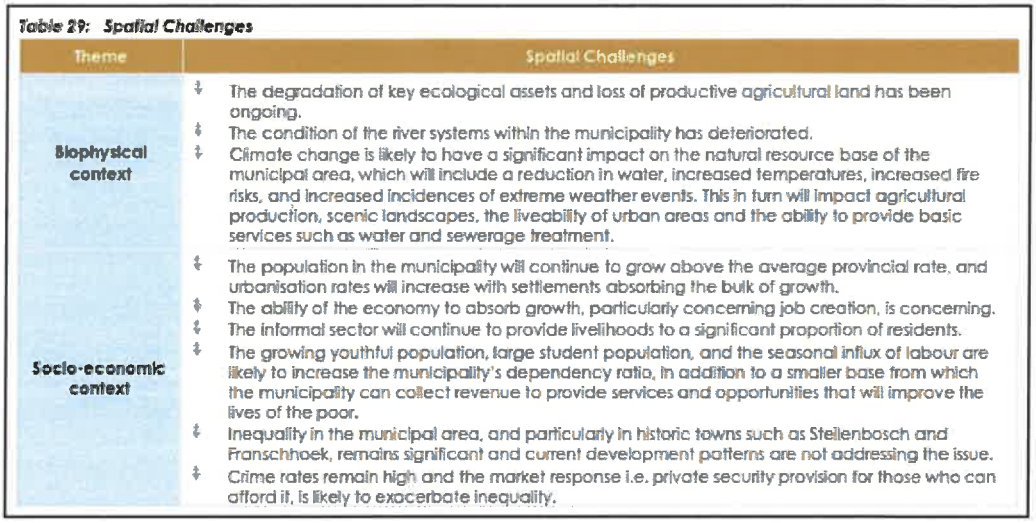


Table 29: Spatial Challenges

Theme	Spatial Challenges
Biophysical context	↓ The degradation of key ecological assets and loss of productive agricultural land has been ongoing. ↓ The condition of the river systems within the municipality has deteriorated. ↓ Climate change is likely to have a significant impact on the natural resource base of the municipal area, which will include a reduction in water, increased temperatures, increased fire risks, and increased incidences of extreme weather events. This in turn will impact agricultural production, scenic landscapes, the liveability of urban areas and the ability to provide basic services such as water and sewerage treatment.
Socio-economic context	↓ The population in the municipality will continue to grow above the average provincial rate, and urbanisation rates will increase with settlements absorbing the bulk of growth. ↓ The ability of the economy to absorb growth, particularly concerning job creation, is concerning. ↓ The informal sector will continue to provide livelihoods to a significant proportion of residents. ↓ The growing youthful population, large student population, and the seasonal influx of labour are likely to increase the municipality's dependency ratio, in addition to a smaller base from which the municipality can collect revenue to provide services and opportunities that will improve the lives of the poor. ↓ Inequality in the municipal area, and particularly in historic towns such as Stellenbosch and Franschhoek, remains significant and current development patterns are not addressing the issue. ↓ Crime rates remain high and the market response i.e. private security provision for those who can afford it, is likely to exacerbate inequality.

Figure 15: Extract of Table 29 from Stellenbosch Municipality IDP, 2023

The development includes provision for inclusionary housing, thus providing for affordable housing at the lowest level possible for private sector developers, and further proposes housing for middle income commuters through the provision of high density dwellings within walking distance of the Lynedoch Station. It is thus responsive to the stated needs of the IDP.

Access to social and community facilities, with specific reference to educational facilities, is an issue that is highlighted in all strategic planning documents, together with the need for housing and employment opportunities. The proposed long-term development of a sustainable urban node at Lynedoch Village seeks to participate in the provision of the required resources and satisfaction of the demand and needs, with minimal investment by the Municipality.

3.2 POPULATION PROFILE

Figure 3.1 illustrates the future population growth of the CWD and its municipal areas between 2022 and 2026. In 2022, the CWD's population is forecast at 968 667, and is mainly concentrated in the Drakenstein (30.8 per cent), Stellenbosch (20.6 per cent) and Breede Valley (20.3 per cent) municipal areas. The least populated municipal area in the District is the Langeberg municipal area, with a concentration of 12.6 per cent.

Figure 3.1
FUTURE POPULATION GROWTH, Cape Winelands District, 2022 - 2026



Source: Western Cape Government PPU, 2022. Provincial, district and local municipal area population estimates by sex and age (2002 to 2037) based on Stats SA MYPE series 2021 and 2022

Between 2022 and 2026, the CWD is forecast to grow annually by 1.7 per cent, reaching above 1.0 million people in 2024. The Witzenberg municipal area is forecast to have the highest population growth rate across all municipal areas in the District, growing annually by 2.2 per cent in the period. This is followed by the Stellenbosch municipal area, which is forecast to grow annually by 2.0 per cent. Though the Drakenstein municipal area is forecast to grow annually at a lower rate than the District across the period (1.5 per cent), it is also forecast to have the highest population share of all the municipal areas in the District (30.6 per cent). The Breede Valley municipal area is forecast to have the lowest growth rate across all municipal areas in the District in the period, with annual growth of 1.2 per cent. The Langeberg municipal area is forecast to grow by 1.6 per cent in the period. It is also forecast to shrink in population share across the District in 2026, contributing 12.5 per cent of the population in the District.

Figure 16: MERO 2022 extract showing population trends

3.7 Spatial consideration issues

Lynedoch is identified and proposed as a socially inclusive urban node with a focus on education and training (for future development) in the 2023 Stellenbosch SDF. It is further indicated as a node in a range of other related documents, and it has been designated as a node since at least 2010 when the concept of a "string of pearls", relating to the nodes along the railway line and at major intersections on the main transport corridors, was promoted as the growth strategy for Stellenbosch.

The provisos in the SDF are:

- That public transport systems must first be established before any significant nodal development may occur.
- That cognisance be taken of the agricultural potential of the land.
- That appropriate green corridors and spaces be retained in view of the need for environmentally sustainable development and the location of the node at the gateway to Stellenbosch.
- That maximum protection be given to valuable agricultural resources and land around the node.
- That the availability and extension of municipal infrastructure services be considered in the assessment of the spatial planning issues.
- That the historical character of the area and the landscape be protected and complemented by development.

The expansion of the Lynedoch node, with amongst others inclusionary and affordable housing, is aligned to the Spatial Planning and Land Use Management Act, 2013, Act 16 of 2013 (SPLUMA), which, together with the Western Cape Land Use Planning, 2014, Act 3 of 2014 (LUPA), promotes the following five general principles for spatial planning, land development and land use management, as applicable to the subject area.

Spatial Sustainability: The proposed residential development is within the future fiscal, institutional, and administrative means of government. Bulk municipal services infrastructure has to be established and external services provided for the development of the node, to which the development would make a significant contribution. It will create economies of scale and by facilitation of improved access to housing that is not within the fiscal other means of government.

The protection of prime and unique agricultural land might not be an issue in this instance, as the land has not been used for viable commercial agriculture for approximately 10 years, primarily due to the changing climatic conditions and lack of water resources for irrigation. The changes in the surrounding land use and agricultural environment have also impacted on the agricultural use of the land. This aspect will be appropriately assessed as indicated above.

A residential development at Lynedoch will promote and stimulate effective and equitable functioning of land markets, as it will provide for affordable housing and access opportunities for middle and lower-middle income groups by using land included in the urban edge of the node.

Given the long term development view of the node, it follows that land which could be feasibly used for agriculture will be retained for at least or more 10 years, but allowance will be made in the planning (of infrastructure and transport infrastructure and systems) for eventual development, to achieve appropriate threshold populations and economies of scale. The loss of the agricultural production on Portion 28 will thus occur over time and not immediately.

Efficiency: The proposed land development, albeit in the medium to long term, will optimise the use of existing resources and infrastructure.

The bulk of the proposed residential development is within 500m of the Lynedoch rail commuter station and a potential bus stop on Baden Powell Drive. The proposal complies with the approved Stellenbosch Comprehensive Integrated Transport Plan (CITP) policy statement, namely: "*to maximise the use of land accessible by public transport in walkable (industrial) neighbourhoods where jobs can be created without negative impact on the natural resources of the area.*"

Its treated effluent can be availed to surrounding farmers for irrigation purposes, thus enhancing the viability of the local agricultural sector, making up for any loss of agricultural production on the land.

Spatial Justice: Past spatial and other development imbalances will be redressed through improved access to and use of land for affordable housing opportunities in proximity of an existing node and a public transport interchange and corridor. It is located along one of the primary movement corridors, where land development has to be considered in view of the settlement and human needs of a growing middle and lower income population.

Resilience: Spatial plans, policies and land use management systems must be flexible to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks. By allowing the proposed development, it would create a more resilient spatial development pattern with limited effect on the natural or agricultural resources.

Re-use of the water consumed in the proposed node for irrigation of surrounding agricultural land will increase the resilience of the farms where it is used.

Good governance: An integrated approach to land use and land development in the area must be considered in keeping with the stated policy of the Municipality. The development of the node is supported in the Stellenbosch SDF, although only for a partial development, the argument being that the majority of the land should be retained as a visual and heritage resource. The question is which needs are to be served, those which have an effect on the health and well-being of the residents and those in need, or those who wish to retain the character of the area and trust that the provision in the needs of the people can be satisfied elsewhere?

It is only a matter of timing, i.e., whether planning and gradual development should occur in expectation of the future public transport system upgrades or prior thereto to fit in with the socio-economic needs of the growing population.

The proposed rezoning, subdivision and use of the land is "consistent with norms and standards, measures designed to protect and promote the sustainable use of agricultural land, national and provincial government policies and the municipal spatial development framework", as indicated above.

The public interest in the application and the proposals will be tested during the public participation process.

"The constitutional transformation imperatives and the related duties of the State" apply to all large-scale developments and as a result the development provides for inclusionary housing aimed at creating opportunities for those who cannot afford or do not have access to housing in the major centres due to housing backlogs and lack of available land.

"The facts and circumstances relevant to the application" indicate that the planning for the future use and development of the node will have no detrimental impact on the surrounding environment and in fact contribute to the achievement of the development objectives of the Municipality, by adding additional revenue generating property to balance the growing demand for non-revenue generating development. Moreover, as indicated in the approved Stellenbosch SDF, the precinct needs to be planned, for which purpose Annexure D illustrates development proposals in keeping with the physical and non-tangible (cultural landscape) characteristics of the site.

It is obvious that the delegated decision-maker will consider "the respective rights and obligations of all those affected", including the needs of the existing residents of the area, with specific mention of Lynedoch EcoVillage as an organisation that serves a wider interest and community.

The state of and impact of the proposed development on engineering services, social infrastructure and open space requirements have been addressed, not the least of which in the engineering services report (Annexure I).

Section 22 (1) and (2) of SPLUMA stipulate that a Municipal Planning Tribunal or any other authority required to make a land development decision may not make a decision which is inconsistent with a municipal SDF and that such authorities may only depart from the provisions of an SDF if there are site specific circumstances that justify a departure. Although it has been shown that the proposal is consistent with the existing SDF, there are certain departures which need to be considered in view of the argument that proactive long-term planning for and a phased development should be considered to ensure efficiencies and economies of scale in the development.

3.8 Provincial planning

The principles referred to in Chapter VI of the Western Cape Land Use Planning Act, 2014 (LUPA), with specific reference to spatial justice, spatial sustainability, efficiency, and good administration have all been considered, as are elaborated on above. In addition, the proposal adheres to the policy guidelines of the Western Cape Provincial Spatial Development Framework (PSDF).

- ✓ The PSDF focuses strongly on densification and intensification of urban areas to achieve its desired outcomes. The average gross residential density of urban areas should increase to 25 units / ha before extensions to an urban edge are considered. The proposed development is within the designated urban edge of the Lynedoch node, but the proposed use of the land is limited to a small footprint which will cause the development densities in the node to be

significantly lower than sustainable from a service delivery perspective. A low density development which retains the area surrounding Lynedoch as a cultural landscape conservation area will cause the development not to achieve the population thresholds essential for the establishment of efficient public transport systems and services infrastructure for amongst others affordable (inclusionary) housing. The proposal for the development of a feasible urban node at a major transport interchange is consistent with the PSDF.

✓ The policy of more intense use of nodes and urban core areas further requires consideration of the bio-physical environment, cultural heritage, municipal infrastructure services and social infrastructure issues and factors. The purpose of densification and best use of scarce land resources in appropriate locations, is primarily to maintain sustainable supplies of natural resources, for food production and ecological functioning, which are not relevant to the subject property. The PSDF seeks to achieve more economical use of municipal services infrastructure and community facilities, provide for efficient public transport services, and reduce traveling distances to a variety of opportunities. The proposed development is aligned to the policy as illustrated above.

✓ The proposed use of the property inside of an identified node and abutting an existing public transport interchange for a development aimed at affordable medium to high density residential use containing retail opportunities and community facilities is aligned to the PSDF. It contributes to intensification and densification of the Lynedoch node, and it leads to improvement of the efficiencies in service provision as indicated above. It does not diminish the supply of ecological or agricultural resources, opportunities for redress, or improved spatial integration with access to land for those previously dispossessed.

3.9 SPLUMA principles

The principles referred to in Section 42 of the Spatial Planning and Land Use Management Act, 2013, Act 16 of 2013 (SPLUMA) have been and are addressed in the process. The following table contains a summary of the principles and how these are addressed in the planning application:

A. Spatial Justice	
a. Redress	Redress is achieved by reversing the effects of past socially and spatially segregated development. Lynedoch EcoVillage is a prime, albeit small-scale, example of an integrated development where redress is core to the planning and management of the settlement. The proposed extension of the node and rezoning of the property does not place any impediment on the Municipality and the community to redress the spatial development imbalances of the past.
b. Inclusion	The proposed development would attract residents from all socio-economic groups, while creating additional employment and residential opportunities in an area where the demand for such opportunities exceeds the supply, as highlighted in the IDP. The development will specifically contribute to the creation of an integrated community, amongst others by the provision of

	inclusionary housing and affordable opportunities for those who do not have such choice inside of Stellenbosch.
c. Flexibility for all types of settlements	The surrounding area is characterised by commercial and agricultural-industrial uses, with limited provision of affordable residential opportunities. The proposed mixed-use and residential development would counter the pattern and allow for better resource use and the supply of community facilities where such are in demand.
d. Tenure and informality	Informality and tenure are not affected by the proposal. Instead, the proposed development will create opportunities for the residents who reside on farms in the area and who have no alternative choices, to acquire accommodation in the area and to thus remain within the social environment of their choice.
e. Settlement upgrading	Settlement upgrading is achieved in the process, by increasing the number of residents in Lynedoch who have to share the burden of cost of providing and maintaining private services in lieu of a municipal supply. The limited agricultural use of the land makes no contribution to the socio-economic situation of Lynedoch and its contribution to the agricultural sector is minimal and not sustainable.
f. Responsive	The proposed use is in response to the need for better utilisation of the existing resources and improved socio-economic opportunities in view of a growing population and a demand for affordable housing in the municipal area.
B. Spatial Sustainability	
a. Capacity of state	The Municipality does not have the capacity to provide the bulk services required for the proposed development. Any development on the land requires capital investment and infrastructure development, which must be provided by the developer in conjunction with the Lynedoch EcoVillage board and must be affordable and sustainable. In view thereof, and the growth trajectory foreseen for the Stellenbosch municipal area and all nodes in it, the infrastructure must be planned, designed, and provided with a proactive view to a future scenario where full development is achieved over the long-term.
b. Food security	Food security is not affected by the proposal, as the farm does not provide food and its grape production is uneconomical and not sustainable.
c. Environmental sustainability	Considering that the environment consists of three elements, namely: social, economic, and bio-physical, the proposed development does contribute to environmental sustainability. It is in proximity of an existing urban settlement, where infrastructure services are already provided, albeit not efficiently, and major transport infrastructure. It could thus lead to decreased traffic movements and increased use of public transport, if or when such is developed, and contribute to the more efficient provision of infrastructure and social services to the local community. The use does not have any known negative environmental effect.
d. Land markets	The proposed use does not diminish the supply of affordable land intended for the provision of subsidised housing or community facilities and better utilises existing underutilised land partially designated for urban development in the SDF.

e. Costs of infrastructure	Engineering services infrastructure need to be provided for the proposed development at the cost of the developer, as the envisaged development is premature for the area in terms of the SDF. The existing services in the area are also privately provided by Lynedoch EcoVillage. Increased numbers of users would create economies of scale for the services provision and make it more affordable and sustainable for the residents.
f. Sustainable settlements	Settlement sustainability includes amongst others, the efficiency of use of existing properties. As indicated above, the better use of the property through an intensive development will contribute to the creation of sustainable settlements as in the example of Lynedoch Village. Sustainability also requires the achievement of certain population thresholds, e.g., for the provision of efficient public transport, to which end the larger development scenario is essential.
g. Innovation	The proposed development will borrow from the innovation as implemented by Lynedoch EcoVillage.
h. Context specific development	The context specific development in response to the spatial planning challenges and policies is described above.
C. Efficiency	
a. Optimises use of existing resources	As indicated above, the better and diversified use of land resources in the designated node will lead to the optimisation of resource use and the availing of more resources to surrounding farms which are better suited to production.
b. Processes to limit negative impact	The negative impacts of the development have been identified by the various specialist assessments and appropriate mitigation measures recommended. The negative effects are mostly on the non-tangible aspects of the environment, which will change over time, and which need to be balanced with the human needs.
c. Streamlined processes	Land use consideration and development processes need to be efficient to ensure rapid delivery of services in response to needs and demand, especially in the current environment where demand for housing outstrips supply.
d. Innovation	None.
e. Spatial Performance Management	Spatial performance is a reflection of how a development was planned and implemented and should be a reflection of the community in which it exists. The continuous growth of housing in the informal sector, which does not only provide for the poor, but out of necessity also for those who can afford but cannot get access to housing opportunities, illustrates a lack of performance. The initiatives of the private sector to assist in the long-term planning for and provision of housing solutions should be supported by all relevant authorities.
f. Development Planning Tools	The Municipality needs to allow for proactive planning to efficiently respond to development pressures and needs. By allowing and managing proactive planning, it reduces reactive applications and shortens the timelines for decision-making and development implementation.
g. Institutionalise for Efficiency	As above, proactive planning and development processes need to be accepted by the Municipality to lead to efficiencies in the development process and resultant willingness of investors to support development projects aligned to the spatial development strategies of the Municipality.

D. Resilience	
a. Sustainable livelihoods	The better use of the under-utilised and uneconomical farm land and integration of the development with the existing Lynedoch Village will improve the socio-economic outlook for people who cannot find such opportunities in the existing nodes. A developed node with the required threshold population will make the node more sustainable and contribute to the provision of amongst others public transport.
b. Resilience against shocks [avoid + bounce back ability]	The development is expected to have positive socio-economic effects. As a result, it should improve the resilience of the receiving community without any predicted negative effects that could jeopardise their situation.
c. Innovation	The proposed development will borrow from the innovation as implemented by Lynedoch EcoVillage.
d. Context specific	The resilience of Lynedoch Village and the receiving community is improved by the development, as it creates new community facilities and a threshold population to better contribute to the sustainability of the community. The increased number of residents will also increase the revenue derived for better maintenance of the services.
e. Flexibility	The proposed development adds to the range of choice and opportunities for those who do not have access to affordable residential opportunities and accommodation. It further provides for flexibility in the larger Stellenbosch area, as not all people need or can afford to reside in the major towns where the cost of housing is out of their reach.
E. Good Administration	
a. Planning Decision-making tools	The Municipality needs to consider the proactive planning of large-scale developments with socio-economic benefit and work with private sector investors as indicated in the SDF to deliver projects which deliver on identified needs. As illustrated above, the proposed development, although partially premature and larger than envisaged in the SDF, has long-term solutions for the growth envisaged for the municipal area and arguably in a location far better suited to such development, within walking distance of existing major transport infrastructure, than most other alternatives available to the Municipality.
b. IGR and integrated approach	A full suite of applications is required for consideration of the proposed development. Cognisance should thus be taken of all specialist assessments and decisions, to come to a rational decision on the planning of the proposed long-term phased development.
c. Meet time frames	As part of the decision-making system, the Municipality must provide a decision-making process program and continuously update the system to ensure the meeting of timeframes.
d. Transparency	Meetings and communications regarding the proposed development need to be recorded and shared, leading to transparency in the consideration and decision-making process.
e. Community empowerment	Public participation for development applications ensures that those stakeholders who could potentially be affected by the proposed development have the opportunity to give input on the development proposal. In this instance the Lynedoch EcoVillage board plays an important role, as the proposed development has direct effect on the Village and its residents.

f. Spatial Performance Management	Performance is to be measured against the success of the development in uplifting the surrounding area and improving the socio-economic situation. It remains to be assessed, but it is predicted to be beneficial.
g. Values	As indicated above, the evaluation of the proposed development will require a fine balance between the socio-economic needs of the those who have few choices and those who seek to protect a specific cultural development pattern.

3.10 Engineering services

3.10.1 The proposed rezoning and development of the site will generate additional traffic, which is addressed in the TIA in Annexure K.

3.10.2 The engineering services report in Annexures L indicate that: -

- Sewerage and water capacity is sufficient. Currently there are no existing municipal sewer or water services in close proximity to the site. The GLS capacity report confirmed that there is sufficient capacity available at the Blaauwklippen pump station.
- Solid waste will be managed privately for the development.
- Stormwater management for the development has been planned and a management plan has been prepared for the proposed development.

3.11 Specialist assessments

The following section is a summary of the specialist assessments of the development proposal were undertaken. It provides further information to be evaluated in consideration of the application and motivation for the approval thereof.

3.11.1 Agricultural Agro-Ecosystem Specialist Assessment – May 2023

Agri Informatics natural resource specialists conducted an Agricultural Agro-Ecosystems Specialist Assessment of Portion 28 of Farm 468, Stellenbosch RD as part of the suite of specialist assessments to guide the application and authorisation processes (*refer Annexure Q*). The assessment included a site sensitivity verification, a soil survey, topographical assessment, climatological assessment, an assessment of water resources, an agricultural potential assessment, and an assessment of the potential impact of the proposed development.

The assessment found that the development will transform ±29 ha net farmland that was used for wine grape production over the past three decades or more. The soil potential varies between low to medium high, with ±35 ha being suitable for irrigated perennial crop production – including road areas. The farm only has access to a very limited supply of groundwater for irrigation.

The exact yield is unknown and appears to be unregistered, but is calculated at 80 m^3/day, sufficient for the irrigation of less than 3 ha wine grapes, which is not regarded as a viable farming option. Given the demarcation of the urban edge around this property, the conversion of the land over the medium to long term is regarded as inevitable. A portion of the proposed development appears to be aligned with the Lynedoch precinct development plan of the Municipal Spatial Development Framework of Stellenbosch Municipality.

The proposed development is of semi-high density and will establish almost 35 residential opportunities per hectare. Being a wine grape farm, the land does not directly contribute to food security, but does provide meaningful job opportunities at present and in the near future. It has been demonstrated that the current farming activities are not sustainable unless an additional source of irrigation water can be secured. It is believed that a development on this site will contribute to the retention of higher value agricultural resources elsewhere in the Stellenbosch or surrounding municipal areas and is therefore supported.

3.11.2 Cultural history

As reported under 3.2.6 and 3.5.2.

3.11.3 Archaeology

The archaeological report indicates that the area proposed for the development yielded some cultural remains but with varied value and preservation. The lithic scatter artefacts in the study area are typical of the transformed agricultural landscape of Stellenbosch and have limited value considering that they have been accumulated and modified to their current ex situ state. The anticipated negative impact of the proposed development on the archaeological resources is considered low due to the degraded and heavily transformed nature of the landscape from centuries of agricultural use.

Archaeological Impact Assessment report concludes that the proposed development, with recommendations, will not negatively impact on the archaeological heritage resources of the site and should be allowed to proceed.

3.11.4 Ecological

The environmental authorisation application will address this.

3.11.5 Socio-economic

As reported under 3.2.1.

3.11.6 Urban design

The urban design concept and landscaping proposals are indicated in report by Terra+ (*Annexures H and I*). The urban design and landscaping framework takes into consideration the bio-physical environment as well as the proposals made in the visual impact assessment.

3.12 Urban development concept

The concept for the development of the land in response to the spatial planning challenges and policies is based on the following strategies:

- A long term phased development with the gradual change from agricultural use to urban development.
- Facilitation of the provision of bulk municipal services infrastructure and improved access to the node.
- Mixed-use development focused on the provision of residential opportunities within walking distance of public transport, albeit currently dysfunctional, and the provision of much-needed affordable housing.
- Retention of the natural systems and the creation of green space to enhance the gateway effect as required in the spatial development policy.
- Protecting the view sheds off Baden Powell Drive through building placement and urban design.
- Maximising residential densities and creating educational opportunities and opportunities for daily needs within walking distance of the transport interchange and in a walkable neighbourhood.
- The integrated development of affordable and economic housing with appropriate value management measures included in the title conditions of the affordable housing to ensure its long term retention.
- An economically viable and economically sustainable development

Primary land use and urban development proposal:

- Approximately 800 - 900 residential opportunities to be established on the property over the long term at densities of 45 – 80 units per hectare.
- Educational and local retail / commercial facilities aimed solely at providing for the needs of the local residents, i.e., in the functional area of influence (or primary market area as in the Demacon Mixed-use Market Study, September 2023).
- Green corridors through and along the boundaries of the development.
- A green buffer along the north-eastern boundary.
- Retention of the usable agricultural resources to create a transition from urban to agricultural use in keeping with the landscape character area indicators.

Connectivity and accessibility:

- Establish a road connection to provide improved access to Baden Powell Drive and employment destinations.
- Develop non-motorised facilities along all new and upgraded road infrastructure.
- Interact with the relevant authorities for the establishment of public transport systems to serve the node.

- Maintain visual and green movement corridors throughout the development to facilitate pedestrian access to the existing Lynedoch Village.
- Provision of an optic fibre network throughout the development to allow for connectivity of all properties.
- Facilitation of public access to the non-residential uses in the core area and interconnectivity with the existing Village.

Open space structure:

- Create green corridors to link existing water features / stream lines with open space networks and stormwater retention facilities where run-off can be filtered before entering the natural system.
- Use urban design to interconnect the development with the surrounding agricultural and undeveloped land.
- Develop the open spaces as part of the development to enhance its visual and social attraction.

Social structure:

- Management of all aspects of the development by property owners, acting as service provider for municipal services.
- Establishment of a property owners' association for the management of the development and infrastructure services.
- Open development with publicly accessible private streets, open spaces, and facilities managed by the property owners' association.
- Provision of private education facilities for resident learners and open to the public.

The proposed planning and phased development of the property contribute to intensification and densification around existing urban nodes in proximity of major transport interchanges, corridors, and infrastructure by development that improves the efficiencies in service provision as set out above, on under-utilised land within an identified urban node and in an area of need where housing demand outstrips supply. It does not diminish the supply of ecological or commercially viable agricultural resources and does not have any significant negative effect on the surrounding agricultural area.

4. CONCLUSION

The above application for the consideration of the rezoning and subdivision and approval of the long-term development can be considered favourably, as the proposed development is aligned to the spatial policies applicable to the development of the designated nodes and will contribute to provision of community facilities, housing, and infrastructure services.

JSAMSON CONSULTANCY
PROFESSIONAL PLANNER

17 St Thomas Road, Claremont, 7708
Mobile: +27 (0)82 467 3748
E-mail: Jacqui@jsamsonconsultancy.com

YOUR REF: TP752/2024-WELMOED FARM 468 PTN 28
OUR REF: JSC/03/A1

DATE: 20 SEPTEMBER 2024

The Director: Planning and Development
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7600

Per email:
landuse.enquiries@stellenbosch.gov.za

Dear Sir/Madam

SITE SPECIFIC MOTIVATION REGARDING THE LAND DEVELOPMENT PROPOSAL FOR REMAINDER PORTION 28 OF THE FARM WELMOED NO. 468. LYNEDOCH, STELLENBOSCH

The following submission serves as the site specific motivation for the proposed mixed-use development at Remainder Portion 28 of the Farm Welmoed No. 468. This should be read together with the application and motivation report submitted on 28 May 2024.

1. STELLENBOSCH MUNICIPALITY IDP AND SDF

1.1 IDP

The IDP lists a number of spatial challenges, as indicated in the extract inserted below. Of note is the reference to the need to adapt to climate change, with reference to the current agricultural use of the property, which is no longer sustainable, and the need for the provision of planned urban settlements for those who cannot afford to live in the low density unaffordable residential neighbourhoods of the major towns.

The proposed development at Remainder 28 of Farm Welmoed No. 468 is a mixed-use and mixed income development that responds to the anticipated growth in the municipal area's population. This development includes provision for inclusionary housing, thus providing for affordable housing at the lowest level possible for private sector developers, and further proposes housing for middle income commuters through the provision of high density dwellings within walking distance of the Lynedoch Station. It is thus responsive to the stated needs of the IDP.

The figure below is an extract of Table 29 of Stellenbosch Municipality IDP, 2023.

Table 29: Spatial Challenges

Theme	Spatial Challenges
Biophysical context	‡ The degradation of key ecological assets and loss of productive agricultural land has been ongoing. ‡ The condition of the river systems within the municipality has deteriorated. ‡ Climate change is likely to have a significant impact on the natural resource base of the municipal area, which will include a reduction in water, increased temperatures, increased fire risks, and increased incidences of extreme weather events. This in turn will impact agricultural production, scenic landscapes, the liveability of urban areas and the ability to provide basic services such as water and sewerage treatment.
Socio-economic context	‡ The population in the municipality will continue to grow above the average provincial rate, and urbanisation rates will increase with settlements absorbing the bulk of growth. ‡ The ability of the economy to absorb growth, particularly concerning job creation, is concerning. ‡ The informal sector will continue to provide livelihoods to a significant proportion of residents. ‡ The growing youthful population, large student population, and the seasonal influx of labour are likely to increase the municipality's dependency ratio, in addition to a smaller base from which the municipality can collect revenue to provide services and opportunities that will improve the lives of the poor. ‡ Inequality in the municipal area, and particularly in historic towns such as Stellenbosch and Franschhoek, remains significant and current development patterns are not addressing the issue. ‡ Crime rates remain high and the market response i.e. private security provision for those who can afford it, is likely to exacerbate inequality.

The proposed development, considered the impact of climate change together with the declining agriculture potential resulting in a lower socio- economic benefit of the agricultural use. An Agriculture Impact Assessment dated June 2023 was conducted by *AgriInformatics* and included as part of the application submitted in May 2024. The assessment, read together with the Market Study report by *Demacon* dated September 2023 (submitted with May 2024 land use application).

The following is an extract from p56 of the *Demacon* Market Study report.

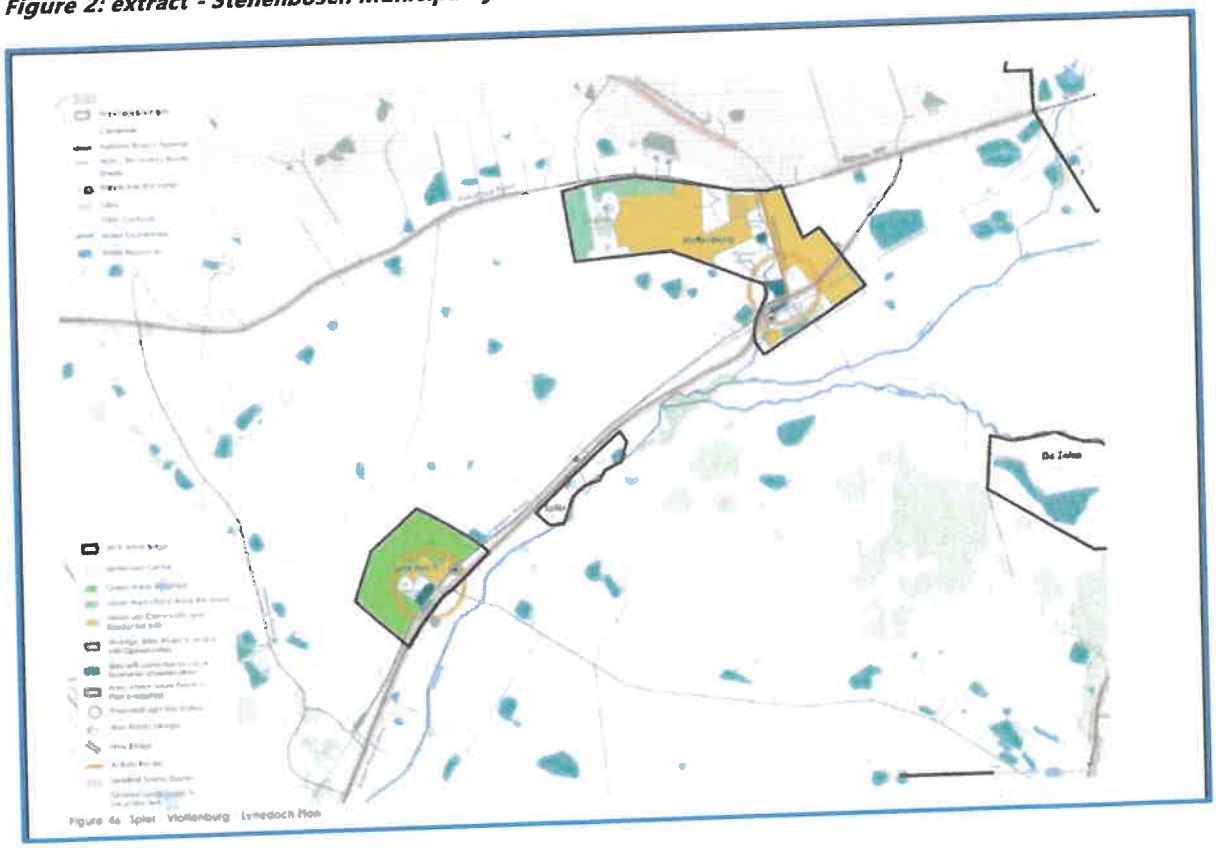
- An estimated 322 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 64 units with a total of ±300 units that could be developed and taken-up over the short term of 3-5years.
- An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units with a total of ±750 units that could be developed and taken-up over the medium to longer term over a 5-to-10-year period.

The Market Study concludes that the proposed development will promote the sustainable use of Rem Portion 28 of Farm Welmoed No 468 as it responds to the socio-economic needs of Stellenbosch municipal area.

1.2 MSDF

The application area currently falls within the urban edge of the Lynedoch Node. Despite the fact that reference is made to the character and extent of the current Lynedoch Eco-Village and the Stellenbosch Sustainability Institute, the boundaries of the Lynedoch Node is extended to fully include the application area, The Urban Edge therefore runs along the property boundary of the Remainder Portion 28 of the Farm Welmoed No 468. As a result, the land development application was compiled, with specialist studies and assessments conducted to determine the sustainable land use of the property.

Figure 2: extract - Stellenbosch Municipality SDF, 2023, Vlottenburg - Spier - Lynedoch Framework



In terms of residential planning, the MSDF stipulated that over the longer term, it is believed that some settlements along the Baden-Powell-AdamTas-R304 corridor can support larger populations, particularly the broader Muldersvlei/ Koelenhof and Vlottenburg/ Spier/Lynedoch areas. The related non-spatial proposals refer to "s*upport [for] private sector led institutional arrangements to enable joint planning and development".* **The proposed development therefore supports the MSDF in that the development is projected to be implemented over a 10-year period.**

Land within the urban edge for development to satisfy the need for affordable housing, is a scarce resource in Stellenbosch, especially since capital (public funds) for development of affordable housing, public transport and municipal infrastructure services, is a scarce resource. On the other hand, land for viticulture is an abundant resource, as is wine, of which there is a surplus in South Africa.

The proposed full development of the land within the urban edge will constitute the best use of the available resources (i.e., the best practicable environmental option). A planned full development of the property over time will provide for a growing population in need of housing in proximity of places of employment and existing (potential) commuter transport infrastructure. The resultant increase in revenue will assist the municipality to provide for the infrastructure and socio-economic needs of its growing population.

2 SUSTAINABILITY OF AGRICULTURE USE VS URBAN DEVELOPMENT

According to the *Demacon Socio-Economic and Fiscal Report* dated September 2024 (attached hereto), the proposed real estate development will transform land currently used for wine grape production into a more diverse set of land uses. This shift will change the economic function of the property, moving from agricultural to various productive uses. This Report considers the opportunity cost of this transition, comparing the economic benefits of the new development with the current agricultural value.

Currently, the agricultural use of the property generates significant positive impacts. With an operational expenditure of about R2.6 million, the farming activities stimulate approximately R4.8 million in business sales, contribute R2.0 million to GDP, and support eight jobs in the Western Cape economy. These benefits are primarily due to wine grape production and related processing activities

The long-term sustainability of the property's economic benefits as a commercial agricultural unit is questionable. The *Agriculture Impact Assessment* report by *AgriInformatics* (2023) highlights several challenges:

- **Low Yields**: Current vineyard yields are 5.5 tons per hectare, far below the 15 tons needed for sustainable production.
- **Aging Vineyards**: The vineyards are aging, with limited capacity for replacement and insufficient water resources.
- **High Costs**: Rising input costs and limited irrigation potential hinder profitability.
- **Declining Viability**: The farm's commercial viability is decreasing due to these factors, along with broader industry trends in South Africa.

Overall, the property's agricultural functions may become unproductive over time, making it a suboptimal use of the land's economic potential.

The proposed development, with a R1.5 billion capital investment, is expected to generate between R1.5 billion and R3.5 billion in additional GDP and business sales during construction, creating nearly 5,300 temporary jobs. Once operational, it could contribute R301 million in household and operational expenditures, resulting in up to R317 million in sustained GDP and supporting around 890 sustained jobs.

The agricultural functions of the property are becoming less productive due to aging vineyards, high replacement costs, and rising input costs, thereby limiting economic expansion. In contrast, the proposed mixed-use development promises greater economic benefits, both in the short term during construction and in the long term once operational, by meeting market demand and addressing urban development pressures

"In comparing the potential economic, socio-economic, and fiscal impacts of the proposed development to the loss generating agricultural use, the impact assessment indicates that the proposed development stands to create a considerable net benefit to the local economy, not least of which would be additional rates and taxes. The long-term and sustained economic value generated by the mixed-use development far exceeds the declining economic value of the current agricultural use of the property. Therefore, the proposed development represents a greater economic benefit to the local economy by establishing long-term value, in contrast to the diminishing returns of continued wine grape production." **(Demacon, September 2024)**

3 AVAILABLE BULK INFRASTRUCTURE CAPACITY

A bulk infrastructure capacity study commissioned by Stellenbosch Municipality, was compiled by *GLS Consulting* and included a Water Master Plan dated June 2023 and the Sewer Master Plan dated June 2023. It should be noted that the future development of Rem Portion 28 of Farm Welmoed No 468 was conceptually taken into consideration for the Stellenbosch Municipality June 2023 master plans for the water and sewer networks.

GLS Consulting investigated and commented on the bulk water supply and sewer discharge of this proposed, mainly residential, development and informed the proposed development on Remainder Portion 28 of Welmoed Farm 468. This led to a bulk water and sewer capacity investigation report performed for the development which was issued in 25 July 2023 and updated in March 2024. A copy of the July 2023 report was included in the land development application submitted in May 2024. The March 2024 report is attached hereto. In this updated March 2024 report, phasing for the different development areas within the larger development node was included, in order to comment on the phasing of the proposed infrastructure upgrades.

With reference to water and sewer bulk capacity, the following conclusions are made in the *GLS Consulting* March 2024 Report.

3.1 WATER NETWORK CAPACITY

The existing pipes of the Polkadraai system in the Baden Powell Drive have insufficient spare capacity to accommodate the proposed development. It is proposed that the development is supplied with water from the Faure system with a connection to the existing 160 mm diameter pipe on the corner of Baden Powell Drive and Annandale Road. **Bulk water capacity is therefore available at the Faure system and can accommodated the proposed land development at Rem Portion 28 of the Farm Welmoed No 468.**

3.2 SEWER NETWORK CAPACITY

There are no sewer services in the vicinity of the proposed development. The nearest bulk infrastructure is the recently constructed Blaauwklippen pumping system to the north of the development area, which discharges at the Stellenbosch Wastewater Treatment Plant (WWTP). The proposed development is located inside the sewer priority area.

It is proposed that sewage from the development gravitates towards the lowest point of Remainder Portion 28 of Farm 468, from where sewage should be pumped to the existing Blaauwklippen pumping station. **There is sufficient capacity in the existing Blaauwklippen pumping system to accommodate the proposed development.**

4. CONCLUSION

In conclusion, the strict application of the land designation in the SDF for green space is not advantageous or beneficial in terms of long-term sustainable use. The growing population and subsequent need for accommodation with access to social and economic opportunities, coupled with the pressure placed on the Municipality to address its service delivery mandate, results in a greater reliance on private sector and developers to respond to this need. The proposed mixed use development includes inclusionary housing which is catering for the medium to lower income households as well as a community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities amongst others to complement the existing facilities and functions of the Sustainability Institute and Lynedoch Village.

This proposed development at Remainder Portion 28 of Farm Welmoed No 468 is desirable and supports the long term intention of the Lynedoch Node. The application with all its supporting plans and reports provides sufficient site specific motivation for a sustainable development that warrants a favourable consideration for approval.

Yours faithfully



MS JACQUI SAMSON

GLS

Infrastructure planning

28 March 2024

UDS Africa
9 Electron Street
Techno Park
STELLENBOSCH
7600

Attention: Mr Cobus Louw

Dear Sir,

DEVELOPMENT OF PORTION 28 OF FARM 468 (WELMOED DEVELOPMENT), STELLENBOSCH: CAPACITY ANALYSIS OF THE BULK WATER & SEWER SERVICES

This is an update of the bulk water and sewer capacity investigation report performed for development on portion 28 of Farm 468, dated 25 July 2023. In this updated report phasing for the different development areas within the larger development node was included in order to comment on the phasing of the proposed infrastructure upgrades.

Your request for GLS Consulting to investigate and comment on the bulk water supply and sewer discharge of the proposed development (mainly residential development of portion 28 of Farm 468, Stellenbosch), refers.

This document should inter alia be read in conjunction with the Water Master Plan (performed for the Stellenbosch Municipality) dated June 2023 and the Sewer Master Plan dated June 2023.

Future development areas V1.1 to V1.9, which include the proposed development area, were conceptually taken into consideration for the June 2023 master plans for the water and sewer networks.

1. WATER DISTRIBUTION SYSTEM

1.1 *Distribution zone*

Portion 28 of Farm 468 is located on the western side of the Baden Powell Drive (R310 Main Road) adjacent to the existing Lynedoch Eco Village. The existing Lynedoch development is supplied with bulk water from the Polkadraai rural water supply scheme, with alternative supply possible from the Faure rural water supply scheme.

The master planning indicated that the development area below the 60 m contour on portion 28 of Farm 468 should be accommodated in the existing Faure water supply scheme. The connection to the existing system should be done on the 160 mm diameter pipe on the corner of the Baden Powell Drive and Annandale Road, as shown on Figure 1 attached. This will serve Phase 1 to Phase 13 of the larger development area.

GLS Consulting (Pty) Ltd
T +27 21 880 0388
Stellenpark, Block D North, Cnr of R44 and School Rd, Jamestown, Stellenbosch, 7600, ZA | PO Box 814, Stellenbosch, 7599, ZA
Reg no: 2007/003039/07
www.gls.co.za

Directors: Flip du Plessis, Tsolane Mokoena

Water pressure from the Faure system is insufficient to service the higher lying areas of portion 28 of Farm 468 (areas above the 60 m contour) and it is proposed in the master planning that these areas are supplied with water directly from the recently constructed Skilpadvlei reservoir, located to the north of the proposed development, as shown on Figure 2 attached. This connection will serve Phase 14 of the development.

The development is situated inside the water priority area.

1.2 *Water demand*

The total annual average daily demand (AADD) and fire flows for the proposed development were calculated as follows:

Potion 28 of Farm 468 [(1)], [(2)]:

• 355 Medium density residential units (40 units/ha) @ 450 L/d/unit		=	159,8 kL/d
• 515 High density residential units (80 units/ha) @ 300 L/d/unit		=	154,5 kL/d
• 14 Allotment Villa units @ 2,0 kL/d/unit		=	28,0 kL/d
• 1,78 ha School area @ 12,0 kL/d/ha		=	21,4 kL/d
• 0,5 ha Business/commercial area @ 20,8 kL/d/ha		=	10,4 kL/d
• 0,18 ha Clubhouse facility area @ 12,0 kL/d/ha		=	2,2 kL/d
	Total	=	376,3 kL/d

- Fire flow criteria (Moderate risk) = 25 L/s @ 10 m

(1) As per Table J.2 and J.4 from Section J – Water Supply of "The Neighbourhood Planning and Design Guide" (so called "Red book").

(2) The total water demand of 376,3 kL/d for portion 28 of Farm 468 can be apportioned 354,3 kL/d for the lower lying areas supplied from the Faure system and 22,0 kL/d for the higher lying areas supplied from the Skilpadvlei reservoir in the Polkadraai system.

1.3 Present situation

1.3.1 Network capacity

The existing pipes of the Polkadraai system in the Baden Powell Drive have insufficient spare capacity to accommodate the proposed development. It is proposed that the development is supplied with water from the Faure system with a connection to the existing 160 mm diameter pipe on the corner of Baden Powell Drive and Annandale Road.

The Faure system is supplied with water from the City of Cape Town's Faure reservoir with a Top Water Level (TWL) of 110 m above mean sea level (m a.s.l.) and can only supply sufficient water pressure to development on portion 28 of Farm 468 below the 60 to 70 m contour (Phase 1 to Phase 13).

It is proposed that the development area above the 60 to 70 m contour level (Phase 14) be supplied with water from the newly constructed Skilpadvlei reservoir in the Polkadraai system.

The Faure system has sufficient spare capacity to accommodate the proposed Phases 1 to 13 of the development area below the 60 to 70 m contour level.

A small section of 160 mm diameter pipeline between the proposed connection point for the development and the existing 200 mm diameter pipeline that are located adjacent to the Annandale Road, on the eastern side of the Eerste River, will however experience a flow velocity of more than 1.2 m/s during peak demand conditions. This is not a concern, but in order to reinforce the total network it can be considered to upgrade this pipeline to a 200 mm diameter pipe in future.

A new dedicated supply pipeline should be constructed from the Skilpadvlei reservoir to the higher lying Phase 14 erven of portion 28 of Farm 468. The TWL of the Skilpadvlei reservoir is 168 m a.s.l. and a pressure reducing valve (PRV) should be constructed on this pipeline to reduce water pressure at the development.

The following main internal pipes will be required for the development:

Potion 28 of Farm 468 (area supplied from Polkadraai system)

- SPW3.3 : 260 m x 200 mm Ø internal network pipe
- SPW3.4 : 150 m x 200 mm Ø internal network pipe (1)

Potion 28 of Farm 468 (area supplied from Faure system)

- SFW1.1 : 280 m x 250 mm Ø internal network pipe and required to connect to existing Faure system.
- SFW1.2 : 1 550 m x 200 mm Ø internal ring feed for the development

(1) Internal pipe SPW3.4 is an emergency connection between the Polkadraai and Faure systems to improve redundancy of the system.

1.3.2 *Reservoir capacity*

The criteria for total reservoir volume used in the Stellenbosch Water Master Plan is 48 hours of the AADD (of the reservoir supply zone). There is sufficient spare capacity available at the existing Skilpadvlei and Faure reservoirs in order to accommodate the proposed development in the existing Polkadraai and Faure water systems.

1.4 *Implementation of the master plan*

The following master plan item are required to supply the higher lying erven of portion 28 of Farm 468 with water from the existing Skilpadvlei reservoir:

Network upgrade (Polkadraai system)

• SPW3.1	:	2 095 m x 200 mm Ø new supply pipe		R 4 214 000 *
• SPW3.2	:	New PRV to regulate water pressure		R 314 000 *
			Sub-total	R 4 528 000 *

The following master plan item is recommended to be implemented in order to improve network conveyance and fire flow to the development from the Faure system:

Network upgrade (Faure system)

- SFW1.5 : 310 m x 200 mm Ø replace existing 160 mm Ø pipe (2) R 1 062 000 *

(* Including P & G, Contingencies and Fees, but excluding VAT - Year 2022/23 Rand Value. This is a rough estimate, which does not include major unforeseen costs).

Take note that the routes of the proposed pipelines and location of the proposed PRV are schematically shown on Figures 1 & 2 attached, but have to be finalised subsequent to detailed pipeline route and PRV position investigations.

(2) Master plan pipe SFW1.5 is not a minimum requirement in order to accommodate the proposed development in the existing water system.

2. SEWER NETWORK

2.1 *Drainage area*

There are no sewer services in the vicinity of the proposed development. The nearest bulk infrastructure is the recently constructed Blaauwklippen pumping system to the north of the development area, which discharges at the Stellenbosch Wastewater Treatment Plant (WWTP).

The proposed development is located inside the sewer priority area.

2.2 *Sewer flow*

The proposed development was taken into consideration for the June 2023 master plan for the sewer network.

The peak day dry weather flow (PDDWF) for the proposed development area is calculated as 263,4 kL/d.

2.3 Present situation

It is proposed that sewage from the development gravitates towards the lowest point of portion 28 of Farm 468, from where sewage should be pumped to the existing Blaauwklippen pumping station. There is sufficient capacity in the existing Blaauwklippen pumping system to accommodate the proposed development.

The following internal outfall sewers are proposed in order to accommodate the sewer flows from the respective smaller development nodes on portion 28 of Farm 468:

Internal network:

- SSS5.5 : 560 m x 160 mm Ø internal outfall sewer
- SSS5.6 : 400 m x 200 mm Ø internal outfall sewer
- SSS5.7 : 120 m x 160 mm Ø internal outfall sewer
- SSS5.8 : 250 m x 160 mm Ø internal outfall sewer
- SSS5.9 : 390 m x 160 mm Ø internal outfall sewer

2.4 *Implementation of the master plan*

The following master plan items are required to pump sewage from the proposed development to the existing Blaauwklippen bulk pumping station:

Network upgrade

• SSS5.1 :	4 100 m x 160 mm Ø new rising main	R	6 985 000 *
• SSS5.2 :	New Welmoed sewer pumping station (capacity = 12 L/s)	R	3 304 000 *
• SSS4.1 :	1 060 m x 315 mm Ø new bulk sewer (Stellenbosch Municipality is in the process to implement this item; currently in tender phase for construction)		Cost not included
	Total	R	10 289 000 *

(* Including P & G, Contingencies and Fees, but excluding VAT - Year 2022/23 Rand Value. This is a rough estimate, which does not include major unforeseen costs).

Take note that the routes of the proposed pipelines and location of the proposed pumping station are schematically shown on Figures 3 & 4 attached, but have to be finalised subsequent to detailed pipeline route and pumping station position investigations.

3. CONCLUSION

The developer of portion 28 of Farm 468 (Welmoed development) in Stellenbosch may be liable for the payment of a Development Contribution (as calculated by Stellenbosch Municipality) for bulk water and sewer infrastructure as per Council Policy.

The development of Phase 1 to Phase 13 below the 60 m contour line can be accommodated within the existing Faure rural water system without any upgrades required.

The development of Phase 14 on portion 28 of Farm 468 above the 60 m contour line should be supplied with water directly from the Skilpadvlei reservoir in the Polkadraai system. Master plan item SPW3.1 will be required to supply the development with bulk water from the Skilpadvlei reservoir and master plan item SPW3.2 will be required to manage static pressures at the development.

There are no sewer services in the vicinity of the proposed development and master plan items SSS4.1, SSS3.1 & SSS3.2 will be required to pump sewage from the proposed development area to the existing Blaauwklippen bulk sewer pumping station, located roughly 5.0 km to the north east of the proposed development.

The existing Blaauwklippen pumping station has sufficient spare capacity to accommodate the proposed development.

We trust you find this of value.

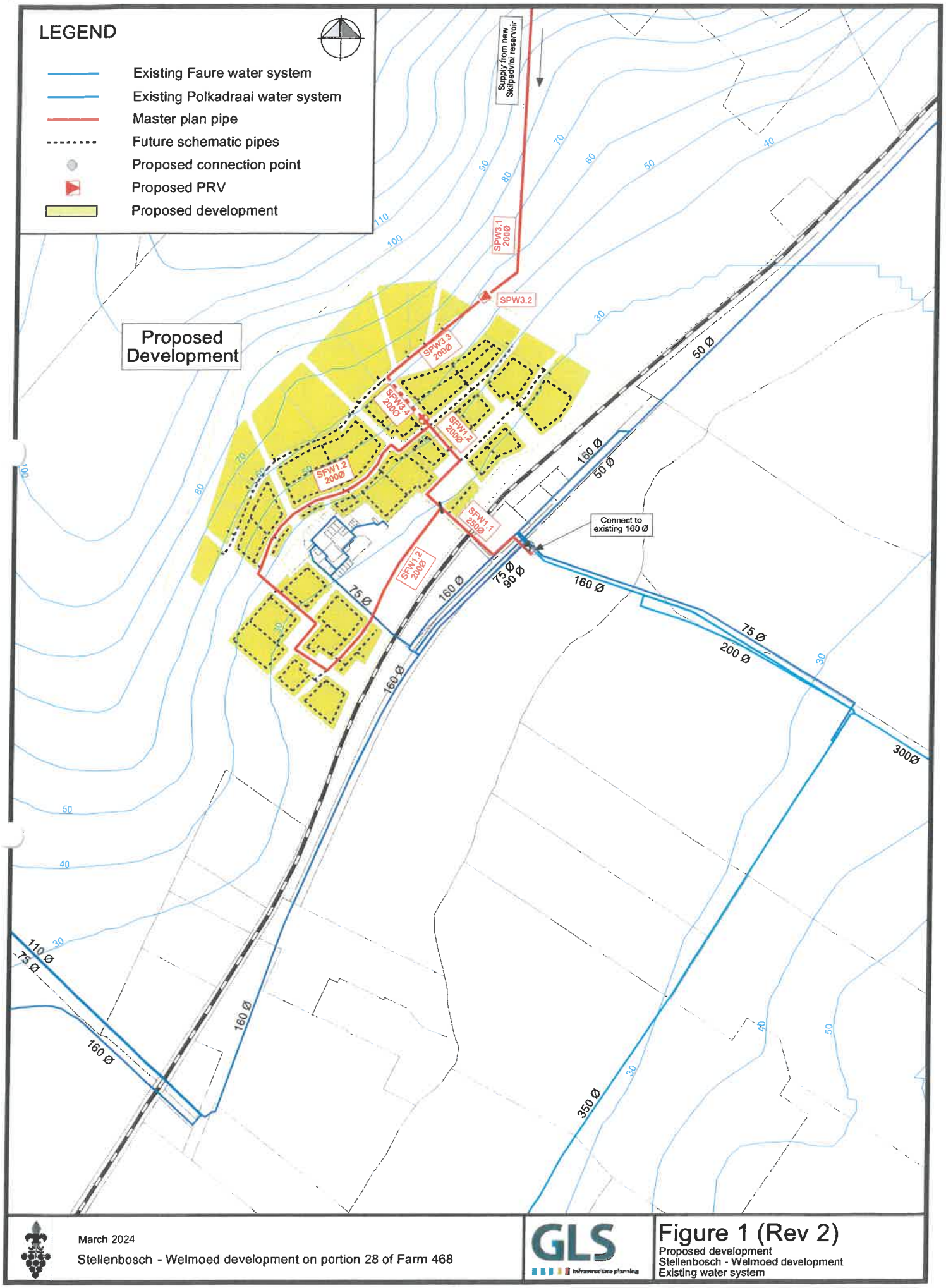
Yours sincerely,

GLS CONSULTING (PTY) LTD
REG. NO.: 2007/003039/07

Per: PC DU PLESSIS

cc. The Director
Directorate: Infrastructure Services
Stellenbosch Municipality
P. O. Box 17
STELLENBOSCH
7599

Attention: Mr Paul Joubert



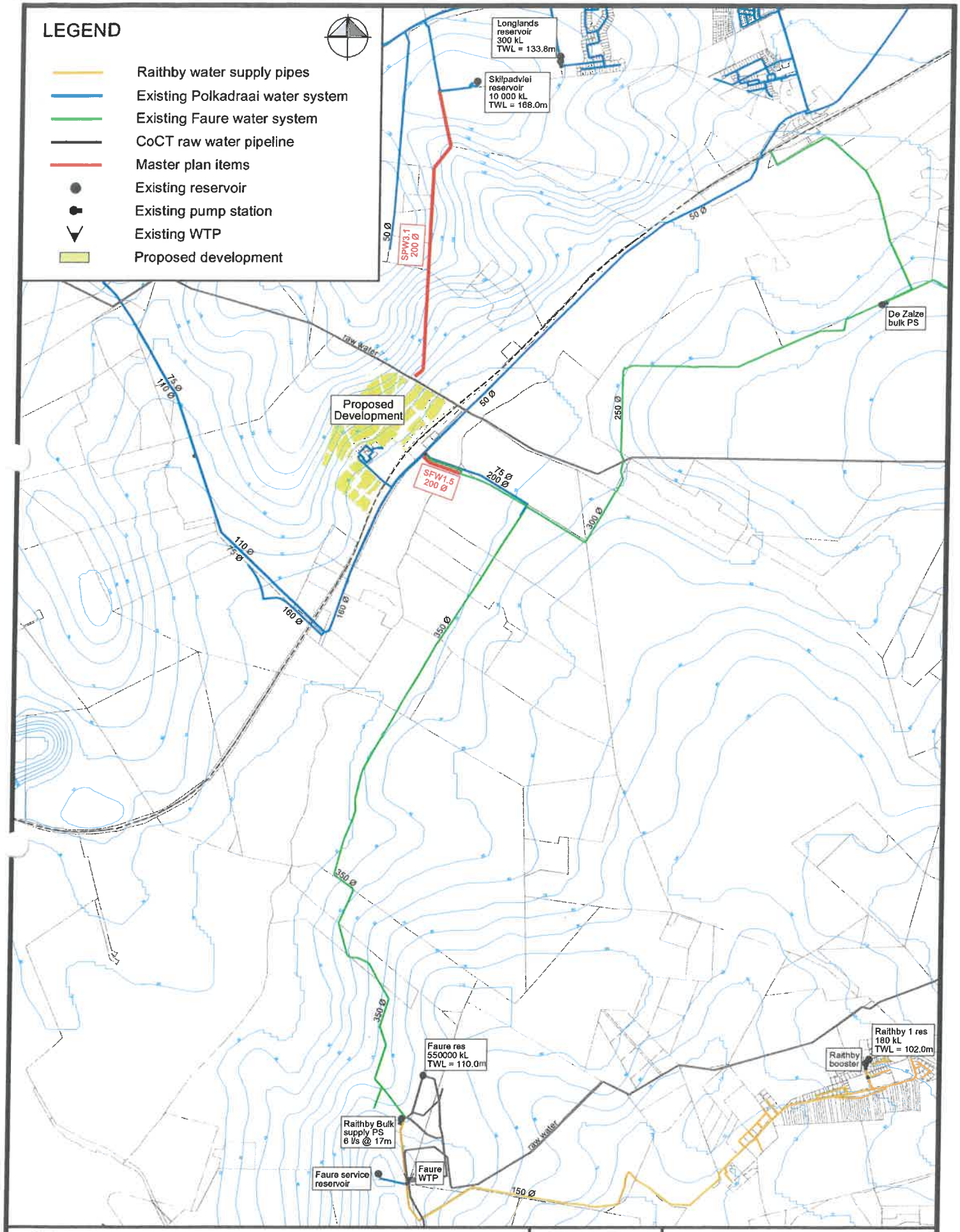
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS

Figure 1 (Rev 2)

Proposed development
Stellenbosch - Welmoed development
Existing water system



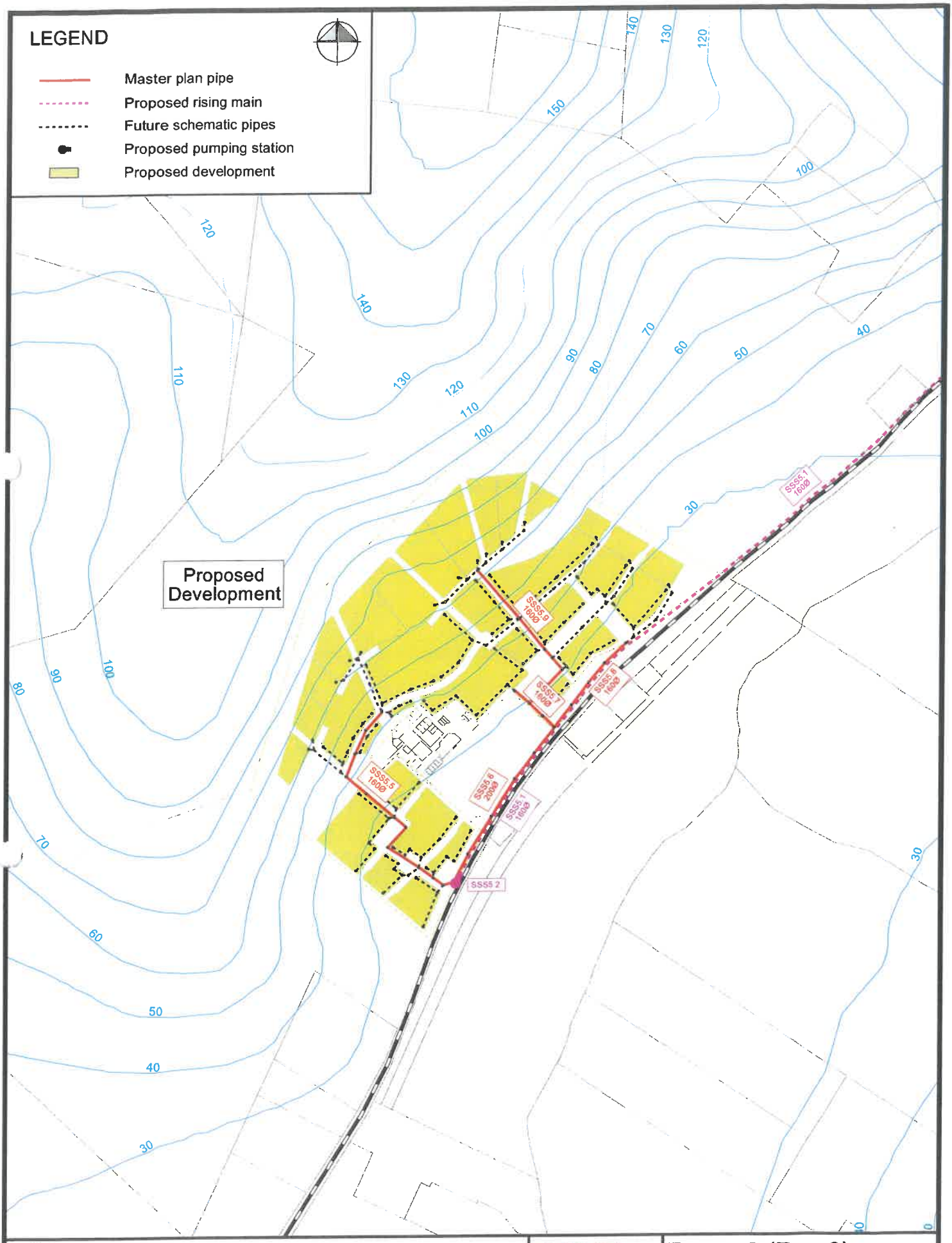
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS

Figure 2 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Water Master Plan



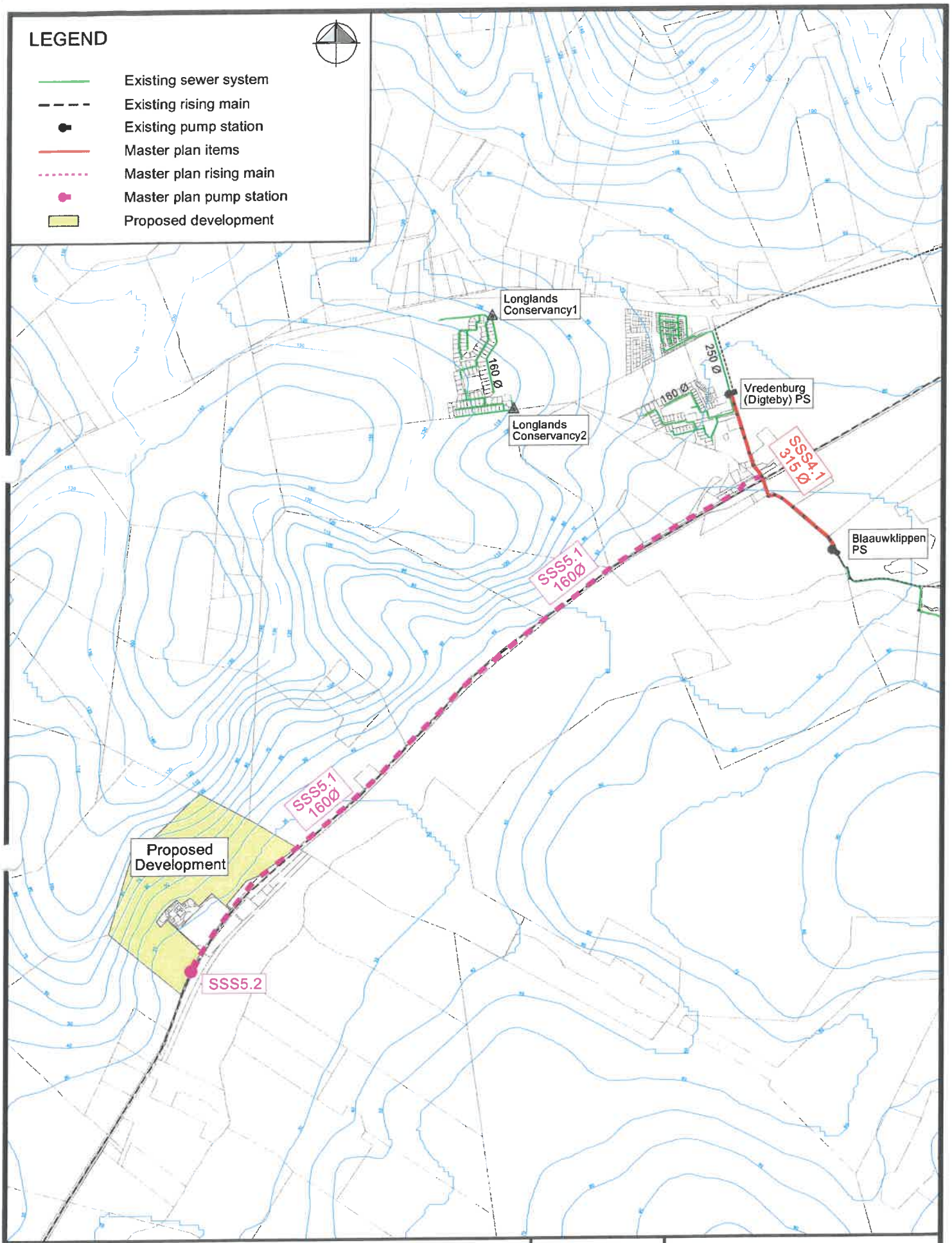
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS

Figure 3 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Existing sewer system



March 2024

Stellenbosch - Welmoed development on 28 of Farm 468

GLS

Figure 4 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Sewer Master Plan

ANNEXURE A: LOCALITY



Ptn 28 Farm Welmoed Estate No. 468

Legend

- Farm Portions
- Erf

Map Center: Lon: 18°46'1.9"E
Lat: 33°58'53.4"S

Scale: 1:5 000

Date created: September 12, 2022

Western Cape Government
Agriculture
FOR YOU

ANNEXURE B: APPLICATION FORM

July 2023v1

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

DIRECTORATE: PLANNING & ECONOMIC

DEVELOPMENT

www.stellenbosch.gov.za/planning-portal/
FOR ENQUIRIES CONTACT landuse.enquiries@stellenbosch.gov.za or 021- 808 8606

SUBMIT APPLICATION BY UPLOADING COMPLETED FORM AND RELEVANT INFO TO THE
Town Planning Application Management System (TPAMS)
AFLA Portal (stellenbosch.gov.za) /
https://citymaps.stellenbosch.gov.za/aflaportal/home

NOTE: In terms of section 69 of the Bylaw on Municipal Land Use Planning 2023 the Municipality may categorise applications for consideration by either an authorised employee or the Municipal Planning Tribunal (Categorisation Model for Decision-making July 2023). These land use applications are subject to prescribed administrative and public participation processes and depending on the type of application, *Land Use Application Form A or Form B* must be completed. *Land Use Application Form B* can be used if the application ONLY comprises of a permanent departure. If any other type of application is also required, *Land Use Application Form A* must be completed. *Land Use Application Form C* must be used if the application comprises of an application for permission either in terms of the zoning scheme or in terms of a condition of approval or in terms of the title deed.

LAND USE PLANNING APPLICATION FORM A Section 15 of the Municipal Bylaw on Land Use Planning 2023 and other relevant legislation	
Complete form using BLOCK letters and ticking the appropriate boxes	
PART A: APPLICANT DETAILS	
First name(s)	Jacqueline
Surname	Samson-Swartz
Company name *(if applicable)*	J Samson Consultancy obo Virdus Works (Pty) Ltd
Postal Address	17 ST Thomas Rd, Claremont, 7708
Email Address	Jacqui@jsamsonconsultancy.com
Contact Number(s)	+27 82 4673748
PART B: REGISTERED LANDOWNER(S) DETAILS *(If different from applicant)*	
Registered owner(s) Name	Billy Visser Trust with POA to Uniqon Developers (Pty) Ltd Reg. no. 1997/021737/07
E-mail Address	etienne@uniqon.co.za
Contact Number	+27 12 809 0262

PART C: PROPERTY DETAILS *(in accordance with title deed)*												
Erf No		Suburb		Town								
Farm no	468	Farm Portion	28	Nearest Town	Stellenbosch							
Physical or Street Address	Lynedoch Road			Property / Business / Farm known as								
Current Zoning	Agriculture and Rural Zone											
Additional or Consent Uses	None											
Current activities	Low scale viticulture											
Property Size / Extent	45,5 ha					Are there existing buildings?	Y					
Title Deed number	T24050/2019											
Any restrictions ito Conveyance's Certificate?		N	If yes, list condition(s) as per certificate.									
Are the restrictive conditions in favour of a third party?		N	If yes, list the party(ies).									
Is the property owned by Council?		N	If yes, attach a power of attorney signed by the Municipal Manager or delegated authority									
Is the building located within the historical core?		N	Is the building older than 60 years?		N	Is the application triggered by the National Heritage Resources Act, 1999 (Act 25 of 1999)[1]		N	If yes, indicate which section are triggered and attach relevant permit.			
Any existing unauthorized buildings and/or land use on the subject property(ies)?			N	If yes, is this application to legalise the building / land use[2]?				N				
Are there any pending court case(s) / order(s) relating to the subject property(ies)?			N	Are there any land claim(s) registered on the subject property(ies)?				N				

PART D: PRE-APPLICATION CONSULTATION AND OR SCRUTINY			
Has there been any pre-application consultation?			If yes, attach the minutes of the pre-application consultation.
Has the pre-application scrutiny form been submitted?			If yes, attach the written feedback received.

The submission of a pre-application scrutiny form to Landuse.Applications@stellenbosch.gov.za is compulsory for the following type of applications and written feedback must be attached to the land use planning application form: rezoning, subdivision and consolidation of land, removal, suspension or amendment of restrictive title deed conditions, the amendment, deletion, or imposition of conditions of approval and the cancellation of an approved subdivision plan.*

[1] All applications triggered by section 38(1)(a) - (e) in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999) may not be processed without a permit issued by the relevant department

[2] No application may be submitted to legalize unauthorised building work and or land use on the property if a notice has been served in terms of Section 87(2)(a), and until such time a Section 91 Compliance Certificate have been issued in terms of the Stellenbosch Land Use Planning By-law

PART E: LAND USE PLANNING APPLICATIONS AND PAYMENT OF FEES	
APPLICATIONS IN TERMS OF SECTION 15 OF THE MUNICIPAL BYLAW ON LAND USE PLANNING 2023	
Type of application	**Tick**
15(2)(a) rezoning of land*	X
15(2)(b) a permanent departure from the development parameters of the zoning scheme	
15(2)(c) a departure granted on a temporary basis to utilise land for a purpose not permitted in terms of the primary rights of the zoning applicable to the land	
15(2)(d) a subdivision of land that is not exempted in terms of section 24, including the registration of a servitude or lease agreement*	X
15(2)(e) a consolidation of land that is not exempted in terms of section 24*	
15(2)(f) a removal, suspension or amendment of restrictive conditions in respect of a land unit*	
15(2)(g) a permission required in terms of the zoning scheme	X
15(2)(h) an amendment, deletion or imposition of conditions in respect of an existing approval*	
15(2)(i) an extension of the validity period of an approval	
15(2)(j) an approval of an overlay zone as contemplated in the zoning scheme	
15(2)(k) an amendment or cancellation of an approved subdivision plan or part thereof, including a general plan or diagram*	
15(2)(l) a permission required in terms of a condition of approval	
15(2)(m) a determination of a zoning	
15(2)(n) a closure of a public place or part thereof	
15(2)(o) a consent use contemplated in the zoning scheme	
15(2)(p) to disestablish a homeowners' association	
15(2)(q) to rectify a failure by a homeowners' association to meet its obligations in respect of the control over or maintenance of services	
15(2)(r) a permission required for the reconstruction of an existing building that constitutes a non-conforming use that is destroyed or damaged to the extent that it is necessary to demolish a substantial part of the building	
OTHER APPLICATIONS	
Deviation from Council Policies/By-laws	
Consent / Permission required in terms of a title deed (includes where permission is required in terms of the Advertising on Roads and Ribbon Development Act, Act 21 of 1940)	

DETAILS FOR INVOICE	
Name & Surname (party responsible for payment)	Virdus Works (Pty) Ltd
Postal Address	3rd Floor, Time Square, Elektron Street, Techno Park, Stellenbosch, 7600
Vat Number (where applicable)	4530303074

1. ***Application fees are per the Council Approved Tariffs. The complete application should first be submitted without the payment of any applicable application fees. Only when satisfied that a complete and accurate application has been submitted, will a proforma invoice be submitted to the applicant with payment instructions. Application fees that are paid to the Municipality are non-refundable as per the Tariff Rules. Once proof of payment is received, the application will be regarded as duly submitted.***
2. ***All indigent residents who are registered as such with the Municipality and with proof submitted together with application will be exempted from applicable fees for Permanent Departure applications including but not limited to building lines, coverage, parking. Contact: Indigent.office@stellenbosch.gov.za or 021 808 8501 or 021 808 8579***
3. ***The applicant is liable for the cost of publishing and serving notice of an application. Additional fees may become applicable, and the applicant will be informed accordingly.***

BANKING DETAILS

Account Holder Name:	Stellenbosch Municipality
Bank:	FIRST NATIONAL BANK (FNB)
Branch no.:	210554
Account no.:	62869253684
Payment reference:	LU/_____ and ERF/FARM _____

Please use both the Land Use Application number and the Erf/Farm number indicated on the invoice as a reference when making EFT payment

PART F: DETAILS OF PROPOSAL *(Brief description of intent of development)*

Uniqon Developers (Pty) Ltd acquired Portion 28 of Farm Welmoed Estate No. 468, Lynedoch, Stellenbosch for urban development purposes in keeping with the urban designation thereof in the approved Stellenbosch Municipality Spatial Development Framework, 2019. Portion 28 is located west of Baden Powell Drive and the Cape Town – Stellenbosch railway line, around Lynedoch Village. It has an area of 45,5 ha which is inside of the delineated urban edge of Lynedoch. Access to Lynedoch Village and the various functions of the Sustainability Institute is through the property, which is closely related to the Village.

The application is for consideration of a phased development, by rezoning of the property to a subdivisional area that provides for mixed uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential, retirement village, private roads, and renewable energy structures;
- private open space zone for conservation of the river corridor, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone for the establishment of small retail outlet, restaurant, medical consulting rooms and offices;
- community zone for the establishment of place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the development;

in terms of the Stellenbosch Municipality Integrated Zoning Scheme Bylaw, 2019.

Name and Date of design guidelines (if applicable)	

		Adjoining erf number				
Building line encroachment	Street		From	m	To	m
	Street		From	m	To	m
	Side		From	m	To	m
	Side		From	m	To	m
	Aggregate side		From	m	To	m
	Rear		From	m	To	m
Exceeding permissible site coverage / footprint			From	%	To	%
Exceeding maximum permitted bulk / floor factor / habitable rooms			From		To	
Exceeding height restriction			From	m	To	m
Exceeding maximum storey height			From	m	To	m

PART G: ATTACHMENTS AND SUPPORTING INFORMATION AND DOCUMENTATION FOR LAND USE PLANNING APPLICATION

Complete the following checklist and attach all the information and documentation relevant to the proposal. Failure to submit all information and documentation required will result in the application being deemed incomplete.

Information and documentation required

Y		Power of attorney / Owner's consent if applicant is not owner			N	Proof of any other relevant right held in the land concerned	
Y		Resolution or other proof that applicant is authorised to act on behalf of a juristic person			N	S.G. diagram / General plan extract (A4 or A3 only)	
Y		Written motivation pertaining to the need and desirability of the proposal		Y		Site development plan or conceptual layout plan (A4 or A3 only) to scale	
Y		Locality plan (A4 or A3 only) to scale		Y		Proof of agreement or permission for required servitude	
Y		Proposed subdivision plan (A4 or A3 only) to scale		Y		Proof of registered ownership **(Full copy of the title deed)**	
Y		Conveyancer's certificate		Y		Written feedback of pre-application scrutiny and Minutes of pre-application consultation meeting (if applicable)	
		N/A	Consolidation plan (A4 or A3 only) to scale			N/A	Land use plan / Zoning plan (A4 or A3 only) to scale
Y			Street name and numbering plan (A4 or A3 only) to scale				
		N/A	Landscaping / Tree plan (A4 or A3 only) to scale			N/A	1: 50 / 1:100 Flood line determination (plan / report) (A4 or A3 only) to scale
		N/A	Abutting owner's consent			N/A	Owners' Association consent
Y			Copy of Environmental Impact Assessment (EIA) / Heritage Impact Assessment (HIA) / Traffic Impact Assessment (TIA) / Traffic Impact Statement (TIS) / Major Hazard Impact Assessment (MHIA) / Environmental Authorisation (EA) / Record of Decision (ROD)	Y			Services Report or indication of all municipal services / registered servitudes
		N/A	Copy of original approval and conditions of approval			N/A	Proof of failure of owner's association
		N/A	Proof of lawful use right			N/A	Any additional documents or information required as listed in the pre-application consultation form / minutes
Y			Required number of documentation copies			N/A	Other (specify):

PART H: AUTHORISATION(S) SUBJECT TO OR BEING CONSIDERED IN TERMS OF OTHER LEGISLATION					
Y		If required, has application for EIA / HIA / TIA / TIS / MHIA approval been made? If yes, attach documents / plans / proof of submission etc.		Specific Environmental Management Act(s) (SEMA) (e.g., Environmental Conservation Act, 1989 (Act 73 of 1989):	
				N/A	National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004)
Y		Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970)		N/A	National Environmental Management: Waste Act, 2008 (Act 59 of 2008)
	N/A	Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) (SPLUMA)		N/A	National Water Act, 1998 (Act 36 of 1998)
	N/A	Occupational Health and Safety Act, 1993 (Act 85 of 1993): Major Hazard Installations Regulations		N/A	Other (specify)
Y		Land Use Planning Act, 2014 (Act 3 of 2014) (LUPA)			
	N	Do you want to follow an integrated application procedure in terms of section 44(1) of the Stellenbosch Municipality Land Use Planning By-Law? If yes, attach motivation.			

SECTION I: DECLARATION

I hereby wish to confirm the following:

1. *That the information contained in this application form and accompanying documentation is complete and correct.*
2. *I'm aware that it is an offense in terms of section 86(1)(e) of said bylaw to supply particulars, information or answers knowing the particulars, information, or answers to be false, incorrect, or misleading or not believing them to be correct.*
3. *I am properly authorized to make this application on behalf of the owner and that a copy of the relevant power of attorney or consent is attached hereto.*
4. *Where an agent is appointed to submit this application on the owner's behalf, it is accepted that correspondence from and notifications by the Municipality in terms of the by-law will be sent only to the agent and that the owner will regularly consult with the agent in this regard.*
5. *I confirm that the relevant title deed(s) have been read and that there are no restrictive title deed restrictions, which impact on this application, or alternatively an application for removal/suspension or amendment forms part of this submission.*
6. *I confirm that I have made known all information relating to possible Land / Restitution Claims against the application property.*
7. *It is the owner's responsibility to ensure that approval is not sought for a building or land use which will conflict with any applicable law.*
8. *The Municipality assesses an application on the information submitted and declarations made by the owner or on his behalf on the basis that it accepts the information so submitted and declarations so made to be correct, true, and accurate.*
9. *Approval granted by the Municipality on information or declarations that are incorrect, false, or misleading may be liable to be declared invalid and set aside which may render any building or development pursuant thereto illegal.*
10. *The Municipality will not be liable to the owner for any economic loss suffered in consequence of approval granted on incorrect, false, or misleading information or declarations being set aside.*

11.	*Information and declarations include any information submitted or declarations made on behalf of the owner by a Competent Person/professional person including such information submitted or declarations made as to his or her qualification as a Competent person and/or registration as a professional.*
12.	*A person who provides any information or certificate required in terms of Regulation A19 of the National Building Regulations and Building Standards Act No 103 of 1977 which he or she knows to be incomplete or false shall be guilty of an offence and shall be prosecuted accordingly.*
13.	*A person who supplies particulars, information, or answers in a land use application in terms of the Stellenbosch Municipality Land Use Planning By-law knowing it to be incorrect, false, or misleading or not believing them to be correct shall be guilty of an offence and shall be prosecuted accordingly.*
14.	*The Municipality will refer a complaint to the professional council or similar body with whom a Competent Person/professional person is registered if it has reason to believe that information submitted, or declaration/s made by such Competent Person/professional person is incorrect, false or misleading.*
15.	*I am aware that by lodging an application, the information in the application and obtained during the process may be made available to the public.*

Applicant's signature:		Date:	27/05/2024
Full name:	Jacqueline Samson		
Professional capacity:	Registered planner A/3401/2023		

ANNEXURE C: APPLICATION AUTHORISATION

ANNEXURE C.1

EXTRACT FROM THE MINUTES OF THE MEETING OF THE TRUSTEES FOR THE TIME BEING OF THE BILLY VISSER TRUST
(TRUST NUMBER: IT 5284/96)

HELD AT Lynedoch **ON THIS** 9TH **DAY OF** January **2024**

PRESENT:

1. **PETRONELLA HENDRINA VISSER** (ID NUMBER: 410316 0028 088)
2. **ELRONA GOOSEN** (ID NUMBER: 651226 0180 086)
3. **ELSARIÉ DE ATH** (ID NUMBER: 720330 0156 083)
4. **SALMOND PETRUS HUYSSTEEN** (ID NUMBER: 640407 5048 080)

RESOLVED THAT:

1. The BILLY VISSER TRUST, (hereinafter referred to as the **"Trust"**) in its capacity as the registered owner of the property known as The Remainder of Portion 28 of the Farm Welmoed Estate No. 468, Registration Division Stellenbosch, Western Cape Province (hereinafter referred to as the **"property"**) hereby authorize, nominate, constitute and appoint the Company UNIQON DEVELOPERS (PTY) LTD (with Company Registration Number: 1997/021737/07) with the power of substitution and agency to be the lawful representatives and agents in the name, place and stead of such Trust and to act as such on its behalf in order to lodge any appropriate Applications for Land Use Rights and/or any other required and/or associated Applications for consent, permits, authorisations or licences which may be necessary, to any authorised statutory body with the necessary authority and/or jurisdiction to adjudicate on such Applications, in terms of any applicable prevailing National, Provincial and/or Municipal legislation, in order to procure the Land Use Rights and to obtain any consent, licence, permit and/or authorisation which may be required for the intended phased mixed-use development to be developed on the property inclusive of multi-unit housing (providing for medium and high-density residential units), business uses, community uses, private open space, transport facilities, public roads, parking and utility uses and for any other ancillary and subservient uses which may be required in that regard, and to otherwise and in general take any actions necessary and/or required to pursue such Applications to finality, including to, if necessary and if required, lodge or

P.A.V.

oppose any Appeals in terms of any applicable and prevailing legislation to any relevant Appeal Authority or other statutory body with the necessary jurisdiction and/or authority to process and decide on such possible Appeals, and to pursue same to finality, and/or to, if required and or necessary, launch or oppose any High Court Applications in pursuance of the outcome envisaged with the abovementioned Applications and/or Appeals and to pursue same to finality.

2. **ELRONA GOOSEN** in her capacity as a Trustee for the time being of the **Trust** hereby be authorized with the power of delegation, substitution and ratification, to appoint any Company, Agent, Consultants, Attorneys and/or Counsel on behalf of the **Trust** for purposes of the drafting, lodging and/or pursuance of the Applications referred to in paragraph 1 *supra* to finality, to sign all documents and/or statements in that regard, to participate in any proceedings and/or appear before any applicable authorities or statutory bodies in pursuance thereof and/or to, as may be required and/or necessary lodge or oppose any Appeals in terms of any applicable and prevailing legislation to any Appeal Authority or other statutory body with the necessary jurisdiction and authority to process and decide on such Appeals, and to pursue same to finality, and/or to, if necessary and if required, launch or oppose any High Court Applications in pursuance of the outcome envisaged with the Applications and/or Appeals mentioned in paragraph 1 *supra*.

CERTIFIED AS A TRUE EXTRACT FROM THE MINUTES OF THE ABOVEMENTIONED MEETING

P. H. Visser.

PETRONELLA HENDRINA VISSER

ELRONA GOOSEN

ELSARIÉ DE ATH

SALMOND PETRUS HUYSSTEEN

6

POWER OF ATTORNEY

I, the undersigned

ELRONA GOOSEN
ID NUMBER: 651226 0180 086

in my capacity as duly authorised Trustee for the time being of the BILLY VISSER TRUST (registered under Trust number IT: 5284/96) (hereinafter referred to as the "**Trust**") hereby authorize, nominate, constitute and appoint the Company UNIQON DEVELOPERS (PTY) LTD (with Company Registration Number: 1997/021737/07) (hereinafter referred to as the "**Company**") and/or any Director of such **Company**, to jointly and/or separately, with the power of substitution and agency be the lawful representatives and agents in the name, place and stead of such **Trust** and to act as such on its behalf in order to lodge any appropriate Applications for Land Use Rights and/or any other required and/or associated Applications for consent, permits, authorisations or licences which may be necessary, to any authorised statutory body with the necessary authority and/or jurisdiction to adjudicate on such Applications, in terms of any applicable prevailing National, Provincial and/or Municipal legislation, in order to procure the Land Use Rights and to obtain any consent, licence, permit and/or authorisation which may be required for the intended phased mixed-use development to be developed on the property known as The Remainder of Portion 28 of the Farm Welmoed Estate No. 468, Registration Division Stellenbosch, Western Cape Province inclusive of multi-unit housing (providing for medium and high-density residential units), business uses, community uses, private open space, transport facilities, public roads, parking and utility uses and for any other ancillary and subservient uses which may be required in that regard, and to otherwise and in general take any actions necessary and/or required to pursue such Applications to finality, including to, if necessary and if required, lodge or oppose any Appeals in terms of any applicable and prevailing legislation to any relevant Appeal Authority or other statutory body with the necessary jurisdiction and/or authority to process and decide on such possible Appeals, and to pursue same to finality, and/or to, if required and or necessary, launch or oppose any High Court Applications in pursuance of the outcome envisaged with the abovementioned Applications and/or Appeals and to pursue same to finality.

£

The aforementioned authority included the power to appoint any Company, Agent, Consultants, Attorneys and/or Counsel for purposes of the drafting, lodging and/or pursuance of the Applications referred to hereinbefore to finality, to sign all documents and/or statements in that regard, to participate in any proceedings and/or appear before any applicable authorities or statutory bodies in pursuance thereof and/or to, as may be required and/or necessary lodge or oppose any Appeals in terms of any applicable and prevailing legislation to any Appeal Authority or other statutory body with the necessary jurisdiction and authority to process and decide on such Appeals, and to pursue same to finality, and/or to, if necessary and if required, launch or oppose any High Court Applications in pursuance of the outcome envisaged with the Applications and/or Appeals mentioned *supra*.

I hereby ratify, allow, confirm and promise and agree to ratify, allow and confirm all and whatsoever my agents shall lawfully do, or cause to be done, by virtue of these present and whatever my said agents have to date done herein.

SIGNED AT UMHLANGA **ON THIS** 9TH **DAY OF** JANUARY **2024**

WITNESSES:

1. _____

2. _____

_____

ELRONA GOOSEN

E

EXTRACT FROM THE MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS OF UNIQON DEVELOPERS (PTY) LTD

(REGISTRATION NUMBER: 1997/021737/07)

HELD AT Pretoria **ON THE** 15 **DAY OF** January **2024**

IT IS RESOLVED:

1. That UNIQON DEVELOPERS (PTY) LTD (hereinafter referred to as the "**Company**") in its capacity as the duly authorised Representative and Agent of the registered owner of the property known as The Remainder of Portion 28 of the Farm Welmoed Estate No. 468, Registration Division Stellenbosch, Western Cape Province (hereinafter referred to as the "**property**"), i.e., BILLY VISSER TRUST (IT: 5284/96), lodge any appropriate Applications for Land Use Rights and/or any other required and/or associated Applications for consent, permits, authorisations or licences which may be necessary, to any authorised statutory body with the necessary authority and/or jurisdiction to adjudicate on such Applications, in terms of any applicable prevailing National, Provincial and/or Municipal legislation, in order to procure the Land Use Rights and to obtain any consent, licence, permit and/or authorisation which may be required for the intended phased mixed-use development to be developed on the **property** inclusive of multi-unit housing (providing for medium and high-density residential units), business uses, community uses, private open space, transport facilities, public roads, parking and utility uses and for any other ancillary and subservient uses which may be required in that regard, and to otherwise and in general take any actions necessary and/or required to pursue such Applications to finality, including to, if necessary and if required, lodge or oppose any Appeals in terms of any applicable and prevailing legislation to any relevant Appeal Authority or other statutory body with the necessary jurisdiction and/or authority to process and decide on such possible Appeals, and to pursue same to finality, and/or to, if required and or necessary, launch or oppose any High Court Applications in

pursuance of the outcome envisaged with the abovementioned Applications and/or Appeals and to pursue same to finality.

2. That **ETIENNE COETZER** in his capacity as a Director of the **Company** hereby be authorized with the power of delegation, substitution and ratification, to appoint any Company, Agent, Consultants, Attorneys and/or Counsel on behalf of the **Company** for purposes of the drafting, lodging and/or pursuance of the Applications referred to in paragraph 1 *supra* to finality, to sign all documents and/or statements in that regard, to participate in any proceedings and/or appear before any applicable authorities or statutory bodies in pursuance thereof and/or to, as may be required and/or necessary lodge or oppose any Appeals in terms of any applicable and prevailing legislation to any Appeal Authority or other statutory body with the necessary jurisdiction and authority to process and decide on such Appeals, and to pursue same to finality, and/or to, if necessary and if required, launch or oppose any High Court Applications in pursuance of the outcome envisaged with the Applications and or Appeals mentioned in paragraph 1 *supra*.

CERTIFIED AS A TRUE EXTRACT OF THE MINUTES OF THE ABOVEMENTIONED MEETING.

DIRECTOR

POWER OF ATTORNEY

I, the undersigned

ETIENNE COETZER
ID NUMBER: 700228 5047 089

in my capacity as Director of UNIQON DEVELOPERS (PTY) LTD (Registration Number: 1997/021737/07) (hereinafter referred to as the "**Company**"), duly authorized thereto by way of a Resolution of the Board of Directors of the abovementioned **Company**, hereby authorize, nominate, constitute and appoint the Company VIRDUS WORKS (PTY) LTD (Company Registration Number: 2018/585747/07), and/or any Director or employee or appointed agent of such Company with the power of substitution and agency to be the lawful representatives and agents in the name, place and stead of the aforementioned **Company** and to act as such on behalf of such **Company** by lodging any appropriate Applications for Land Use Rights and/or any other required and/or associated Applications for consent, permits, authorisations or licences which may be necessary, to any authorised statutory body with the necessary authority and/or jurisdiction to adjudicate on such Applications, in terms of any applicable prevailing National, Provincial and/or Municipal legislation (including any applicable Legislation such as the Spatial Planning and Land Use Management Act (Act 16 of 2013) and the prevailing SPLUMA By-law and/or Town Planning Scheme) in order to procure the Land Use Rights and to obtain any consent, permit, licence and/or authorisation which may be required for the intended phased mixed-use development to be developed on the property known as The Remainder of Portion 28 of the Farm Welmoed Estate No. 468, Registration Division Stellenbosch, Western Cape Province inclusive of multi-unit housing (providing for medium and high-density residential units), business uses, community uses, private open space, transport facilities, public roads, parking and utility uses and for any other ancillary and subservient uses which may be required in that regard, and to otherwise and in general take any actions necessary and/or required to pursue such Applications to finality.

This authority specifically includes the right to, in terms of any applicable prevailing legislation on behalf of the **Company** if required, lodge any further Applications to the relevant authority required to procure the effective vesting of such envisaged Land Use Rights and the executability thereof, and if necessary and if required, to withdraw and/or cancel any such Applications, action and/or representation and if required, to sign all documents which may be required for that purpose to pursue same to finality.

I hereby ratify, allow, confirm and promise and agree to ratify, allow and confirm all and whatsoever such agent or employees shall lawfully do, or cause to be done, by virtue of these present and whatever such agents have to date done herein.

SIGNED AT Pretoria **ON THIS** 15 **DAY OF** January **2024.**

WITNESSES:

1. _____

2. _____

_____

ETIENNE COETZER

EJ

EXTRACT FROM THE MINUTES OF A MEETING OF THE BOARD OF DIRECTORS OF VIRDUS WORKS (PTY) LTD
(REGISTRATION NO.: 2018/585747/07)

PASSED AT Stellenbosch ON THE 4th DAY OF May 2023.

IT WAS RESOLVED:

1. That VIRDUS WORKS (PTY) LTD (the "**Company**"), via its Directors and/or employees, shall render consulting and professional Town Planning Services to any instructing Clients in terms of any applicable and prevailing legislation within the Republic of South Africa, such as *inter alia* the Spatial Planning and Land Use Management Act, Act 16 of 2013, any Municipal Spatial Planning and Land Use Management By-laws and/or any applicable and prevailing Town Planning or related legislation, including Local Government Ordinances or repealed, but still operational legislation, with regard, but not limited to:

   (i) Applications for the amendment of any applicable and prevailing statutory land use management or town planning schemes as well as any applications for consent, permission and/or the relaxation of any provisions in terms of any such land use management or town planning schemes;

   (ii) Applications for the subdivision, consolidation and/or notarial binding of any land portions (including, but not limited to erven in proclaimed land development areas and/or townships, registered farm portions and/or agricultural holdings) as well as any applications for the division of any proclaimed and/or approved land development areas and/or townships;

   (iii) Applications for the deviation and/or departure from any approved and adopted national, provincial and/or municipal spatial development frameworks and/or plans, policies or strategies, which prohibit and/or restrict the property development proposals and/or initiatives of instructing Clients;

   (iv) The pursuance and/or finalisation of any pending applications, appeals and/or any other matters of instructing clients, which were pending before

any erstwhile town planning and/or land development tribunals at the commencement of the aforementioned Spatial Planning and Land Use Management Act and/or the By-laws of a Municipality;

(v) Applications for the establishment of any new townships or the extension of any boundaries of any proclaimed and/or approved townships or land development areas;

(vi) Applications for the removal and/or suspension of any conditions of title and/or servitudes, or the procurement of consent from the beneficiaries of or controlling authorities nominated in such conditions of title, which may be deemed to be restrictive, alternatively obsolete, with regard to property development proposals and/or initiatives to be embarked upon on behalf of instructing Clients;

(vii) Applications for the suspension of or exemption from the provisions of any legislation which may be deemed to be dilatory and/or prohibitory in the context of executing the property development proposals and/or initiatives of instructing Clients;

(viii) Applications for the closure of any public roads and/or public places as well as applications to procure the incorporation of such closed public roads and/or public places, to form part of the properties under the control of instructing clients and/or to form part of the property development proposals and/or initiatives to be embarked upon by such instructing Clients;

(ix) Applications for the alteration, amendment and/or cancellation of the whole or any part of any general plan of any registered township or development area, so as to give effect to the property development proposals and/or initiatives of instructing Clients;

(x) Applications for departures from or relaxations of any provisions emanating from any statutory land use management or town planning schemes or other prevailing legislation, which restrict and/or curtail the development potential of land under the control of instructing Clients;

(xi) The preparation, withdrawal, amendment and/or submission of any applications, annexures, plans and/or diagrams, which are reasonably

required to give effect to the property development proposals and/or initiatives of instructing Clients;

(xii) Negotiations with any interested and/or affected parties, national, provincial and/or municipal departments and/or any other company, close corporation, trust, entity and/or statutory body or person with an interest in any applications or the outcome thereof, as submitted on behalf of instructing Clients, and the conclusion of any *inter partes* agreements on behalf of instructing Clients in that regard;

(xiii) The negotiation and finalisation of arrangements for the provision of any engineering services necessary and/or required for the ultimate realisation of the property development proposals and/or initiatives of instructing Clients, with any national, provincial and/or municipal departments and/or any statutory body with the necessary jurisdiction and authority in that regard;

(xiv) The preparation for and appearance at any form of hearing before any applicable and prevailing town planning committee, municipal authority, municipal town planning and/or appeal tribunal or any other statutory body or authority with the necessary authority and jurisdiction to decide and adjudicate upon any matters pertaining to land use and/or property development, as envisaged and/or required in pursuance of any actions taken on behalf of any instructing clients herein, in order to ultimately give effect to the property development proposals and/or initiatives of such instructing Clients, and/or to appoint any consultants and/or legal representatives which may be necessary and/or required for such purpose;

(xv) To depose to any affidavits required by law or by virtue of any legal action or proceedings related to any function executed and/or envisaged in terms of this resolution on behalf of instructing Clients; and

(xvi) To take any actions necessary and/or required to protect the interests and/or rights of instructing Clients, which *inter alia* includes the opposition of and/or intervention in any competing and/or undesirable land development applications, which may affect the rights, interests, enjoyment and/or any other matters of instructing Clients.

2. That **DUPRÉ LOMBAARD**, and/or any other Director or employee of the **Company**, be authorized with the power of substitution and agency to act on behalf of the **Company** in attending to any or all of the abovementioned matters on behalf of any instructing Clients where the **Company** is appointed to attend to any or all of the abovementioned matters, and to take any other action which may reasonably be required and/or necessary to give effect to this resolution and the instructions of the **Company's** Clients.

CERTIFIED AS A TRUE EXTRACT FROM THE MINUTES OF THE ABOVEMENTIONED MEETING

DIRECTOR

POWER OF ATTORNEY

I, the undersigned

DUPRÉ LOMBAARD
ID NUMBER: 570708 5057 086

in my capacity as the Director of VIRDUS WORKS (PTY) LTD (Registration Number: 2018/585747/07) (hereinafter referred to as the "**Company**"), duly authorized thereto by way of a Resolution of the Board of Directors of the abovementioned **Company**, hereby authorize, nominate, constitute and appoint JACQUELINE SAMSON-SWARTZ (ID Number: 691115 0094 086) in her personally capacity as well as her capacity as the sole proprietor of J SAMSON CONSULTANCY, and/or any employee of the **Company** with the power of substitution and agency to be the lawful representatives and agents in the name, place and stead of the aforementioned **Company** and to act as such on behalf of UNIQON DEVELOPERS (PTY) LTD (Company Registration Number: 1997/021737/07) by lodging any appropriate Applications for Land Use Rights and/or any other required and/or associated Applications for consent, permits, authorisations or licences which may be necessary, to any authorised statutory body with the necessary authority and/or jurisdiction to adjudicate on such Applications, in terms of any applicable prevailing National, Provincial and/or Municipal legislation (including any applicable Legislation such as the Spatial Planning and Land Use Management Act (Act 16 of 2013) and the prevailing SPLUMA By-law and/or Town Planning Scheme) in order to procure the Land Use Rights and to obtain any consent, permit, licence and/or authorisation which may be required for the intended phased mixed-use development to be developed by UNIQON DEVELOPERS (PTY) LTD on the property known as The Remainder of Portion 28 of the Farm Welmoed Estate No. 468, Registration Division Stellenbosch, Western Cape Province inclusive of multi-unit housing (providing for medium and high-density residential units), business uses, community uses, private open space, transport facilities, public roads, parking and utility uses and for any other ancillary and subservient uses which may be required in that regard, and to otherwise and in general take any actions necessary and/or required to pursue such Applications to finality.

This authority specifically includes the right to, in terms of any applicable prevailing legislation on behalf of the **Company** if required, lodge any further Applications to the relevant authority required to procure the effective vesting of such envisaged Land Use Rights and the executability thereof, and if necessary and if required, to withdraw and/or cancel any such Applications, action and/or representation and if required, to sign all documents which may be

required for that purpose to pursue same to finality.

I hereby ratify, allow, confirm and promise and agree to ratify, allow and confirm all and whatsoever such agent or employees shall lawfully do, or cause to be done, by virtue of these present and whatever such agents have to date done herein.

SIGNED AT Stellenbosch **ON THIS** 15th **DAY OF** January **2024.**

WITNESSES:

1. .....

2. .....

.....

DUPRÉ LOMBAARD

ANNEXURE D: TITLE DEED

117

Cluver Markotter Inc
Cluver Markotter Building
Mill Street
Stellenbosch
7600

Prepared by me

CONVEYANCER
LIZE PECORARO

Deeds Office Registration fees as per Act 47 of 1937		
	Amount	Office Fee
Purchase Price	R 2750000	R 51124,00
Reason for exemption	Category Exemption.....	Exemption i.t.o. Sec/Reg..... Act/Proc.....

14-03-2019

T0000240 50/2019

DEED OF TRANSFER

13-03-2019

BE IT HEREBY MADE KNOWN THAT

ANTON LUTHER POSTHUMUS

appeared before me, REGISTRAR OF DEEDS at CAPE TOWN, the said appearer being duly authorised thereto by a Power of Attorney granted to him/her by

SISTEEN MARIÉ GEYSER in my capacity as representative of the Executors, acting herein in terms of General Estate Power of Attorney signed at Stellenbosch on 10 October 2016 by PETRONELLA HENDRINA VISSER and signed at Gordon's Bay on 11 October 2016 by ELRONA GOOSEN, in their capacities as Executors in the Estate Late WILLEM JOHANNES VISSER, acting under Letters of Executorship Number 012709/2016 issued by the Master of the High Court of South Africa Western Cape Division, Cape Town at Cape Town on 6 October 2016

which said Power of Attorney was signed at Stellenbosch on 10 May 2019

And the said appearer declared that:

WHEREAS WILLEM JOHANNES VISSER who died testate on the 19 June 2016 is the registered owner of the hereinafter mentioned properties;

AND WHEREAS during his lifetime the late WILLEM JOHANNES VISSER was married out of community of property to PETRONELLA HENDRINA VISSER;

AND WHEREAS the said WILLEM JOHANNES VISSER bequeathed the hereinafter mentioned properties to BILLY VISSER TRUST in terms of his Last Will and Testament signed at Stellenbosch on 06 November 2012, together with a Codisil signed at Lynedoch on 25 August 2014 and another Codisil signed at Lynedoch on 31 August 2015;

NOW THEREFORE he/she, the said appearer, in his/her capacity aforesaid, did, by virtue these presents, cede and transfer to and on behalf of:

The Trustees for the time being of BILLY VISSER TRUST
Registration Number IT5284/1996

its Successors in Office or assigns, in full and free property

1. REMAINDER OF PORTION 27 OF THE FARM WELMOED ESTATE NUMBER 468 IN THE MUNICIPALITY AND DIVISION OF STELLENBOSCH, WESTERN CAPE PROVINCE

   IN EXTENT 32,8307 (THIRTY TWO COMMA EIGHT THREE ZERO SEVEN) Hectares

   FIRST TRANSFERRED by Deed of Transfer Number T595/1931 with Diagram relating thereto and held by Deed of Transfer T25442/1987

A. SUBJECT to the conditions as referred to in Deed of Transfer number T15427/1948.

B. SUBJECT FURTHER and entitled to the benefits of the following special conditions (the property transferred herewith being a portion of the remainder) as referred to in the note dated 5 February 1931 attached to Certificate of Amended Title number 9631/1920 namely:

"(1) That the furrow marked on the diagram of the said Lot 7B shall remain free and undisturbed for the use of the said Lot 7B of the remaining extent of the said Welmoed Estate held by the said RUDOLPH LEVIN KRAMER under the aforesaid Certificate of Amended Title number 9631 and of Lot number 6 of the said Welmoed Estate registered in favour of Johannes Roos Bosman by Deed of Transfer number 5789 dated 10th July 1930 and shall be maintained and kept in order by the owners and their successors in title of the said Lot 7B, the said remaining extent, and the said Lot number 6.

(2) That the furrow marked on the diagram of the remaining extent of the said Welmoed Estate, held by the said RUDOLPH LEVIN KRAMER under the aforesaid Certificate of Amended Title, shall remain free and undisturbed for the use of the said Lot 7B, of the said remaining extent, and of Lot number 6 of the said Welmoed Estate registered in favour of Johannes Roos Bosman by Deed of Transfer number 5789 dated 10th July 1930, and shall be maintained and kept in order by the respective owners and their successors in title of the said Lot 7B, the said remaining extent and the said Lot number 6.

(3) That the furrow marked on the diagrams of Lots numbers 6 and 12 of the said Welmoed Estate, registered in favour of JOHANNES ROOS BOSMAN by Deed of Transfer number 5789 dated 10th July 1930, shall remain free and undisturbed for the use of the said Lot 7B, of the remaining extent of the said Welmoed Estate held by the said RUDOLPH LEVIN KRAMER under the aforesaid Certificate of Amended Title number 9631, and of the said Lot number 6, and shall be maintained and kept in order by the respective owners and their successors in title, of the said Lot 7B, the said remaining extent of the said Lot number 6."

C. SUBJECT FURTHER to the servitude, reference to which is contained in the note dated 11 August 1938 annexed on Deed of Transfer number 9028/1933, which note reads as follows:

"By Transfer number 8241 dated 11th August, 1938, a servitude relating to certain conditions regarding roads, fishing, water, furrows, and the use of remainder para. 1 and remainder para. 2 held hereunder, and certain ancillary rights thereto have been entered into by the owners of property thereby conveyed and the remainder held hereunder as will more fully appear on reference to the said Transfer."

D. SUBJECT FURTHER by Notarial Deed of Servitude number K125/1989 dated 23/12/1988 and contained in Deed of Transfer number T25442/1987, to a pipeline servitude, whereby the owners of the dominant tenements shall be entitled to lead water across this property by means of a pipeline situated in a servitude area 1 metre wide, the lins BC and DEF on servitude diagram 416/1985 representing the middle of the 1 metre servitude area and a servitude area of which the line AB represents the western boundary of the servitude area in favour of:

1. Remainder Portion 13 of the Consolidated Farm Welmoed Estate number 468, Division of Stellenbosch
   Held by T58960/1983

2. Remainder Portion 22 of the Consolidated Farm Welmoed Estate number 468, Division of Stellenbosch, measuring 75,1741 ha, held by T58959/1983, together with ancillary rights.

As will more fully appear from the said Notarial Deed.

E. SUBJECT FURTHER by Notarial Deed of Servitude number K365/2000S, dated 19/10/1999 and contained in Deed of Transfer number T25442/1987, to a servitude for a water pipeline in favour of the Cape Metropolitan Council as shown on Diagram number 7305/1979, namely:

- The broken line AB represents a line 4,00 metres south west of the north eastern boundary of a servitude pipeline 12,00 metres wide, as indicated, and

- The figure CDe middle of the Eerste River fGH represents a servitude pipeline area over the abovementioned property.

As will more fully appear from the said Notarial Deed.

F. SUBJECT FURTHER to an expropriation endorsement filed as EX31/2007, where in terms of approximately 0,0772 hectares of Remainder of Portion 27 of the Farm Welmoed Estate Number 468 is expropriated for road purposes in terms of Section 27 of the Road Ordinance 19 of 1976.

G. SUBJECT FURTHER to an expropriation endorsement filed as EX32/2007, where in terms of approximately 0,0355 hectares of Remainder of Portion 27 of the Farm Welmoed Estate Number 468 is expropriated for road purposes in terms of Section 27 of the Road Ordinance 19 of 1976.

H. SUBJECT FURTHER to an expropriation endorsement filed as EX33/2007, where in terms of approximately 0,0685 hectares of Remainder of Portion 27 of the Farm Welmoed Estate Number 468 is expropriated for road purposes in terms of Section 27 of the Road Ordinance 19 of 1976.

I. SUBJECT FURTHER to an expropriation endorsement filed as EX83/2013, where in terms of approximately 1,7153 hectares of Remainder of Portion 27 of the Farm Welmoed Estate Number 468 is expropriated for road purposes in terms of Section 27 of the Road Ordinance 19 of 1976.

J. SUBJECT FURTHER to an expropriation endorsement filed as EX123/2016, where in terms of approximately 0,9196 hectares of Remainder of Portion 27 of the Farm Welmoed Estate Number 468 is expropriated for road purposes in terms of Section 27 of the Road Ordinance 19 of 1976.

K. SUBJECT FURTHER to the following condition contained in the Last Will and Testament of the said WILLEM JOHANNES VISSER dated 06 November 2012 "9. Ek bepaal dat alle bemakings en erfenisse uitgesluit sal wees van alle gemeenskaplike boedels en aanwasbedelings kragtens huwelike alreeds aangegaan tydens my afsterwe en alle huwelike wat ons bevoordeeldes daarna op enige stadium van hul leeftyd as sodanig mag aangaan. Alie bemakings en erfenisse sal onder alle omstandighede beskerm wees teen die skuldeisers van alle gades, hetsy binne of buite gemeenskap van goedere getroud."

2. REMAINDER OF PORTION 28 OF THE FARM WELMOED ESTATE NUMBER 468 IN THE MUNICIPALITY AND DIVISION OF STELLENBOSCH, WESTERN CAPE PROVINCE

IN EXTENT 45,5075 (FORTY FIVE COMMA FIVE ZERO SEVEN FIVE) Hectares

FIRST TRANSFERRED by Deed of Transfer Number T595/1931 with Diagram relating thereto and held by Deed of Transfer Number T25442/1987

A. SUBJECT to the conditions as referred to in Deed of Transfer number T595/1931.

B. SUBJECT FURTHER to the servitude, reference to which is contained in the note dated 11 August 1938 annexed on Deed of Transfer number 9028/1933, which note reads as more fully set out in paragraph 1C above.

C. SUBJECT FURTHER by Notarial Deed of Servitude number K123/1989 dated 23/12/1988 and contained in Deed of Transfer number T25442/1987, to a pipeline servitude, whereby the owners of the dominant tenements shall be entitled to lead water across this property by means of a pipeline, situated in a servitude area 3 metres wide the eastern boundary of which is represented by figure AB on servitude diagram 417/1985 in favour of

1. Remainder Portion 13 of the Consolidated Farm Welmoed Estate number 468, Division of Stellenbosch
   Held by T58960/1983

2. Remainder Portion 22 of the Consolidated Farm Welmoed Estate number 468, Division of Stellenbosch, measuring 75,1741 ha, held by T58959/1983

As will more fully appear from the said Notarial Deed.

D. SUBJECT FURTHER by Notarial Deed of Servitude number K366/2000S dated 19/10/1999 and contained in Deed of Transfer number T25442/1987, to a servitude for a water pipeline in favour of the Cape Metropolitan Council as shown on Diagram number 7303/1979, namely:

The full line ABC represents the north eastern boundary of a servitude pipeline 12,00 metres wide.

As will more fullly appear from the said Notarial Deed.

E. SUBJECT FURTHER by virtue of Notarial Deed dated 28 February 2018, number K165/2019 and contained in Deed of Transfer number T25442/1987, to a pipeline servitude as depicted on Diagram SG 1714/2014, in favour of the remainder of Portion 13 of the Farm Welmoed Estate number 468, measuring 1,3835 hectares, held by Deed of Transfer number T75469/1997, as depicted by line AB.

As will more fully appear from the said Notarial Deed.

F. SUBJECT to an expropriation endorsement, filed as number EX82/2013 and contained in Deed of Transfer number T25442/1987, in terms of which of a portion of the property, measuring approximately 0,1765 hectares has been expropriated by the Provincial Government of the Western Cape.

G. SUBJECT FURTHER to the following condition contained in the Last Will and Testament of the said WILLEM JOHANNES VISSER dated 06 November 2012

"9. Ek bepaal dat alle bemakings en erfenisse uitgesluit sal wees van alle gemeenskaplike boedels en aanwasbedelings kragtens huwelike alreeds aangegaan tydens my afsterwe en alle huwelike wat ons bevoordeeldes daarna op enige stadium van hul leeftyd as sodanig mag aangaan. Alie bemakings en erfenisse sal onder alle omstandighede beskerm wees teen die skuldeisers van alle gades, hetsy binne of buite gemeenskap van goedere getroud."

WHEREFORE the said Appearer, renouncing all rights and title which the said

Estate Late WILLEM JOHANNES VISSER

heretofore had to the premises, did in consequence also acknowledge him to be entirely dispossessed of, and disentitled to the same, and that by virtue of these presents, the said

The Trustees for the time being of BILLY VISSER TRUST
Registration Number IT5284/1996

its Successors in Office or assigns, now is and henceforth shall be entitled thereto, conformably to local custom, the State, however reserving its rights, and finally acknowledging the value of the property to be R27 500 000,00 (TWENTY SEVEN MILLION FIVE HUNDRED THOUSAND RAND).

IN WITNESS WHEREOF, I the said Registrar, together with the Appearer, have subscribed to these presents, and have caused the Seal of Office to be affixed thereto.

THUS DONE and EXECUTED at the Office of the REGISTRAR OF DEEDS at CAPE TOWN on 2019-06-13

q.q.

In my presence

REGISTRAR OF DEEDS

ANNEXURE E: CONVEYANCER'S CERTIFICATE

ANNEXURE E.1

STELLENBOSCH
STELLENBOSCH•PNIEL•FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

CONVEYANCER CERTIFICATE

I/We JAN ANDREAS ADRIAAN KRUGER (04229)

(conveyancer's name and surname)

Practising at:

COUZYN HERTZOG & HORAK INC
321 MIDDEL STREET
BROOKLYN
PRETORIA
0181

(firm and place of practice)

In respect of:

THE REMAINDER OF PORTION 28 OF THE FARM WELMOED ESTATE NUMBER 468, IN THE MUNICIPALITY AND DIVISION OF STELLENBOSCH, WESTERN CAPE PROVINCE

(full property description (erf / farm) as it appear in title deed of some)

Hereby certify that a search was conducted in the Deeds Registry, regarding the said property (ies) (including both current and earlier title deeds/pivot deeds/deeds of transfer):

1. DEED OF TRANSFER T24050/2019
2.
3.
4.
5.
6.
7.
8.

For example Deed of Transfer T12345/2000 or Certificate of Registered Sectional Title ST1234/2000 (description of title deed number and date)

STELLENBOSCH
STELLENBOSCH•PNIEL•FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

A. IDENTIFY RESTRICTIVE TITLE CONDITIONS (if any)

Categories		Are there deed restrictions (indicate below)		Title Deed and Clause number if restrictive conditions are found
1.	Use of land	Y	X	
2.	Building lines	Y	X	
3.	Height	Y	X	
4.	Number of Dwellings	Y	X	
5.	Bulk floor area	Y	X	
6.	Coverage/built upon area	Y	X	
7.	Subdivision	Y	X	
8.	Servitudes that may be registered over or in favour of the property	✓	N	
9.	Other Restrictive Conditions	✓	N	

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

B. INDICATE AFFECTED PARTIES AS PER TITLE DEED (if any)

*In respect of which it was found that there *are/are no restrictive conditions with reference to Section 33(4) (a, b or c) of the Land Use Planning By-law (2015) registered against such property (ies) prohibiting it from being utilised/developed for the following purposes (as elaborated in the accompanying application):*

a.	Organ(s) of State that might have an interest in the restrictive condition	THIS CERTIFICATE MUST BE READ IN CONJUNCTION WITH THE "MOTIVATION IN SUPPORT OF LAND DEVELOPMENT APPLICATION FOR PORTION 28 OF THE FARM WELMOED ESTATE NO 468, STELLENBOSCH" COMPILED BY VIRDUS WORKS (PTY) LTD,
b.	A person whose rights or legitimate expectations will be affected by the removal/suspension/amendment of a restriction condition.	
c.	All persons mentioned in the deed for whose benefit the restrictive condition applies	

C. PROCESS BY WHICH RELEVANT CONDITIONS WILL BE ADDRESSED

(please tick appropriate box)

Application in terms of Section 15 of the Stellenbosch Municipal Land Use Planning By-Law (2015)	Notarial Deed of Cancellation (Submit Copy of Signed Agreement)	Action by way of court order (Submit Copy of the Court Order)	If Other, Please Specify

Signed at PRETORIA (Place) **on this** 8th (Day) AUGUST (Month)
of2023

Full names and Surname: JAN ANDREAS ADRIAAN KRUGER

Signature:

P O BOX 2509
BROOKLYN SQUARE
0075

Kindly certify a true copy by affixing official stamp within this block

COUZYN HERTZOG & HORAK INC

Tel: 0124605090

Email: jan@couzyn.co.za

Cell: 0836101105

JAN ANDREAS ADRIAAN KRUGER
NOTARIS / NOTARY
KOMMISSARIS VAN EDE / COMMISSIONER OF OATHS
PRAKTISERENDE PROKUREUR RSA / PRACTISING ATTORNEY RSA
AKTEVERVAARDIGER / CONVEYANCER
COUZYN HERTZOG & HORAK ING/INC
Middelstraat 321 Middel Street, Brooklyn Pretoria

JAN ANDREAS ADRIAAN KRUGER
NOTARY PUBLIC
LPCM04229
Gauteng
SOUTH AFRICA

DEEDS REPORT

FOR THE ESTABLISHMENT OF A TOWNSHIP SITUATED ON THE REMAINDER OF PORTION 28 OF THE FARM WELMOED ESTATE NUMBER 468, MUNICIPALITY AND DIVISION OF STELLENBOCH, WESTERN CAPE PROVINCE

1. PROPERTY

The township to be established is situated at:

THE REMAINDER OF PORTION 28 of the farm WELMOED ESTATE NUMBER 468, in the Municipality and Division of STELLENBOSCH, WESTERN CAPE PROVINCE;

IN EXTENT 45,5075 (FORTY FIVE comma FIVE NIL SEVEN FIVE) Hectares;

Presently held by the Trustees for the Time being of the BILLY VISSER TRUST (Registration Number IT5284/1996) in terms of Deed of Transfer Number T24050/2019 (Annexure "A")

Portion 28 was formerly known as Lot 9, as per SG Diagram A700/1930 (Annexure "C")

Deeds search in respect of the property (Annexure "D")

According to the extending clause in the said Title Deed T24050/2019 the property was FIRST TRANSFERRED by Deed of Transfer Number T595/1931 with diagram annexed thereto (Annexure "E")

DISCUSSION:

The applicant for the establishment of the township is UNIQON DEVELOPERS PROPRIETARY LIMITED who will have to take transfer of the properties, but in the interim can apply for the establishment of the township on condition that the current registered owners grant the necessary power of attorney to the Town Planner to make such

application. In the event of the properties then being transferred in the name of the applicant the conditions of establishment will be amended to show the correct applicant.

RECOMMENDATION:

The application for the establishment of the township must be submitted in terms of the Power of Attorney of the current registered owners which has been granted to the Town Planner and the applicant will then be amended at a later stage.

2. NAME OF THE TOWN TO BE ESTABLISHED

The name of the so to be established town is **WELMOED VILLAGE.**

3. CONDITIONS OF TITLE

The aforementioned property is subject to the conditions contained on pages 6 and 7 of Title Deed Number T24050/2019 (Annexure "A").

RECOMMENDATION:

The existing Conditions of Title in respect of the establishment of the township will be treated in the same order as it appears in the Title Deed.

3.1 CONDITION A – T595/1931

According to the extending clause in the said Title Deed T24050/2019 the property was FIRST TRANSFERRED by Deed of Transfer Number T595/1931 with diagram annexed thereto (Annexure "E")

RECOMMENDATION:

The existing Conditions of Title in respect of the establishment of the township will be treated in the same order as it appears in the Title Deed.

3.1.1 CONDITION A

The property is in terms of this condition subject to the conditions as referred to in Deed of Transfer Number T15427/1948. The said title deed is not available in the Deeds Office, Cape Town. For an unknown reason it seems to be filed in Kimberley and is also not available in that Deeds Office.

In terms of the Deeds Registries of the former Cape Province, this deed is referred to as the "pivot deed" and it is a reference to general conditions contained in a specific deed. The pivot deed, under normal circumstances, refers to the first deed in terms of which the property was registered and remains unchanged, except in certain conditions. Where a condition created before 01 September 1937 lapses or is cancelled or the property is deprived thereof, the fact of such lapsing or cancellation or deprivation may (depending on circumstances) be recorded by means of an appropriate endorsement (as the case may be) on the existing title deed (Deed 1), thereafter the condition must be omitted from the *"new deed"* (Deed 2) and the new deed (Deed 2) must contain a *"not subject"* clause in respect of the condition which has lapsed or been cancelled. The pivot will remain unaltered in this deed (Deed 2). Upon transfer of the property from this deed (Deed 2) to the next owner by means of (Deed 3) the *"not subject"* clause in (Deed 2) will be dropped from (Deed 3) and the pivot will be changed in (Deed 3). The pivot in (Deed 3) will become the title reference of (Deed 2). How does the explanation above apply to Portion 27?

3.1.1.1 Portion 27 was first registered by Deed of Transfer no. T595/1931 (Deed 1) (Annexure "E");

3.1.1.2 T595/1931 (Deed 1) was therefore the pivot deed of the property;

3.1.1.3 T595/1931 (Deed 1) on page 2 contained a restrictive condition that that *"no General Dealer's business may be operated on Portion 27 for a period of 10 years from 1 April 1930"*. The aforementioned condition lapsed by effluxion of time on 31 March 1940;

3.1.1.4 Portion 27 (and Portion 28) was subsequently transferred to the Monica Selekovitz Trust on 14 July 1948 in terms of Deed of Transfer No. T15427/1948 (Deed 2). Even though a copy of the said deed is not available, the condition (that has lapsed) referred to in clause 3.1.1.3 must have been recorded as a "Not Subject to....." condition as per the Cape Town Deeds Office practice as described above;

3.1.1.5 Portion 27 (and Portion 28) was transferred to DJ Visser on 9 November 1977 in terms of Deed of Transfer No. T28537/1977 (Deed 3). With this transfer the pivot deed of the Portion 27 was changed to T15427/1948, namely Deed 2 as explained above;

3.1.1.6 Prior to 1937 and in terms of the pivot deed system, no conditions were carried forward in a title deed. All conditions recorded in T595/1931, was carried forward, which has been dealt with this in this report. In the event the 1948 title deed contained any newly imposed restrictive conditions, such conditions would have been carried forward in subsequent title deeds of the property or any subdivisions thereof.

RECOMMENDATION:

There is no condition to be dealt with under this heading.

3.1.2 CONDITION B (1–3)

In terms of this condition the aforementioned property is entitled to a water furrow as described in (1), (2) and (3) which conditions can be summarized as follow:-

(1) Lot 7B (R/E of Portion 27) is entitled to the said water furrow (RL Kramer) as indicated on the diagram of the said Lot 7B (SG Diagram Number A699/1930 – Annexure "B")

Lot 6 is entitled to the said water furrow (J R Bosman)

The water furrow shall be maintained and kept in order by the owners of the said Lot 7B, the Remaining Extent and Lot 6

(2) The Remaining Extent of the farm is subject to the said water furrow (RL Kramer)
(Land Surveyor to provide diagram for the Remaining Extent)
Lot 7B is entitled to the said water furrow
Lot 6 is entitled to the said water furrow
The water furrow shall be maintained and kept in order by the owners of the said Lot 7B, the Remaining Extent and Lot 6

(3) Lot 6 is subject to the said water furrow
Lot 12 is subject to the said water furrow
(Land Surveyor to provide diagrams for the said Lots 6 and 12)
Lot 7B is entitled to the said water furrow
The water furrow shall be maintained and kept in order by the owners of the said Lot 7B, the Remaining Extent and Lot 6

RECOMMENDATION

In terms of these conditions the property is entitled to use the water furrow as indicated. The Land Surveyor must plot these properties and servitudes as described on the mentioned diagrams to ascertain the current use and existence of the said water furrow. The properties mentioned relates to Lot 6, Lot 12 and Remaining Extent. The servitudes must be taken into account on the development plan of the township.

Is it possible that the furrow(?) indicated in orange on SG Diagram A699/1930 (Annexure "B") mentioned above, refers to the furrow as mentioned under the heading "Recommendation" (see paragraph 3.1.12 hereunder).

3.1.3 CONDITION C

In terms of this condition the property is subject to a servitude relating to certain conditions regarding roads, fishing, water, furrows, with ancillary rights, as will more fully appear from Deed of Transfer Number 9028/1933 (Annexure "F") and

Deed of Transfer Number 8241/1938 (Annexure "G") with SG Diagram Number 2913/1938 (Annexure "G1").

RECOMMENDATION

The conditions mentioned above were created in terms of the endorsement dated 11 August 1983 on the last page of Deed of Transfer Number T9028/1933 (Annexure "F"). The said servitudes are dealt with in Deed of Transfer Number T87363/1999 (Annexure "H") and has reference to **Portion 41 (a portion of Portion 27)** and Portion 40 (a portion of Portion 28) of the farm. It seems that these conditions were supposed to be created in the title deed/s of the Remaining Extent of Portion 27 and 28 (and not been referred to in general terms), the said R/E of Portion 27 being subject and entitled to the conditions mentioned hereunder.

PORTION 41 (a portion of Portion 27) of the said farm, registered in the name of LYNDOCH DEVELOPMENT by virtue of Deed of Transfer Number T87363/1999 (Annexure "H") as will more fully appear from SG Diagram Number 2913/1938 (Annexure "G1") is subject and entitled to the following rights (Page 4 of the said Deed) :-

C (2) The right to use the existing road on the 'remainder' (R/E of Portion 27) indicated by the line a b on the said diagram;

NOTE: A Part of the R/E of Portion 27 was expropriated as a road (EX32/2007 – Minor Road 5203) (Annexure "EX2")

C (3) The right to water furrow indicated by the line e d, as well as any other existing furrows, on the said diagram;

NOTE: These servitude/s seems not to be indicated on SG Diagram 2913/1938 (Annexure "G1")

C (4) The restrictive condition that the R/E of Portion 27 may not be used as a Hotel, Boardinghouse or road-house;

NOTE: It might be necessary to cancel the said restriction in terms of the by-law or by obtaining a court order.

C (5) The right of pedestrian access to the Eerste River with fishing rights.

NOTE:

This right can be exercised as directed by the owner (transferor) from time to time. With reference to EX123/2016 (Annexure "EX5") and the available road reserve on District Road 1050 (Allandale Road), the condition will not have any impact on the proposed development.

3.1.4 CONDITION D

In terms of this condition the owners of R/E of Portion 13 (T58960/1983 - Annexure "I") and R/E of Portion 22 (T58959/1983 - Annexure "J") is entitled to lead water across the said property by means of a pipeline, as will more fully appear from Deed of Servitude Number K125/1989 (Annexure "K") as shown on SG Diagram Number 416/1985 annexed thereto (Annexure "K1").

RECOMMENDATION

This servitude must be taken into account on the layout plan of the township. See basis plan (Annexure "L").

3.1.5 CONDITION E

In terms of this condition the property is subject to a Water Pipe Line Servitude in favour of the Cape Metropolitan Council, as will more fully appear from Deed of Servitude Number K365/2000-S (Annexure "M") as shown on SG Diagram Number 7305/1979 annexed thereto (Annexure "M1") and endorsed on Deed of Transfer Number T25442/1987 (Annexure "N")

RECOMMENDATION

This servitude must be taken into account on the layout plan of the township. See basis plan (Annexure "L").

3.1.6 CONDITION F

In terms of this condition the property is subject to Expropriation Notice EX 31/2007 (Annexure "EX1") for road purposes (Main Rd 168). The said expropriation seems to refer to a road widening.

3.1.7 CONDITION G

In terms of this condition the property is subject to Expropriation Notice EX 32/2007 (Annexure "EX2") for road purposes (Minor Rd 5203).

The Expropriation Notice refers to "Remaining Extent of Portion 27'. With reference to the sketch plan attached to the expropriation notice it appears as if the expropriation effects Portion 4 which was previously a part of the Remaining Extent of Portion 27.

3.1.8 CONDITION H

In terms of this condition the property is subject to Expropriation Notice EX 33/2007 (Annexure "EX3") for road purposes (Minor Rd 5204).

3.1.9 CONDITION I

In terms of this condition the property is subject to Expropriation Notice EX 83/2013 (Annexure "EX4") for road purposes (Main Rd 168). The expropriation seems to have been done with the view of constructing the second lane of the Baden Powell Road.

3.1.10 CONDITION J

In terms of this condition the property is subject to Expropriation Notice EX 123/2016 (Annexure "EX5") for road purposes (District Rd 1050) (Allendale Road).

RECOMMENDATION CONDITIONS F – J

All these conditions deal with expropriations for road purposes and all expropriations were done in terms of Section 27 of the Road Ordinance 19/1976.

The said expropriations must be taken into account on the development plan of the township.

3.1.11 CONDITION K

In terms of this condition the property is subject to the Last Will and Testament of the Late WILLEM JOHANNES VISSER

RECOMMENDATION

This condition will automatically lapse when the property is transferred to UNIQON DEVELOPERS PROPRIETARY LIMITED

3.1.12 Proposed New CONDITION L (unregistered servitude diagram)

In terms of this condition stand to be registered the property is subject to 3 servitudes as shown on SG Diagram Number 7191/1986 (Annexure "O") being –

- The line B C refers to the northwestern boundary of a 2m pipe line servitude
- A servitude area indicated by the figure C D E F G H j middle Eerste River k L M N O
- The line L P Q and T U indicates the middle line of a 2m pipe line servitude

RECOMMENDATION

This servitude as plotted on the basis plan being drawn by the Land Surveyor (Annexure "L"), and being created on SG Diagram Number 7191/1986 mentioned above, is an unregistered servitude/s and must be registered. It is however uncertain as to the extent thereof.

It seems to refer to the existing dam on the R/E of Portion 27 with furrows / pipelines connecting the dam to other property/ies.

Is it possible that the line B C mentioned above, refers to the furrow mentioned in Par. 3.1.2 ? The line represents a pipeline along Baden Powell Road and originating from the neighboring property/ies being inter alia the Spier property..

3.2 REMAINDER OF PORTION 28 of the farm WELMOED ESTATE NUMBER 468

The aforementioned property is subject to the conditions contained on pages 6 and 7 of Title Deed Number T24050/2019 (Annexure "A").

RECOMMENDATION:

The existing Conditions of Title in respect of the establishment of the township will be treated in the same order as it appears in the Title Deed.

3.2.1 CONDITION B

In terms of this condition the property is subject to a servitude relating to certain conditions regarding roads, fishing, water, furrows, with ancillary rights, as will more fully appear from Deed of Transfer Number 9028/1933 (Annexure "F") and Deed of Transfer Number 8241/1938 (Annexure "G") with SG Diagram Number 2912/1938 (Annexure "G2").

(See paragraph 3.1.3 above)

RECOMMENDATION

The conditions mentioned above were created in terms of the endorsement dated 11 August 1983 on the last page of Deed of Transfer Number T9028/1933. The said servitudes are dealt with in Deed of Transfer Number T87363/1999 (Annexure "H") and has reference to Portion 41 (a portion of Portion 27) and **Portion 40 (a portion of Portion 28)** of the farm. It seems that these conditions were supposed to be created in the title deed/s of the Remaining Extent of Portion 27 and Portion

28 (and not been referred to in general terms), the said R/E of Portion 28 being subject and entitled to the conditions mentioned hereunder.

PORTION40(**a portion of Portion 28**) of the said farm, registered in the name of LYNDOCH DEVELOPMENT by virtue of Deed of Transfer Number T87363/1999 (Annexure "H") as will more fully appear from SG Diagram Number 2912/1938 (Annexure "G2") is entitled to the following rights (Page 7 & 8): -

B. (2) The existing road on the 'remainder' (R/E of Portion 28) indicated by the line f e on the said diagram shall remain a common road;

NOTE: The line f e seems to be the western section of the same road indicated by the line a b to the east of the railway line being part of the R/E of Portion 27 and which was expropriated by EX32/2007 (Annexure "EX2") mentioned above. The road is situated on the R/E of Portion 28 of the farm and not on the Lyndoch property.

B. (3) and (4) The right of way to use the existing roads/ pedestrian access and the cancellation of the said entitlement;
It is important to take note of the said rights and the conditions under which the rights can/ may be cancelled.

NOTE: The rights referred to in B(3) and (4) and with reference to the definition of the 'transferor' in paragraph B(1)(a), have lapsed, the reason being that the whole of the remainder were sold by the said 'transferor'.

B. (5) The Transferee (Lyndoch) shall be entitled to all water from the Spring situate on the remainder, with the right to lead water through the pipe line as will more fully appear from the said SG Diagram 2912/1938 (Annexure "G2");
B. (6) The Transferee (Lyndoch) shall be entitled to all water from the bore-hole and windmill situate on the remainder, and to store water in the reservoir, with the right to lead water through the pipe line as will more fully appear from the said SG Diagram 2912/1938;
B. (7) This condition refers to the right to access in order to maintain the servitudes mentioned in B.(5) and (6) above.

NOTE: I could not fine any proof that the servitudes as mentioned in B(5), (6) and (7) was cancelled. Physical inspection and negotiations with the Lyndoch owners might be the only way to ascertain the existence and extent of the rights.

B. (8) The right to water furrow indicated by the line k s j, as well as any other existing furrows, on the said diagram;

NOTE: The line k s j does not indicate a description of a furrow. Once again a physical inspection and negotiations with the Lyndoch owners might be the only way to ascertain the existence and extent of the rights.

C. (9) The restrictive condition that the remainder (R/E of Portion 28) may not be used as a Hotel, Boardinghouse or road-house;

NOTE: It might be necessary to cancel the said restriction in terms of the by-law or by obtaining a court order.

B. (10) The right of pedestrian access to the Eerste River with fishing rights.

NOTE: This right can be exercised as directed by the owner (transferor) from time to time. With reference to EX123/2016 (Annexure "EX5") and the available road reserve on District Road 1050 (Allandale Road), the condition will not have any impact on the proposed development.

3.2.2 CONDITION C

In terms of this condition the owners of R/E of Portion 13 (T58960/1983-Annexure "I") and R/E of Portion 22 (T58959/1983 - Annexure "J") is entitled to lead water across the said property by means of a pipeline, as will more fully appear from Deed of Servitude Number K123/1989 (Annexure "P") as shown on SG Diagram Number 417/1985 annexed thereto (Annexure "P1").

(See paragraph 3.1.4 above)

RECOMMENDATION

This servitude must be taken into account on the layout plan of the township. See basis plan (Annexure "L").

3.2.3 CONDITION D

In terms of this condition the property is subject to a Water Pipe Line Servitude in favour of the Cape Metropolitan Council, as will more fully appear from Deed of Servitude Number K366/2000-S (Annexure "Q") as shown on SG Diagram Number 7303/1979 annexed thereto (Annexure "Q1") and endorsed on Deed of Transfer Number T25442/1987 (Annexure "N")

(See paragraph 3.1.5 above)

RECOMMENDATION

This servitude must be taken into account on the layout plan of the township. See basis plan (Annexure "L").

3.2.4 CONDITION E

In terms of this condition the property is subject to a Water Pipe Line Servitude, as will more fully appear from Deed of Servitude Number K165/2019-S (Annexure "R") as shown on SG Diagram Number 1714/2014 annexed thereto (Annexure "R1").

RECOMMENDATION

This servitude must be taken into account on the layout plan of the township. See basis plan (Annexure "L").

3.2.5 CONDITION F

In terms of this condition the property is subject to Expropriation Notice EX 82/2013 (Annexure "EX6") for road purposes (Main Rd 168).

4.4 Portion 41 (a portion of Portion 27) – Lyndoch Development (T87363/1999)

4.5 Portion 51 – Suid-Afrikaanse Spoorpendelkorporasie Ltd (T7167/1953)

4.6 Portion 52– Vetho Apartment Hotels CC (T34398/2018)

4.7 Portion 54 – Regional Services Council –Cape Metropole (T19240/1964)

5. **PERMISSION OF THE DEPARTMENT OF AGRICULTURE**

The necessary consent for establishment of the Township must be obtained from the said Department.

6. **MINERAL RIGHTS**

The Mineral Rights in respect of the property have not been reserved.

RECOMMENDATION

In the light of the stipulations of the Mineral and Petroleum Resources Development Act, 2002, the consent to the establishment of the township must, in terms of Section 53 of the said Act, be obtained from the applicable Department. (Annexure "T")

7. **BOND HOLDER**

No bond

J.A.A. KRUGER

CONVEYANCER

17.04.2023

ANNEXURE F: DIAGRAMS

Approved
Surveyor-General.
8.7.1938

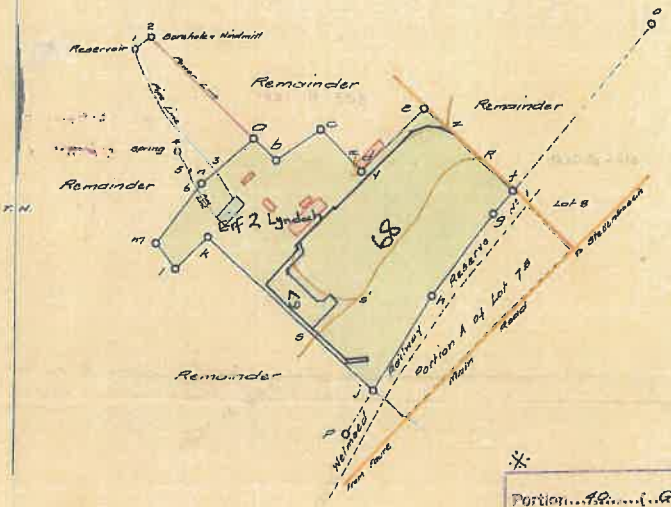
2912/1938

	SIDES Cape Feet	ANGLES OF DIRECTION ° ' "		SYSTEM Lo. y CO-ORDINATES x
ab	110.8	312.41.40	a	- 84987.6 + 16787.2
bc	189.5	235.26.50	b	- 85069.0 + 16862.3
cd	203.0	315.22.50	c	- 85225.1 + 16754.8
de	307.1	224.37.0	d	- 85367.7 + 16899.3
ef	423.8	313.0.40	e	- 85583.4 + 16680.7
fg	103.1	39.41.30	f	- 85893.3 + 16969.8
gh	353.3	36.17.10	g	- 85827.5 + 17049.1
hj	394.0	31.24.40	h	- 85618.4 + 17333.9
jk	795.1	132.44.50	j	- 85413.0 + 17670.2
kl	159.8	45.42.40	k	- 84829.1 + 17130.5
lm	112.3	142.14.0	l	- 84714.7 + 17242.1
mn	264.2	217.59.20	m	- 84645.9 + 17153.3
na	238.8	228.36.0	n	- 84806.5 + 16946.1
fo	760.5	219.41.30	o	- 86379.0 + 16384.6
jp	178.5	31.24.40	p	- 85320.0 + 17822.5

SS'R = wyz represent rights-of-way

BEACONS ...d.....
REPLACED, VIDE E. 170/80

Description of beacons:
acdefklmn - Iron fencing standards about 6" above ground
b - Iron fencing standard 18" above ground
j " " 2" " "
ghop - Rail sections (Railway beacons)



* Portion 49 (GLEN EAGLES) ~~Consolidated~~ (a portion of Portion 29) of the farm WELMOED ESTATE No. 468

* NOW ERF 1 LYNDOCH

BEACONS b,c,d,f,h,j,k,l,m,n
REPLACED, VIDE E. 596/2001

Scale 1: 5000

The figure abcdefghjklmn represents 6.9063 Morgen Red. Quitrent Square Feet of land, called "GLEN EAGLES"

portion of Lot 9 of The Welmoed Estate which is referred to hereunder,
situate in the Field Cornetcy of Eerste River DIVISION of Stellenbosch
PROVINCE of CAPE of GOOD HOPE.

Surveyed in Feb. 1938 by me Land Surveyor.

This diagram is annexed to Transfer Deed No. 8241 dated 11 August 1938 in favour of Charles Kramer

Registrar of Deeds.

The original diagram is No. A 700/1930 annexed to Transfer Deed No. 595 dated 5.2.1931 in favour of J.H.S. Hertzog.

S.G. File No. S 9487
Survey Records No. E 708/1938
M 3159
VN Consol. 468/40.

FORM Q.

S 8 P.O.T.

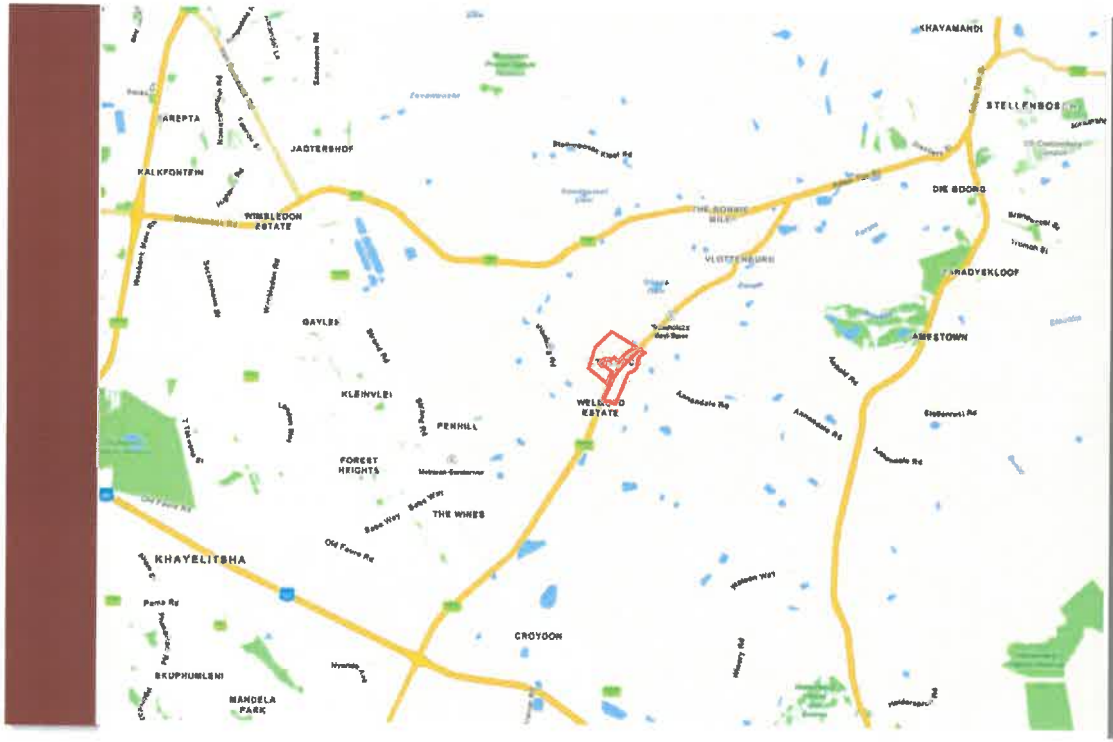
FOR ENDORSEMENTS SEE BACK OF DIAGRAM

ANNEXURE G: MARKET ASSESSMENT STUDY

REPORT PREPARED FOR:

UNiQON

September
2023



LYNEDOCH MIXED USE
Market Study

133

DEMACON
Market Studies

LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT

Market Studies
Retail Studies | Centre Repositioning | Consumer Surveys

Special Projects
Mixed Use Developments | Inclusionary Housing Projects | Economic Impact Assessments

Africa
Real Estate Feasibility Studies | Economic Assessments | Socio-Economic Surveys | Impact Assessments

Incorporating **GIS TECHNOLOGY** for Advanced Geo-Spatial Analysis

CONTACT US:
Dr. Hein du Toit

+27 12 460 7009
+27 12 346 5883
+27 82 8988 667
hein@demacon.co.za
www.demacon.co.za

The information contained in this report has been compiled with the utmost care and accuracy within the parameters specified in this document. Any decision based on the contents of this report is, however, the sole responsibility of the decision maker.

TABLE OF CONTENTS

SYNOPSIS 1

1. INTRODUCTION 68
1.1 BACKGROUND 68
1.2 PROJECT BRIEF & OBJECTIVES 68
1.3 RESEARCH METHODOLOGY 68
1.4 STUDY AREA DELINEATION 70
1.5 REPORT OUTLINE 75

2. POLICY AND STRATEGIC PLANNING CONTEXT 77
2.1 INTRODUCTION 77
2.2 STELLENBOSCH SPATIAL DEVELOPMENT FRAMEWORK, 2019 77
2.3 STELLENBOSCH INTEGRATED DEVELOPMENT PLAN, 2022 - 2027 96
2.4 LOCAL AREA PERSPECTIVE 104
2.5 STATE OF THE MUNICIPALITY INDEX 109
2.6 SITE LOCATION ASSESSMENT 111
2.7 SYNTHESIS 114

3. ECONOMIC PROFILE & DRIVERS 118
3.1 INTRODUCTION 118
3.2 REFERENCE FRAMEWORK 118
3.3 MACRO-ECONOMIC INDICATORS 119
3.4 LOCAL ECONOMIC TRENDS AND PERFORMANCE 132
3.5 SYNTHESIS 142

4. SOCIO ECONOMIC PROFILE 145
4.1 INTRODUCTION 145
4.2 MARKET AREA DELINEATION 146
4.3 DEMOGRAPHIC PROFILE (PRIMARY MARKET AREA) 148
4.4 SYNTHESIS 159

5. HOUSEHOLD SURVEY RESULTS 162
5.1 INTRODUCTION 162
5.2 DISTRIBUTION OF RESPONDENTS 162
5.3 SOCIO-ECONOMIC PROFILE 163
5.4 RESIDENTIAL SUPPORT AND PREFERENCES 164
5.5 RETAIL SUPPORT AND PREFERENCES 168
5.6 SUPPORT FOR ANCILLARY SERVICES 171
5.7 SYNTHESIS 172

6. MARKET-BASED RESIDENTIAL POTENTIAL 177
6.1 INTRODUCTION 177
6.2 GENERAL RESIDENTIAL MARKET INDICATORS 177
6.3 LOCAL RESIDENTIAL MARKET ACTIVITY 178
6.4 RESIDENTIAL DEMAND MODELLING 193
6.5 SYNTHESIS 203

7. RETAIL MARKET POTENTIAL 207
7.1 INTRODUCTION 207
7.2 LOCAL DEVELOPMENT PERSPECTIVE 207
7.3 RETAIL MARKET TRENDS 208
7.4 RETAIL MARKET POTENTIAL ASSESSMENT 212
7.5 SYNTHESIS 220

8. AUTOMOTIVE MARKET POTENTIAL 223
8.1 INTRODUCTION 223
8.2 DEFINING OF SECTOR AND SUBSECTOR 223
8.3 AUTOMOTIVE TRENDS AND OUTLOOK 2023 224
8.4 MARKET POTENTIAL ASSESSMENT 225
8.5 SYNTHESIS 228

9. OFFICE MARKET POTENTIAL 231
9.1 INTRODUCTION 231
9.2 GENERAL OFFICE MARKET TRENDS 231
9.3 LOCAL MARKET INDICATORS 235
9.4 MARKET POTENTIAL ASSESSMENT 247
9.5 SYNTHESIS 247

10. PRIVATE HEALTHCARE MARKET ANALYSIS 250
10.1 INTRODUCTION 250
10.2 PUBLIC AND PRIVATE MEDICAL HEALTHCARE 250
10.3 HEALTHCARE FACILITIES, LEVELS OF CARE AND SPECIALTY 251
10.4 CAPE WINELANDS HOSPITAL STAY 255
10.5 BURDEN OF DISEASE PROFILE 256

10.6 SUPPLY POTENTIAL ASSESSMENT 257
10.7 MARKET POTENTIAL ESTIMATIONS 261
10.8 SYNTHESIS 262

11. PRIVATE SCHOOL MARKET ANALYSIS 266
11.1 INTRODUCTION 266
11.2 PRIVATE SCHOOL SECTOR 266
11.3 MARKET POTENTIAL ASSESSMENT 268
11.4 SYNTHESIS 272

12. STUDENT ACCOMMODATION MARKET ANALYSIS 275
12.1 INTRODUCTION 275
12.2 STUDENT ACCOMMODATION IN SOUTH AFRICA 275
12.3 HIGHER EDUCATION INSTITUTION SUPPLY AND TARGET INSTITUTION IDENTIFICATION 276
12.4 STUDENT ACCOMMODATION SUPPLY 280
12.5 MARKET DEMAND MODELLING 299
12.6 SYNTHESIS 303

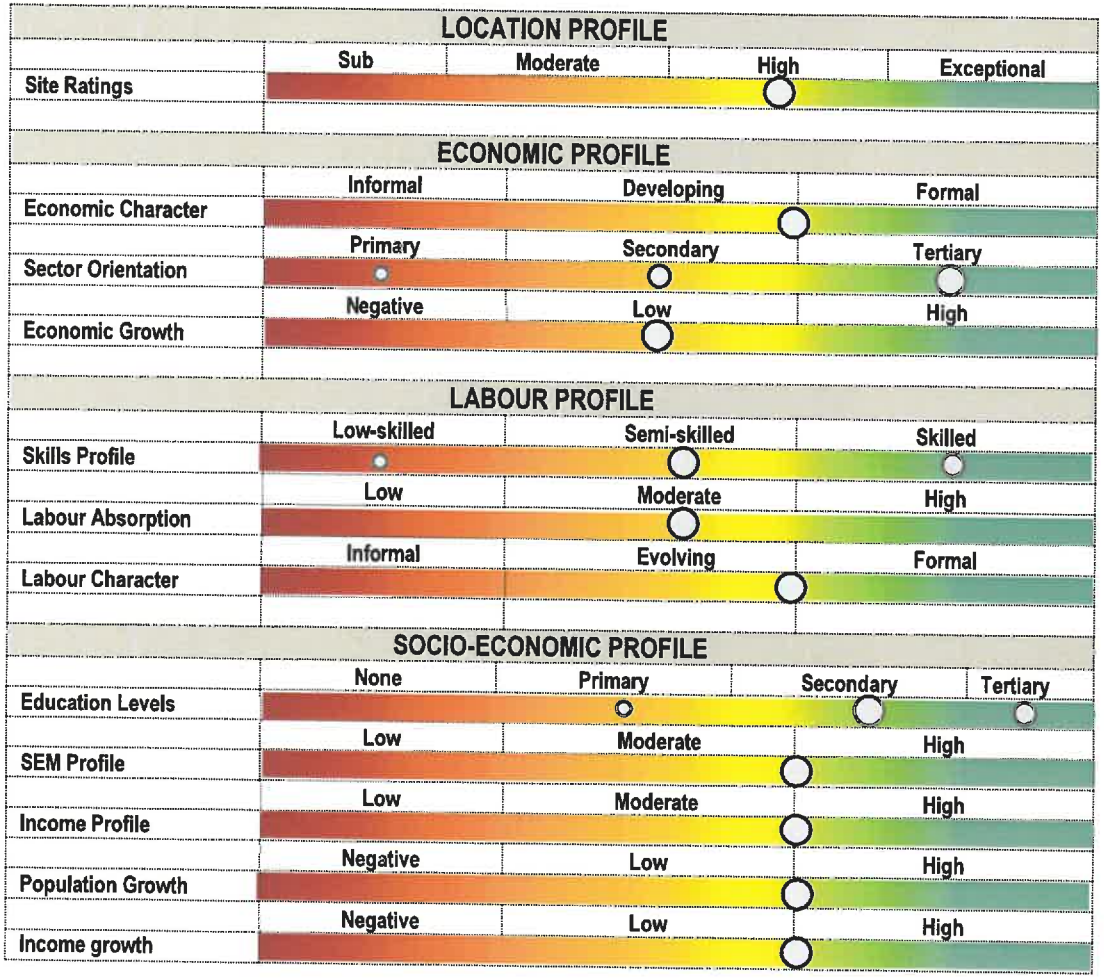
13. SUMMARY AND RECOMMENDATIONS 308
13.1 INTRODUCTION 308
13.2 MARKET DEMAND SUMMARY AND OUTCOMES 308
13.3 OVERVIEW OF MARKET RECOMMENDATIONS 311
13.4 LYNEDOCH MIXED-USE DEVELOPMENT LAND BUDGET & PHASING 321

A. RESIDENTIAL MARKET ACTIVITY – STELLENBOSCH & JAMESTOWN 323

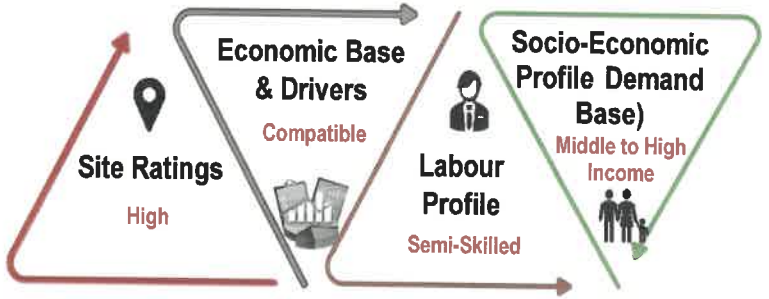
SYNOPSIS

KEY INDICATORS

GRAPHIC SYNOPSIS OF MARKET INDICATORS



DEVELOPMENT OPTIONS & COMPATIBILITY



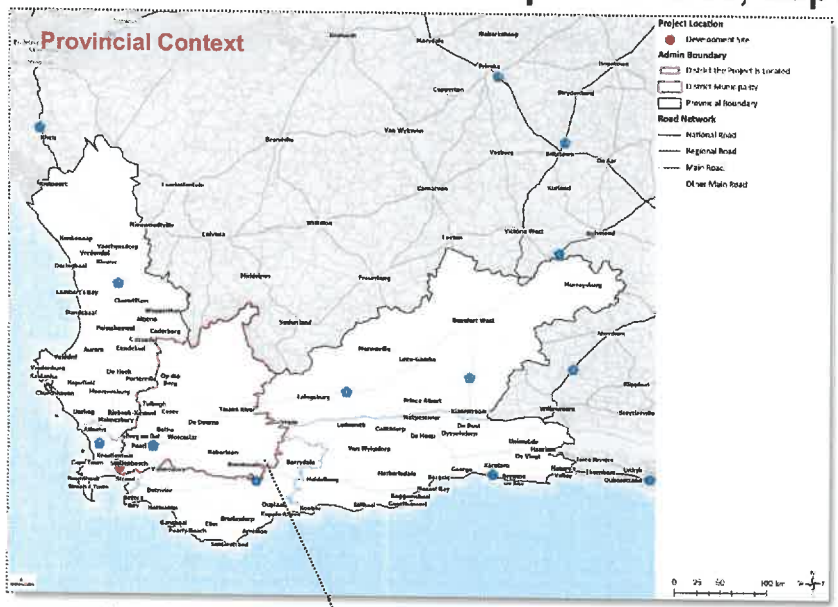
DEVELOPMENT RECOMMENDATIONS

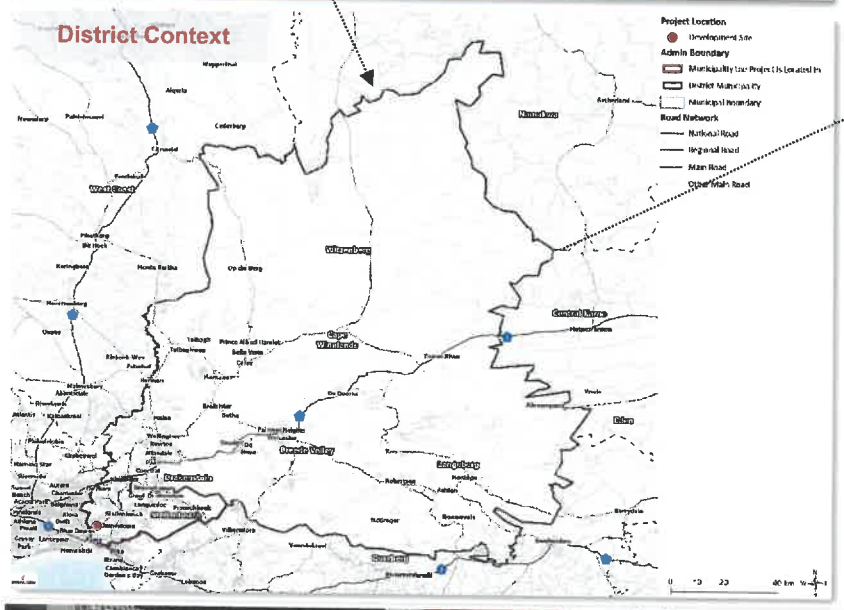
10-Year Take-up Forecast

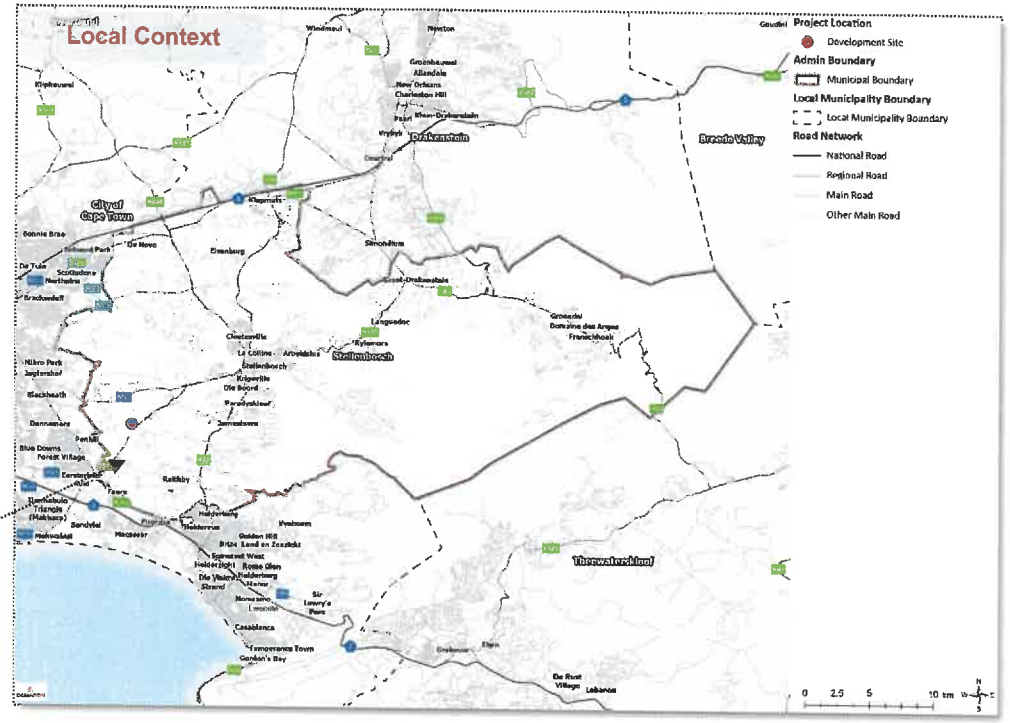
Land Use	Proposed Size	Hectares
Residential Bonded (Low Density)	±630 units	75.9
Student Accommodation (Medium Density)	±120 units	31.6
Retail (Small Convenience Centre)	±2 869m²	11.1
Trade (Automotive)	±455m²	1.3
Offices / Administrative Functions	±2 082m²	4.5
Private Day Clinic	±488m² (5 to 7 beds)	0.9
Private School	±3 720m² (350 to 400 pupils)	31.3
Total		38.78

A total of 38.78 hectares could be developed and taken up over a 10-year timeframe. This includes 88.7% (34.41 ha) for residential uses and 11.3% (4.37 ha) for non-residential uses. The site is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. Take-up is forecast to accelerate as the development gains traction in the market. Considering, the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45.48ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development.

Site in context of Western Cape Province, Cape Winelands District and Stellenbosch Local Economy



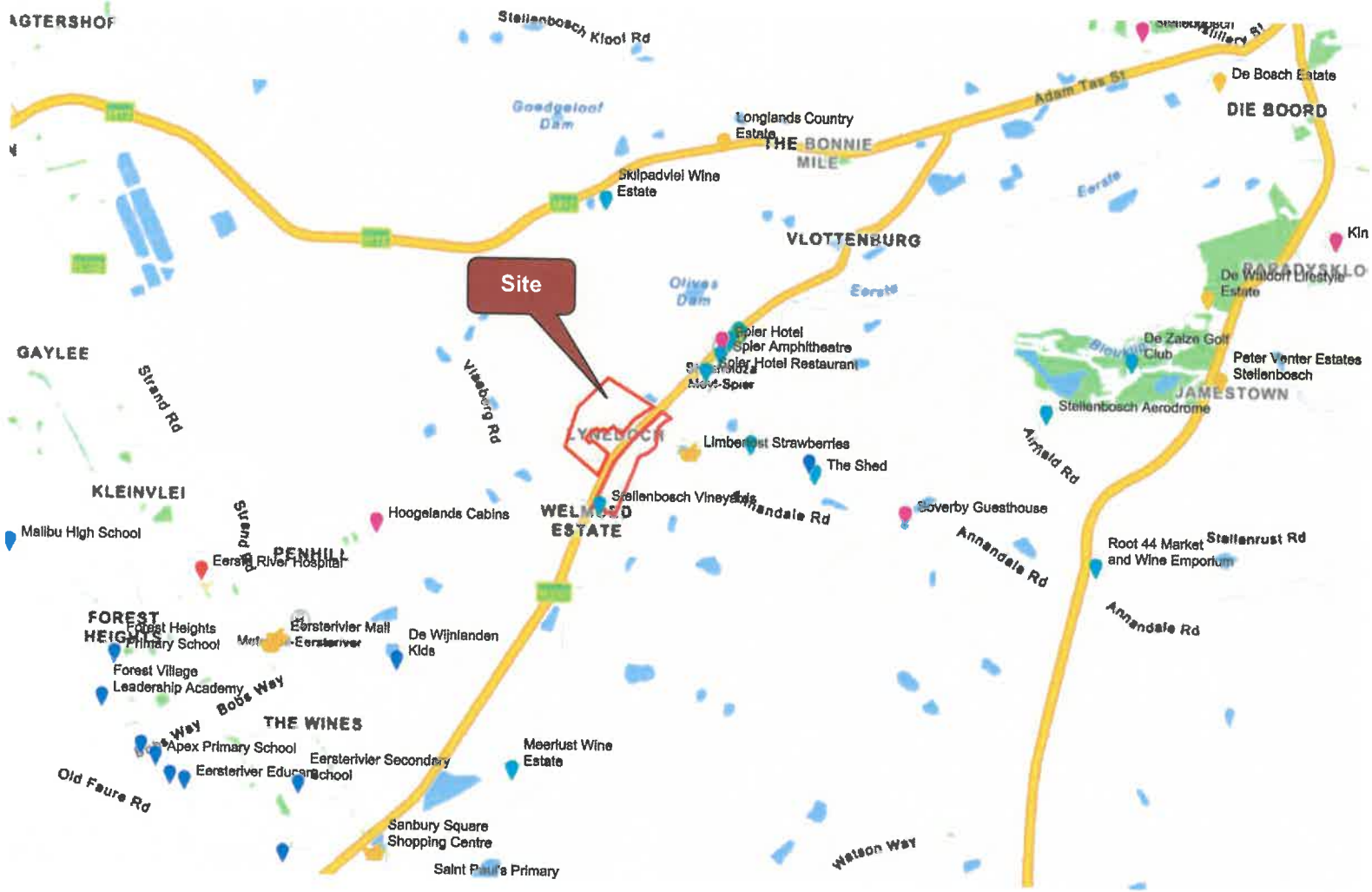




The Layout of the Site and Aerial View

The proposed development is located in **Lynedoch, Stellenbosch Local Municipality, Western Cape Province**. The sites extend north and south of the R310 road (Baden Powell Drive). The focus of the market study is **Portion 28** to the **north of the R310** which measures **±45.48 ha**.

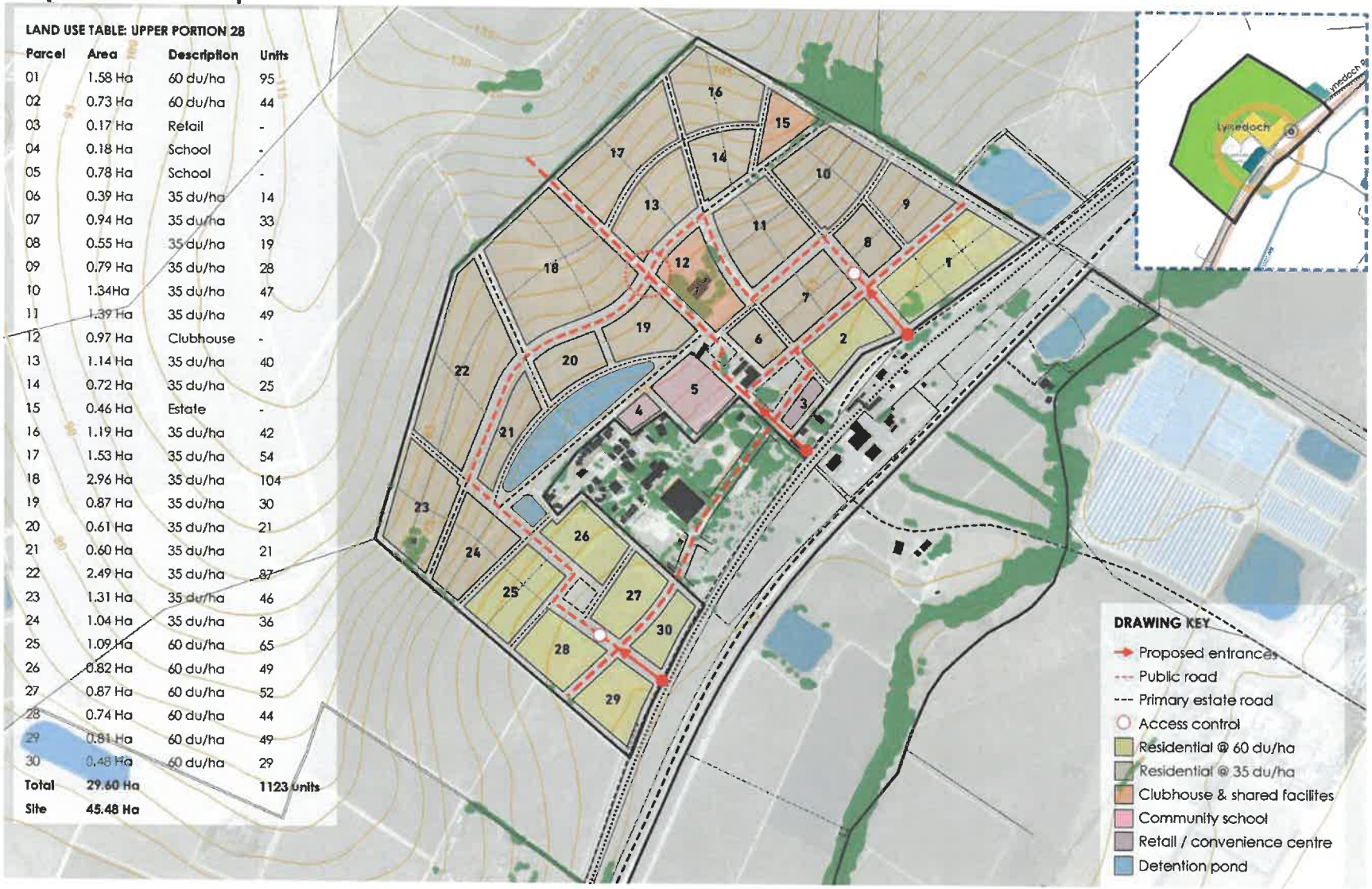
Location of Site & Arial View



Development Concept – Portion 28

LAND USE TABLE: UPPER PORTION 28

Parcel	Area	Description	Units
01	1.58 Ha	60 du/ha	95
02	0.73 Ha	60 du/ha	44
03	0.17 Ha	Retail	-
04	0.18 Ha	School	-
05	0.78 Ha	School	-
06	0.39 Ha	35 du/ha	14
07	0.94 Ha	35 du/ha	33
08	0.55 Ha	35 du/ha	19
09	0.79 Ha	35 du/ha	28
10	1.34Ha	35 du/ha	47
11	1.39 Ha	35 du/ha	49
12	0.97 Ha	Clubhouse	-
13	1.14 Ha	35 du/ha	40
14	0.72 Ha	35 du/ha	25
15	0.46 Ha	Estate	-
16	1.19 Ha	35 du/ha	42
17	1.53 Ha	35 du/ha	54
18	2.96 Ha	35 du/ha	104
19	0.87 Ha	35 du/ha	30
20	0.61 Ha	35 du/ha	21
21	0.60 Ha	35 du/ha	21
22	2.49 Ha	35 du/ha	87
23	1.31 Ha	35 du/ha	46
24	1.04 Ha	35 du/ha	36
25	1.09 Ha	60 du/ha	65
26	0.82 Ha	60 du/ha	49
27	0.87 Ha	60 du/ha	52
28	0.74 Ha	60 du/ha	44
29	0.81 Ha	60 du/ha	49
30	0.48 Ha	60 du/ha	29
Total	**29.60 Ha**		**1123 units**
Site	**45.48 Ha**		



Development concept A

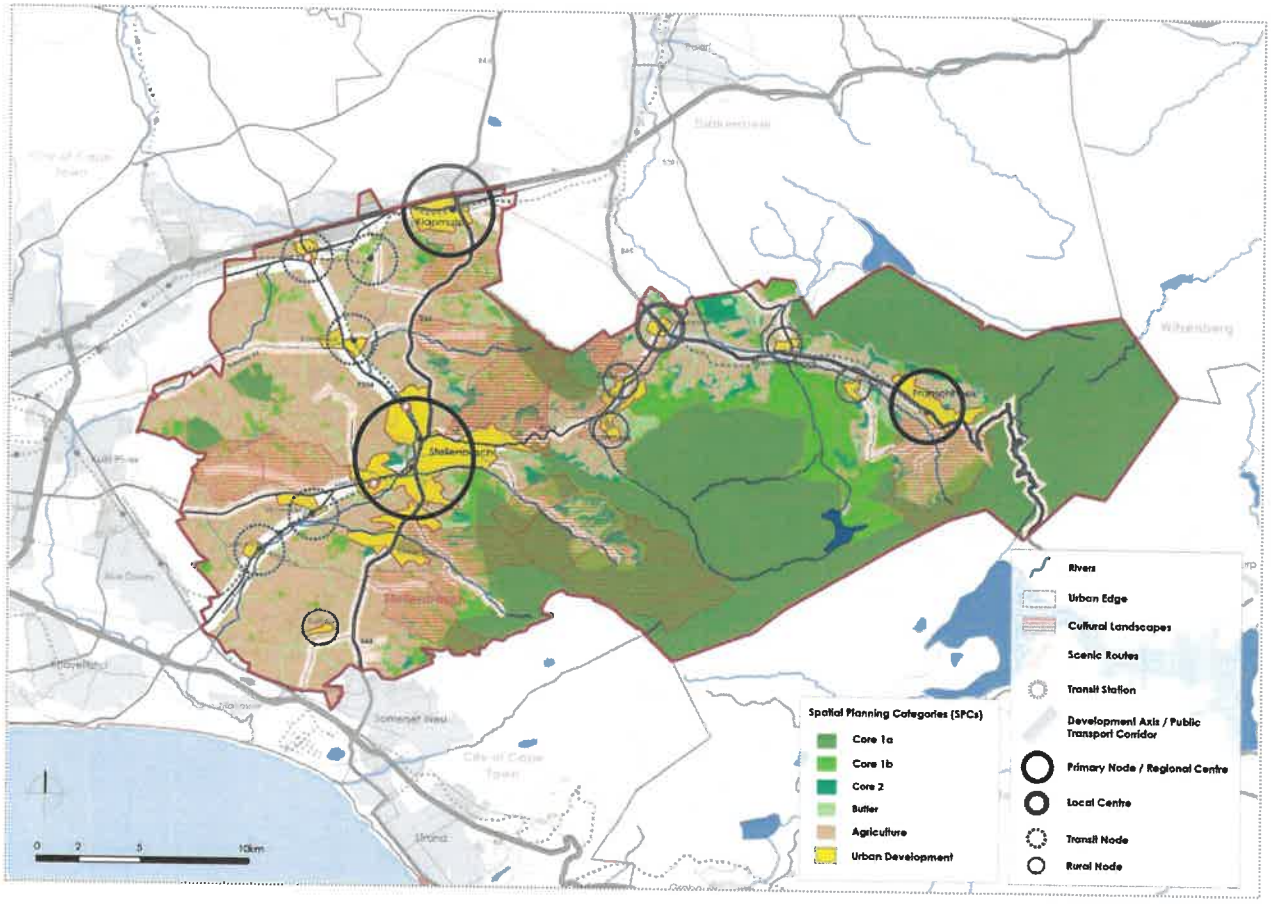
CONTEXT & CONCEPT JUNE 2023 WELMOED

URBANSTUDIO
architects & urban designers

LOCATION ANALYSIS

Strategic Analysis

- ✓ The site is situated within Lynedoch, Stellenbosch Local Municipality, which forms politically, part of the Cape Winelands District Municipality, Western Cape Province.
- ✓ Stellenbosch Local Municipality is bounded to the east and south by the Drakenstein, Wemmershoek and Limietberg mountain ranges.
- ✓ The **main settlements** in SM are the historic towns of Stellenbosch and Franschhoek, and Klapmuts. There are also a number of **smaller villages**, including Jamestown (contiguous with Stellenbosch town), Pniel, Johannesdal, Lanquedoc, Lynedoch, and Raithby. New nodes are emerging around agricultural service centres, for example, Koelenhof and Vlottenburg.
- ✓ Lynedoch is classified as a **secondary settlement** with the role to gradual expand focusing on **sustainable living and education.**
- ✓ The **current housing demand** waiting list comprise some 15 780 applicants (Western Cape Housing Demand Database extract for Stellenbosch, May 2018).
- ✓ In terms of the Stellenbosch's Built Environment Context, a **housing backlog** in the rural settlements have a backlog of over **3 000 housing opportunities** in rural areas (based on information from the Draft Rural Plan).
- ✓ Lynedoch is identified as:
  - A growth node
  - Opportunities for a new high density MU infill development.
  - Future opportunities for new high-density MU – when transit implemented.



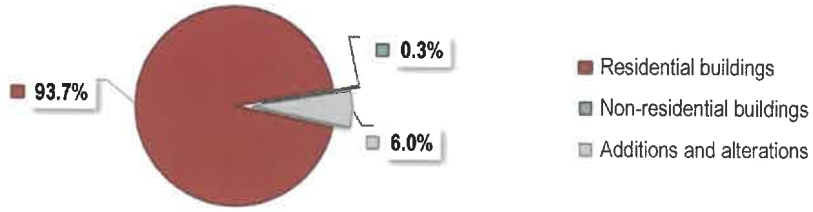
- ✓ In terms of the **consolidated concept**, Lynedoch is:
  - A primary development axis / transport corridor
  - A transit node,
  - Highly accessible location within the urban edge
- ✓ Several **settlement plans / new developments** for the municipality:
  - Raithby
  - Vlottenburg
  - Kylemore
  - Phiel
  - Koelenhof
  - Muldersvlei
  - Klapmuts
  - Groot Drakenstein
  - Wemmershoek
  - Franschhoek
  - Several **settlement plans / new developments** for the municipality:
- ✓ In terms of residential planning, the MSDF stipulated that over the longer term, it is believed that some settlements along the **Baden-Powell-Adam Tas-R304** corridor can support larger populations, particularly the broader Muldersvlei/ Koelenhof and Vlottenburg/ Spier/**Lynedoch** areas.

Buildings Completed

Key Findings – *Stellenbosch Local Municipality Building Statistics (from 2012 to 2022)*

- ✓ 88.7% of all buildings completed from 2012 to 2022, were residential, 1.9% were non-residential, and 9.4% were additions/alterations.
- ✓ In terms of **residential buildings** completed from 2012 to 2022:
  - 57.3% were dwelling houses,
  - 36.7% flats,
  - 5.5% townhouses and
  - 0.5% other residential buildings (incl. tourism accommodation etc).
- ✓ The majority of **non-residential buildings** completed from 2012 to 2022:
  - 34.9% were industrial and warehouse space,
  - 24.9% office and banking space,
  - 16.2% shopping space and
  - 16.2% schools, nursery schools, crèches, hospitals
- ✓ Industrial and warehouse space amounted to ±64 353m², office and banking space 45 958m² and shopping space 29 939m² from 2012 – 2022.
  Source: Demacon ex StatsSA

Summary of Buildings Completed - *Stellenbosch Local Municipality*



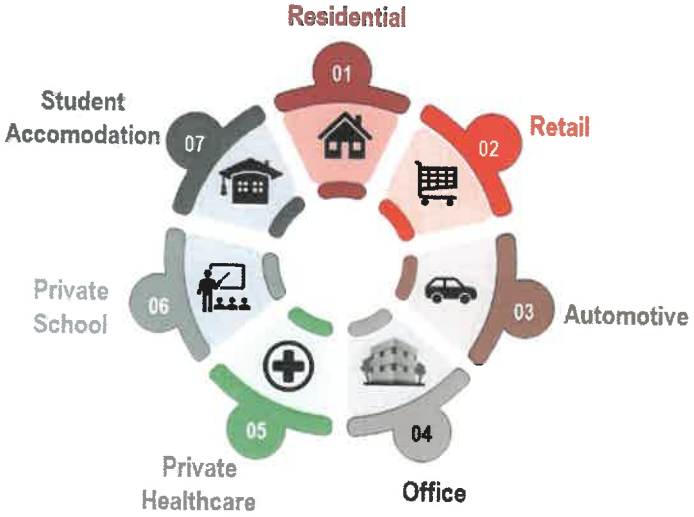
Residential Buildings Summary

Stellenbosch Local Municipality			TOTAL	AVERAGE
Residential Buildings		Dwelling-Houses	2 462 units	224 units
		Flats	1 579 units	144 units
		Townhouses	238 units	22 units
		Other Residential (incl. Tourism Accommodation)	20 units	2 units
		RESIDENTIAL UNITS	4 299 units	430 units/a
Non-Residential Buildings		Office and banking space	45 958m²	4 178m²
		Shopping space	29 939m²	2 722m²
		Industrial and warehouse space	64 353m²	5 850m²
		Churches, sport and recreation clubs	2 967m²	270m²
		Schools, nursery schools, crèches and hospitals	29 833m²	2 712m²
		Other non-residential buildings	11 590m²	1 054m²
		NON-RESIDENTIAL BUILDINGS	184 640m²	16 785m²

Source: Demacon ex StatsSA

Site Assessments

Site assessments for the project include the following land uses:



The preceding analysis shows the outcome of the location analysis for the proposed development. The data shows that the site ratings are high and indicate that most important fundamentals for a successful development are in place.

Summary of site assessments:

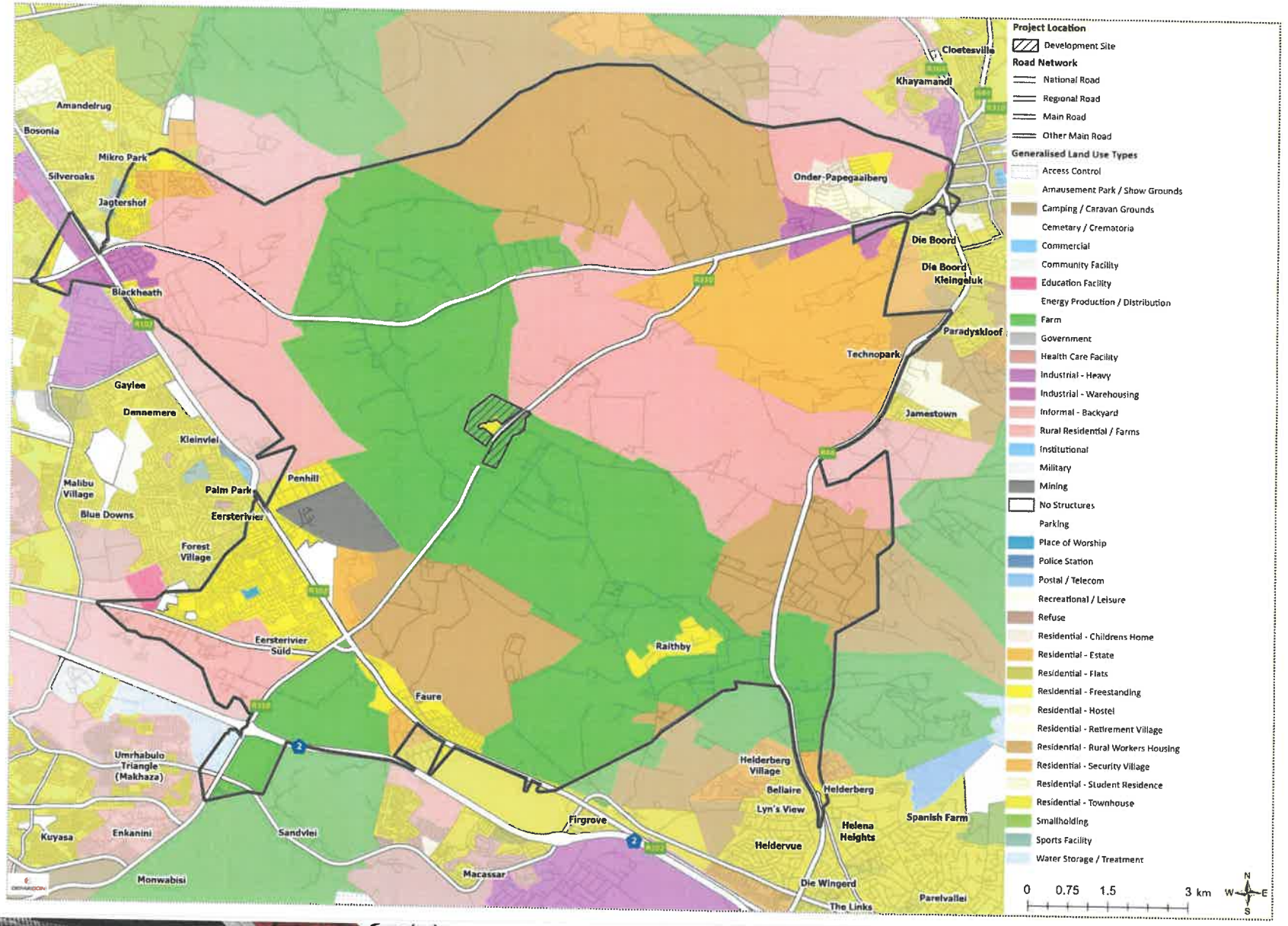
Residential	73.2%
Retail	75.5%
Office	72.9%
Private Healthcare	69.8%
Private School	73.8%
Student Accommodation	72.7%

The location scores rated high due to the following:

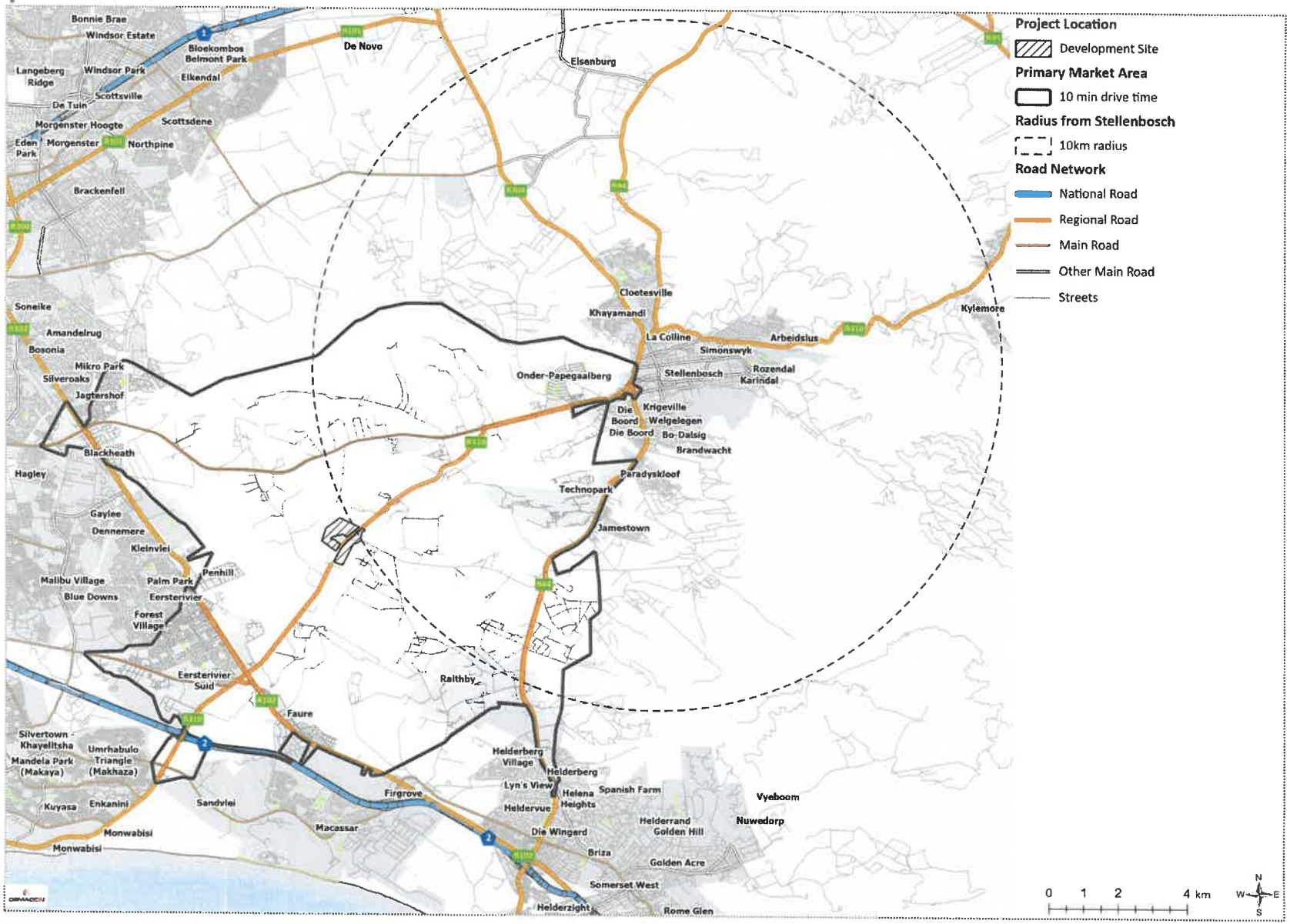
- Address Value
- Access to main roads (adjacent to the R566 Road)
- Accessibility
- Visibility
- Availability of Land
- Future Expansion Potential

144

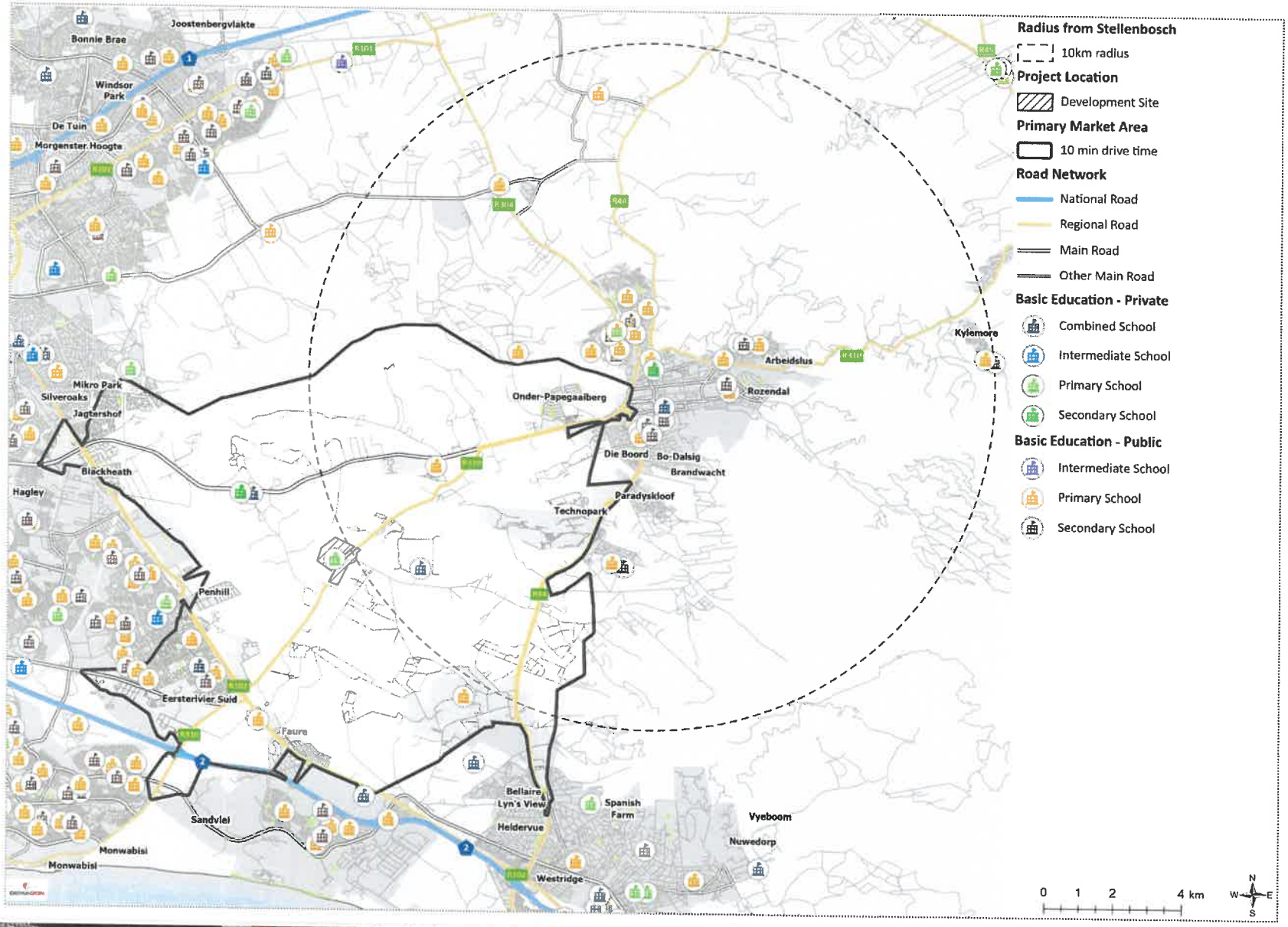
High Level Land Uses



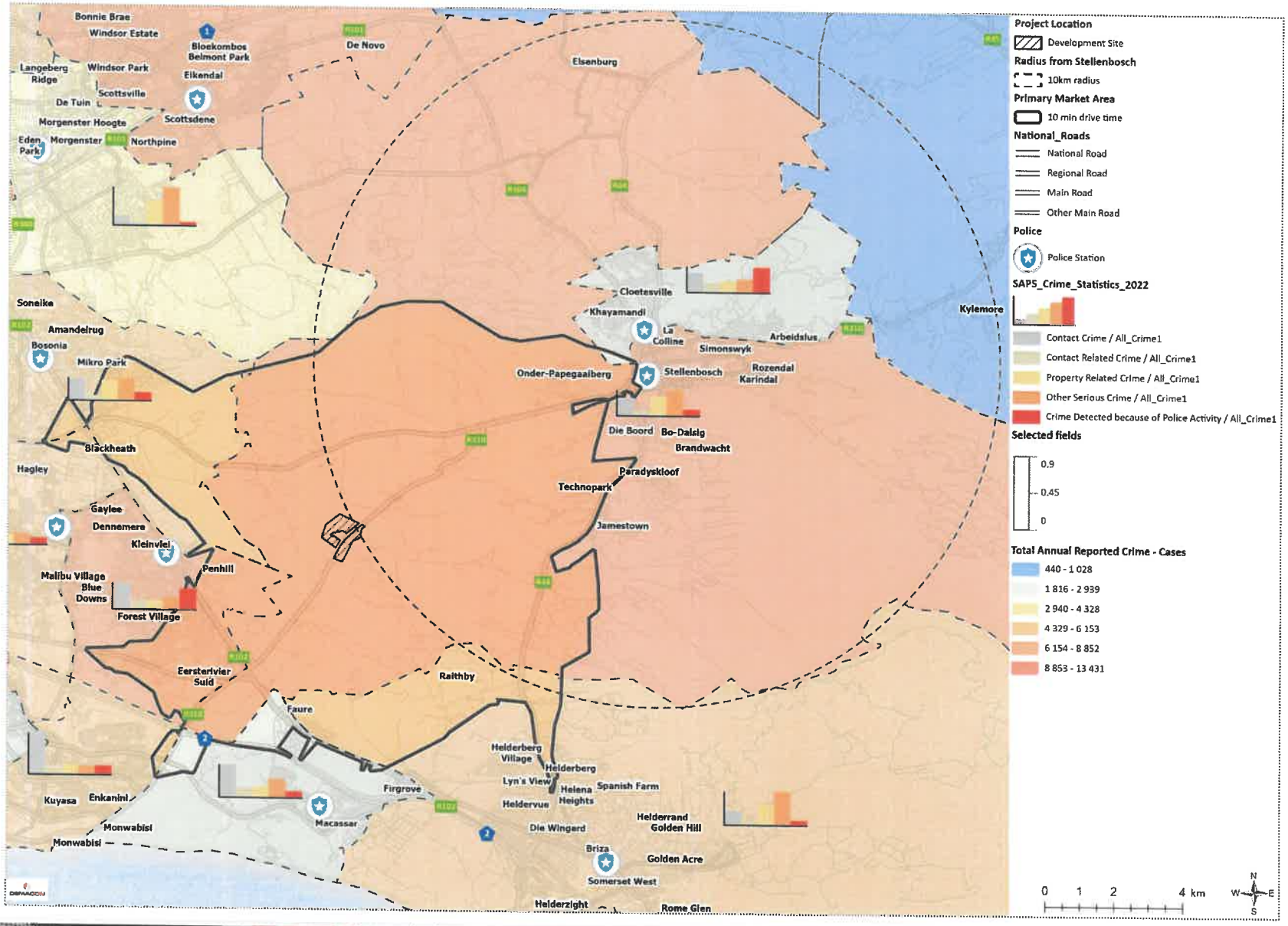
Transport Network



Basic Education



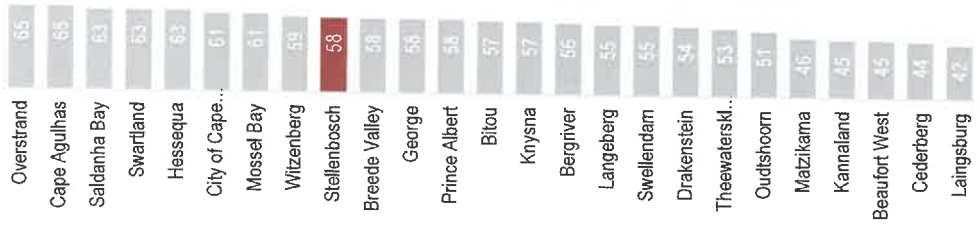
Crime Statistics



STATE OF THE MUNICIPALITY INDEX

The Out of Order Index is an index that allocates each of the more than 200 local municipalities and eight Metros a score on a scale from 0-100, where 0 is a failure and 100 is perfectly performing. The data used is sourced from authoritative sources, such as National Treasury's budget data which is used for calculating budget allocations to municipalities, the Auditor-General's reports, and Statistics South Africa. Unlike other approaches, the Index does not only include pure financial metrics, but also measures of unemployment, poverty, and basic service delivery to households. Some factors are within the direct control of the municipality and others are not, but all affect their trajectory as sustainable entities.

Westerm Cape Province Local Municipalities



Best Performers









The **Stellenbosch** is ranked 9th out of 25 municipalities in the Western Cape Province.

Worst Performers







FACTORS that contribute towards the Metro Municipality's Out of Order Index Score:

Money not spent properly
R0

% of households that are poor
51%

% of households receiving rubbish removal
94%

Operating budget
R1 718 542 150

% of households receiving water
100%

% of operating budget spent on staff wages
31%

Maintenance spending
1%

% of households receiving electricity
101%

Number of households
54 199

% of households receiving sewerage services
79%

The Auditor General has downgraded the City of Tshwane Municipality to below investment grade by June 2021. The Metro has been operating as a going concern for the past three financial years. This effectively means that the municipality does not have enough revenue to cover their expenditure and that they owe more money than what they have.
Source: DEMACON ex Auditor General South Africa, SAPOA & News24, 2023

KEY ECONOMIC INDICATORS – Stellenbosch Local Economy

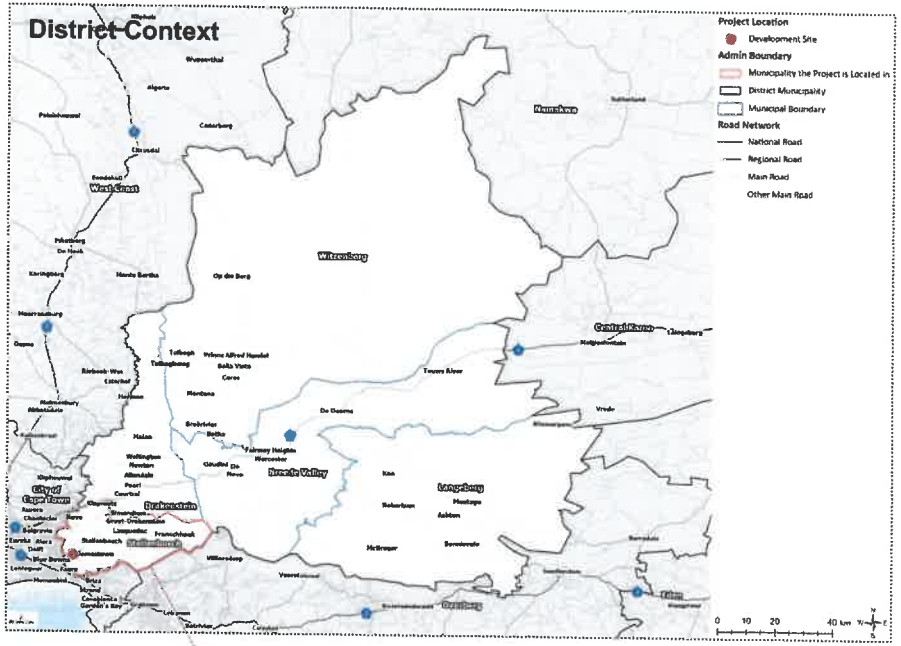
From a provincial economic perspective, the proposed project is located in **Cape Winelands District** within **Stellenbosch Local Economy** and will be analysed in the section below:

Local / Regional Economic Context



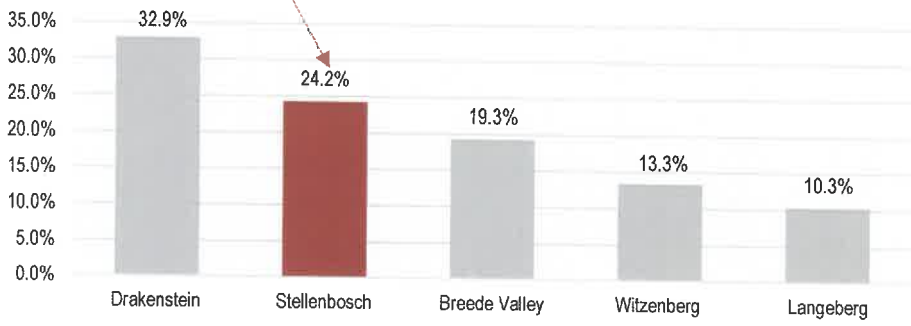






SPATIAL CONTRIBUTION TO CAPE WINELAND DISTRICT ECONOMY (Current)

The local economy is the fourth largest contributor to the total economy of the **Cape Winelands District.** The local economy is characterized by **tertiary economy** activities with a strong **community services** component.



KEY ECONOMIC INDICATORS – Stellenbosch Local Economy

ECONOMY GROWTH *(constant)*

Cape Winelands District

1.0% 5-year growth

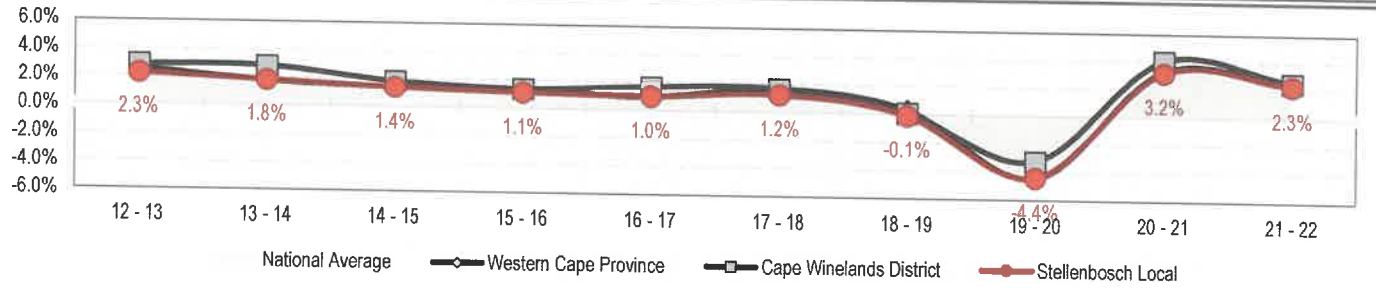
1.6% 10-year growth

Average Annual Economic Growth

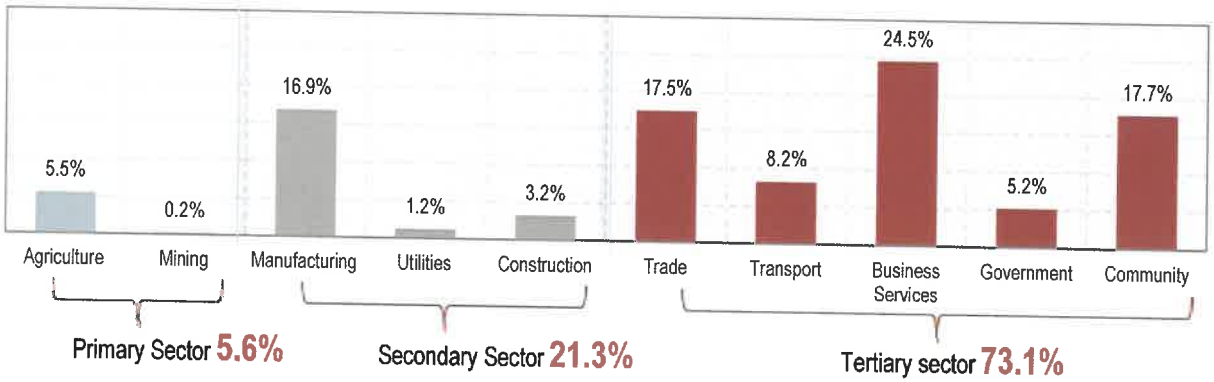
Stellenbosch Local Economy

0.4% 5-year growth

1.0% 10-year growth

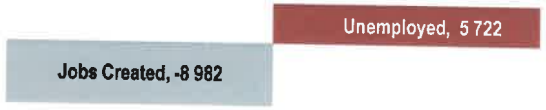


ECONOMIC STRUCTURE



LABOUR FORCE PARTICIPATION

64.5% of the potential labour force participate in the local economy



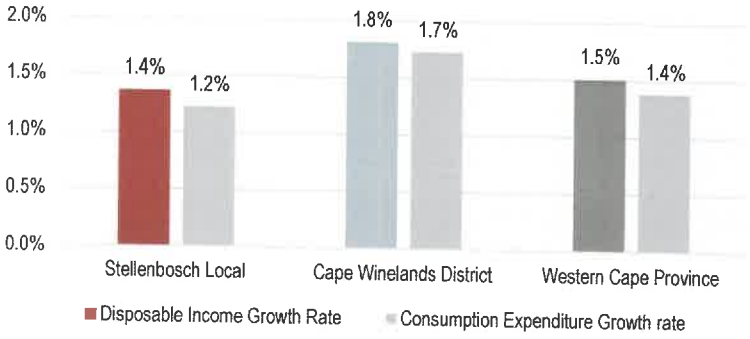
Total formal jobs in Stellenbosch Local Economy since 2022: **56 966**

Formal Jobs Gained 10yr: **10 092**

Formal jobs per annum: **1 009**

Unemployment rate: **19.3%**

DISPOSABLE INCOME & CONSUMPTION EXPENDITURE GROWTH



Stellenbosch Local Economy:

Disposable income:

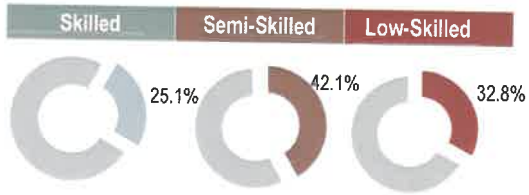
1.3% 5-year growth

1.5% 10-year growth

Consumption Expenditure:

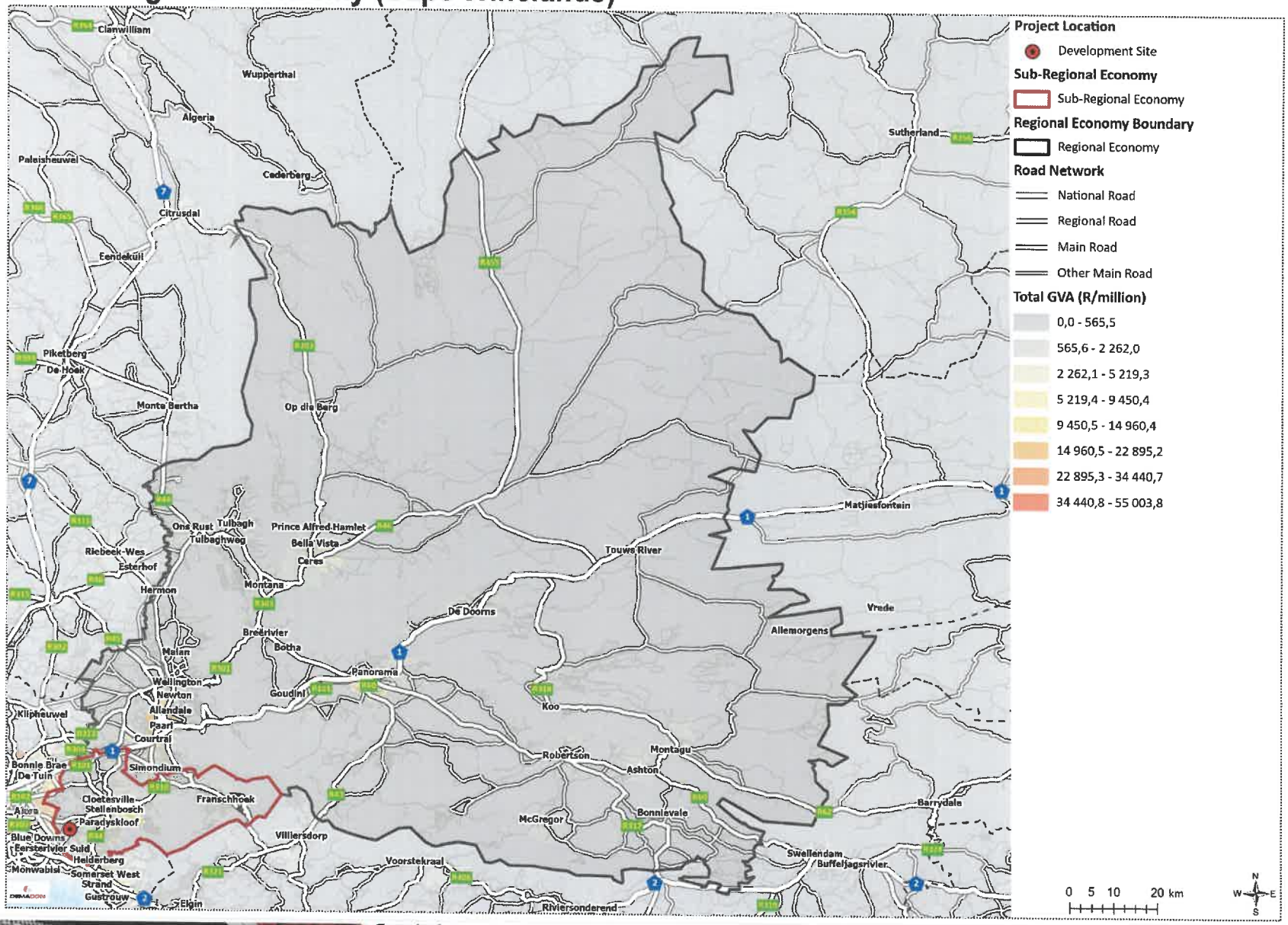
0.5% 5-year growth

1.4% 10-year growth

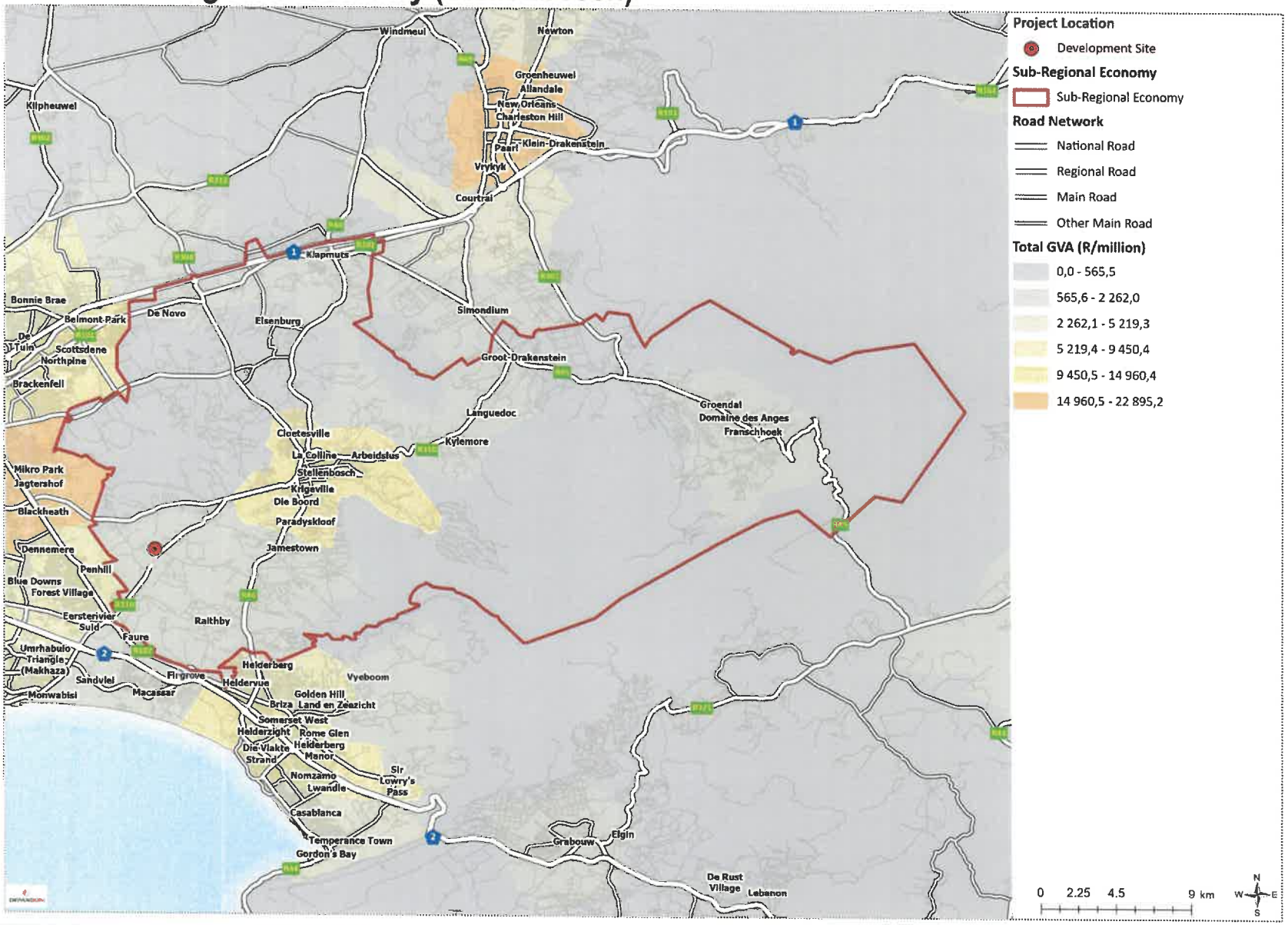


	Skilled	Semi-Skilled	Low-Skilled
Jobs (2022)	14 308	23 967	18 691
Gain Since 2022	2 784	6 468	840
Average Gain	278	647	84

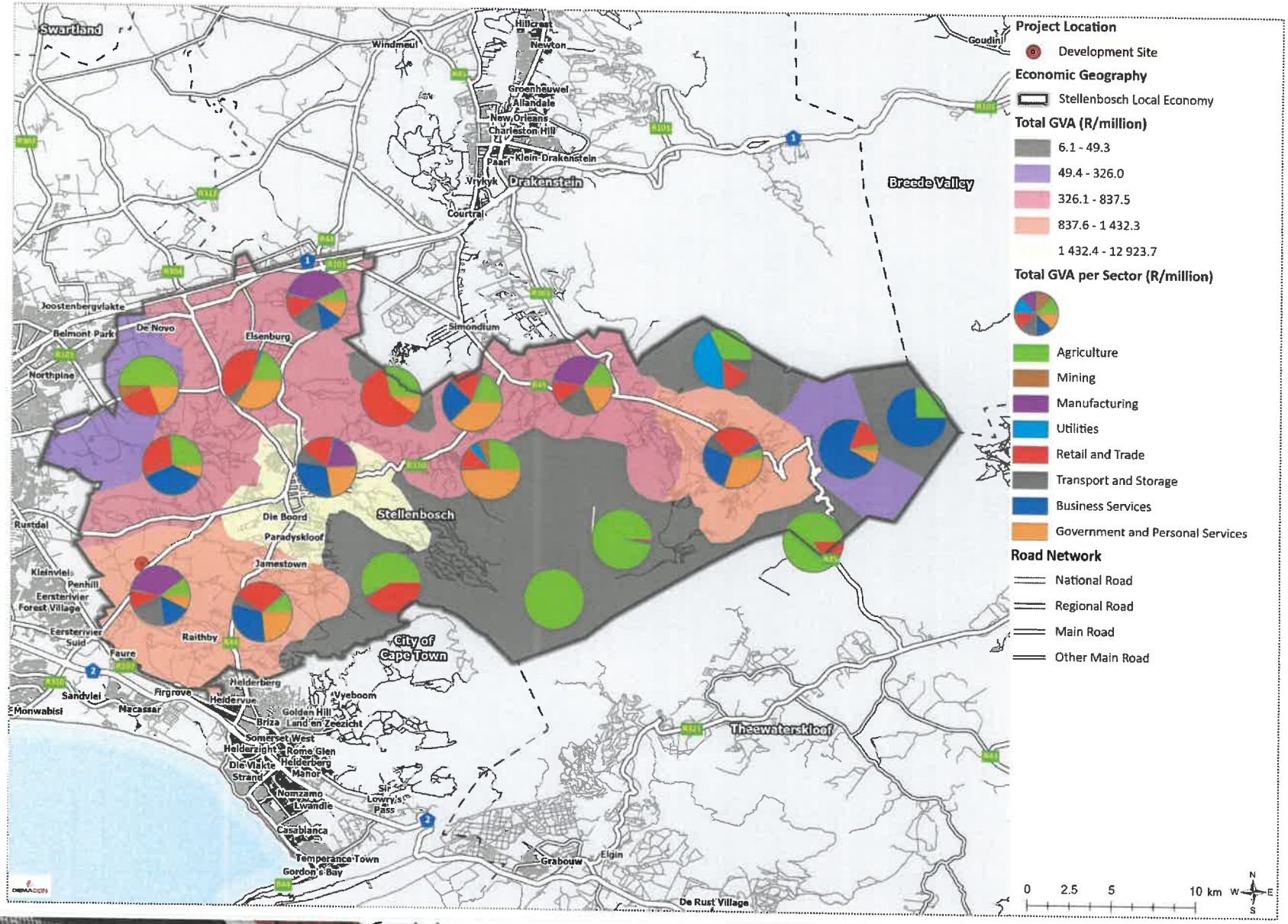
Total GVA – Regional Economy (Cape Winelands)



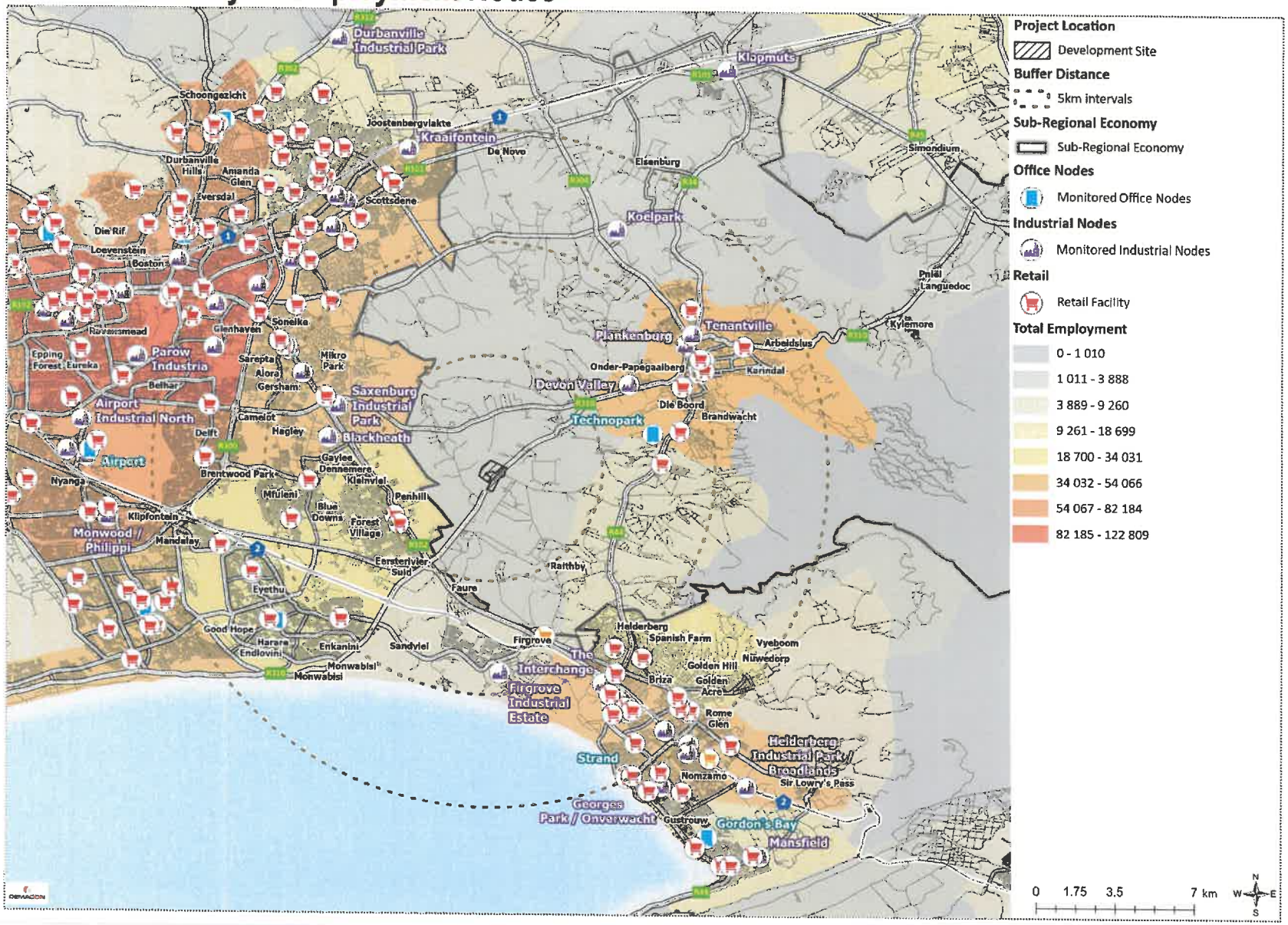
Total GVA – Sub-Regional Economy (Stellenbosch)



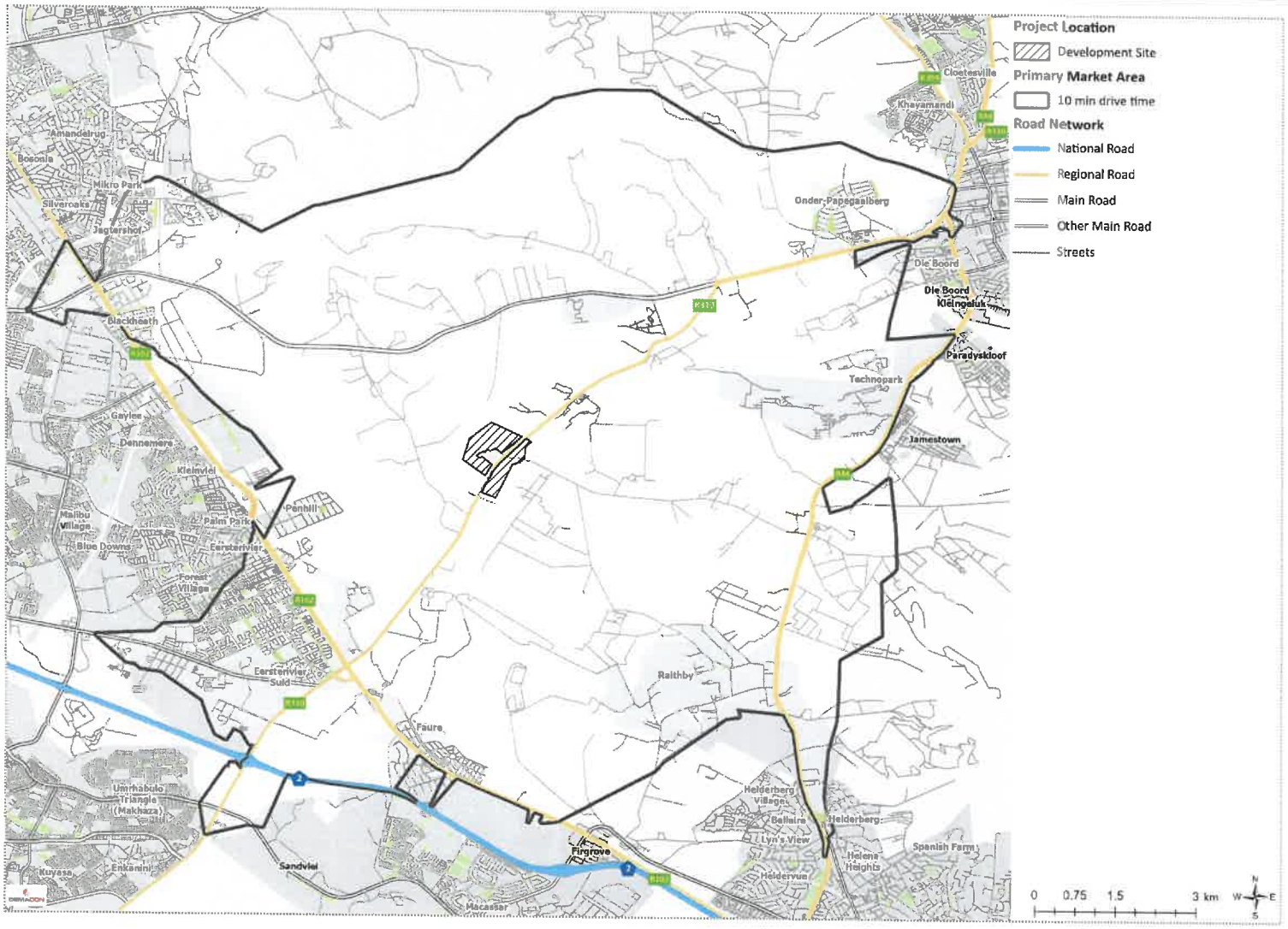
GVA Per Sector



Economics - Proximity to Employment Nodes



PRIMARY MARKET DEMOGRAPHIC SUMMARY (±10min drive time)



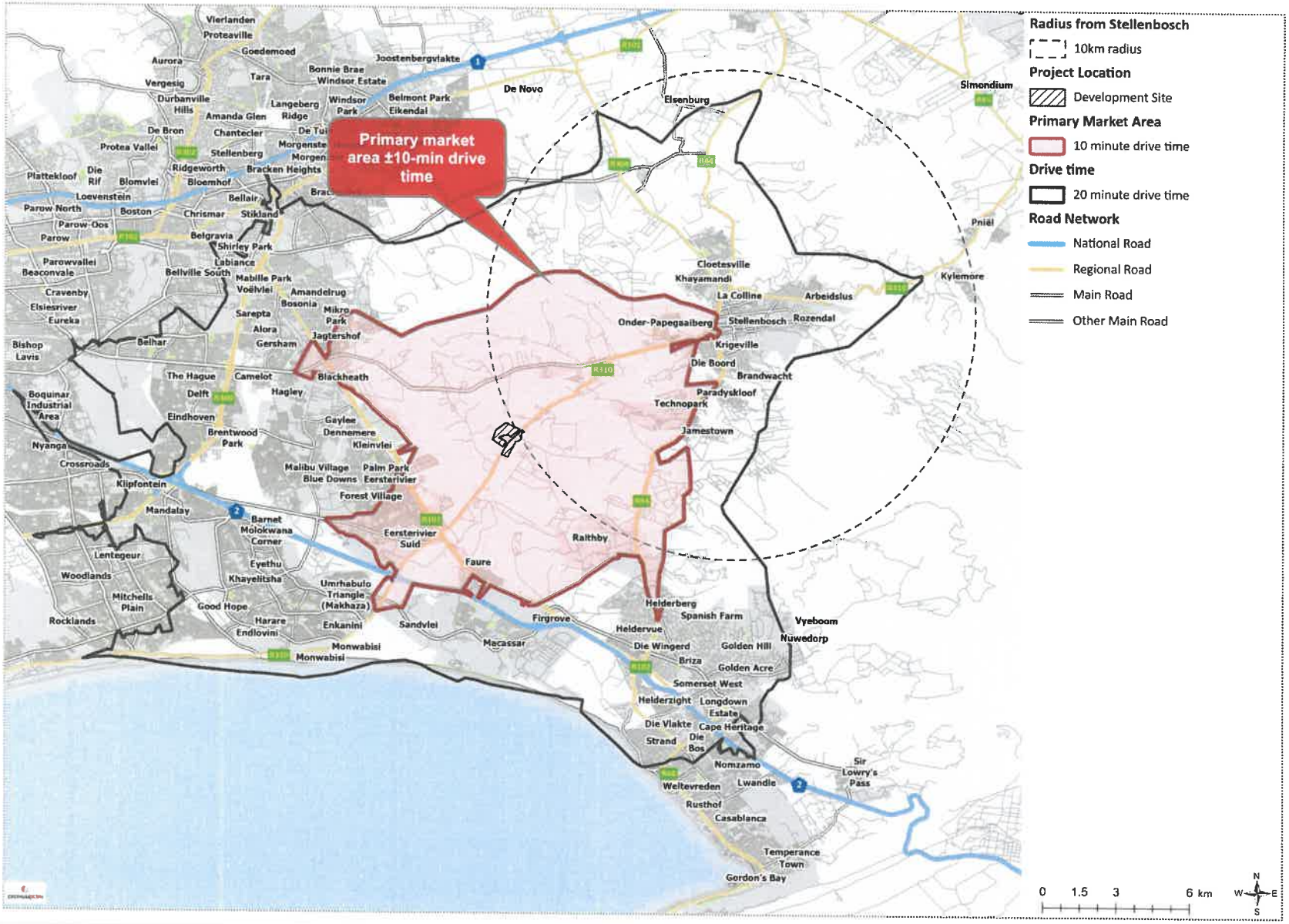
The primary market area for the project is based on the polygon (±10-minute drive time isochrone).

The key socio-economic indicators of the primary market, informed by general SACSC criteria, as well as the following:

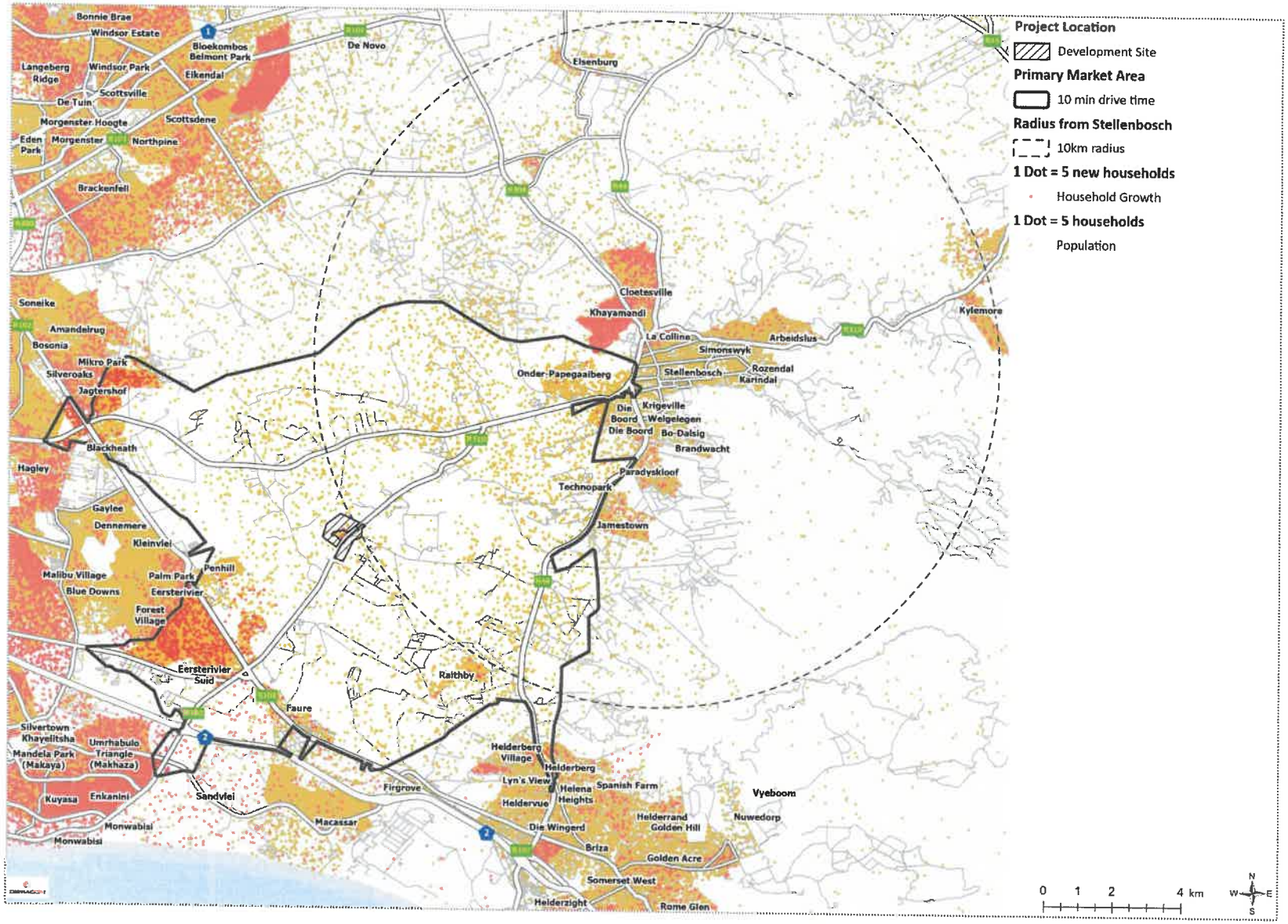
- Consumer market behaviour and expenditure trends
- Regional and sub-regional levels of accessibility
- Geographic barriers
- General consumer mobility patterns and drive times.

156

Drive Time


Primary market area ±10-min drive time
Radius from Stellenbosch
10km radius
Project Location
Development Site
Primary Market Area
10 minute drive time
Drive time
20 minute drive time
Road Network
National Road
Regional Road
Main Road
Other Main Road
0 1.5 3 6 km
N
W
E
S

Household Growth and Distribution



PRIMARY MARKET DEMOGRAPHIC SUMMARY (±10min drive time)

POPULATION SIZE

74 510
PEOPLE IN THE **PRIMARY** TRADE AREA

Population
Average Annual **Growth Rate**
2.24%

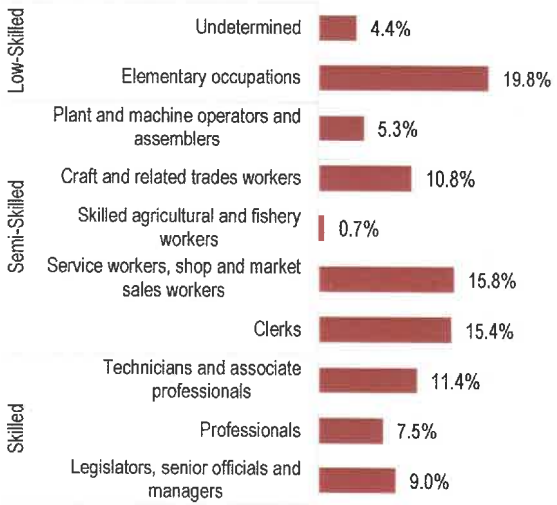
20 347
HOUSEHOLDS

Household
Average Annual **Growth Rate**
3.06%

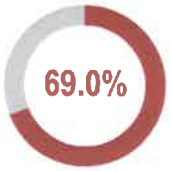
Biggest Employing Economic Sectors in the Primary Trade Area

25.7% - Community, social & personal services sector
19.2% - Wholesale and retail sector
17.1% - Finance, insurance, real estate and business services

OCCUPATION STATUS



EMPLOYMENT PROFILE

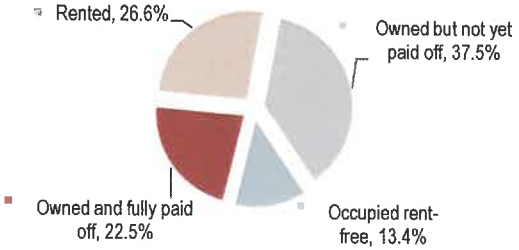


Economically ACTIVE Population

Employed **84.8%**

Employed and unemployed persons are economically active and thus is a segment of the economically active percentage.

TENURE STATUS



HOUSEHOLD INCOME

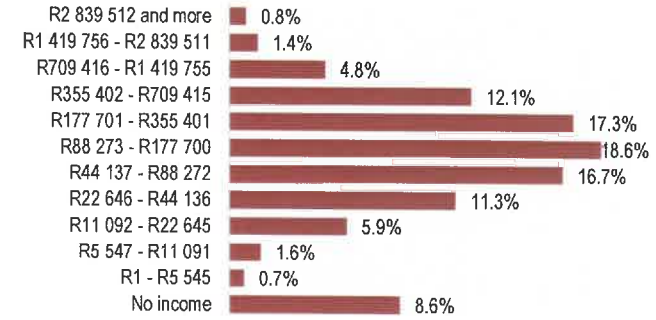
Average annual household income for all SEM Groups (2023)
R271 759

Average annual household income for SEM 2+ Groups (2023)
R429 189

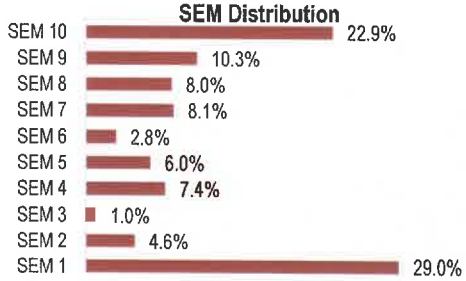


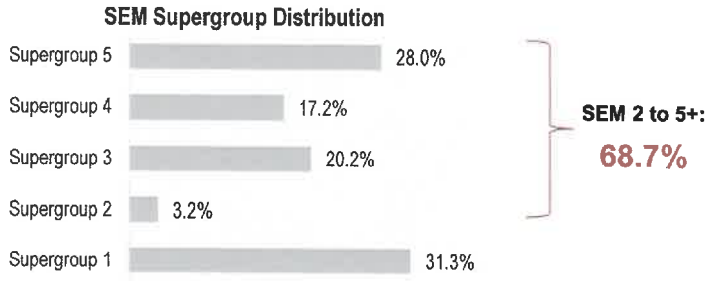
Average monthly household income for all SEM Groups (2023)
R22 647

Average monthly household income for SEM 2+ Groups (2023)
R35 766



SEM PROFILE

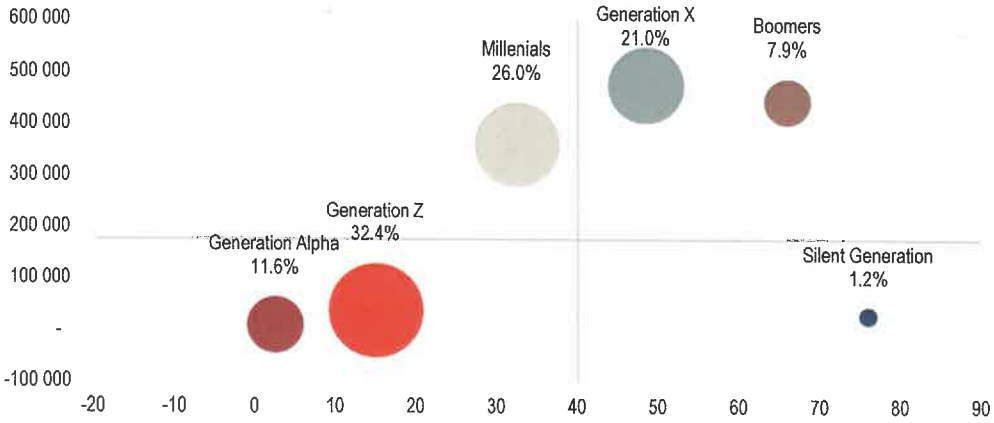




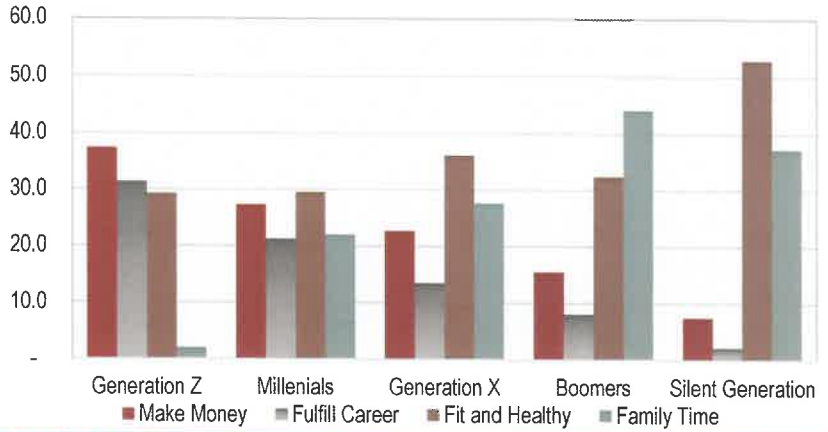
Generational Consumers

Changes have been taking place within shopping centres, largely due to changes in their market segment's lifestyles. Increased emphasis is being placed on the creation of spaces and atmospheres within malls where people feel comfortable and are encouraged to linger longer. Focus is turned towards the experience and convenience of centres, offering consumers the opportunity to relax and interact with friends and family.

CONSUMER MARKET SEGMENTS



MAIN ASPIRATIONS OF CONSUMER SEGMENTS



GENERATIONAL CHARACTERISTICS

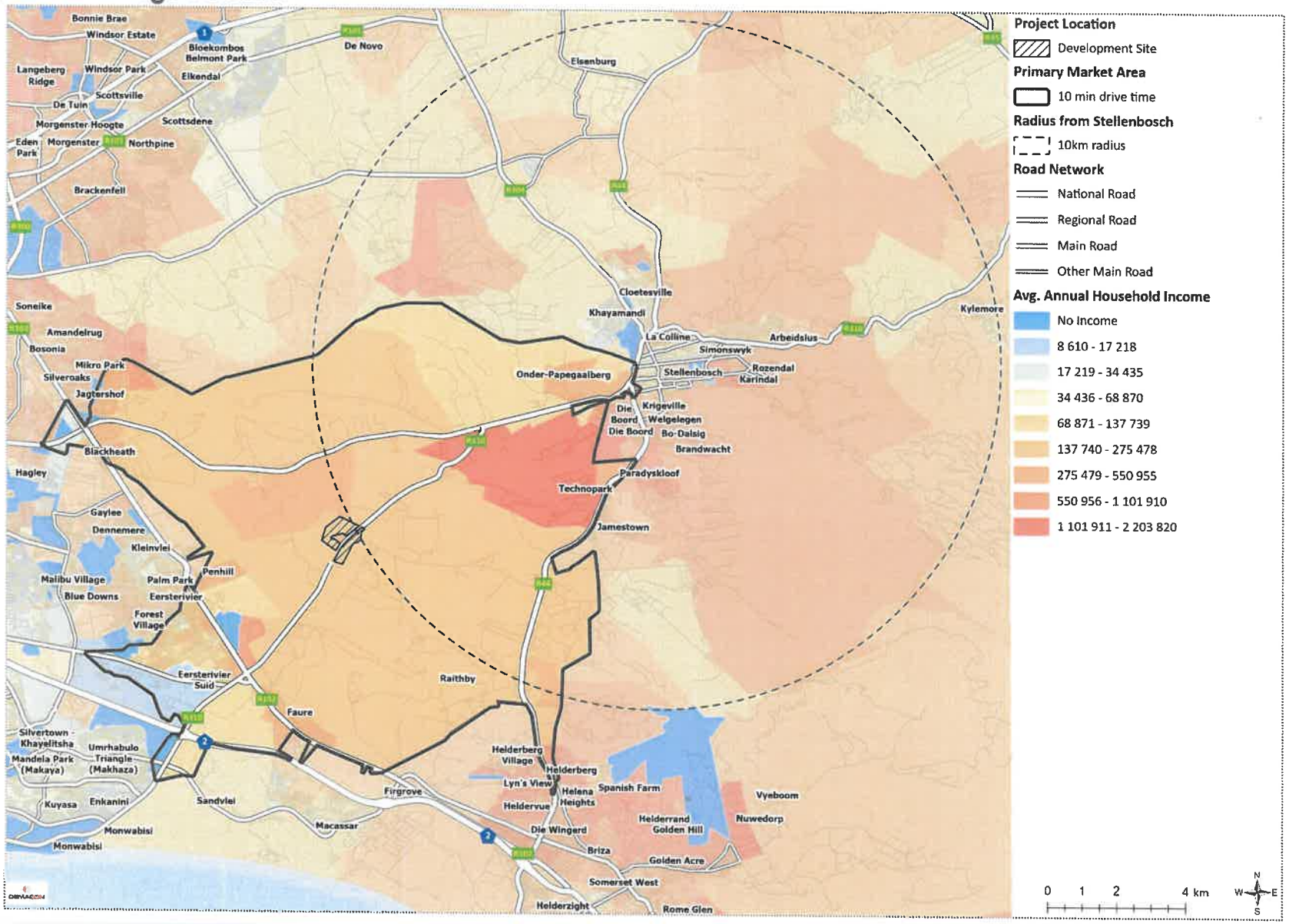
	ALPHA GENERATION	GENERATION Z	MILLENNIALS	GENERATION X	BABY BOOMERS	SILENT GENERATION
Current Age	**0-5 years**	**6-24 years**	**25-40 years**	**41-56 years**	**57-75 years**	**76+ years**
Percentage of Target Market	**11.6%**	**32.4%**	**26.0%**	**21.0%**	**7.9%**	**1.2%**
Characteristics	• Raised in homes with smart speakers & devices. • Technology is built into everyday items. • Many attend schools virtually – gravitating towards online schooling	• Flexible work environments • Clear directions & transparency • Seek personal growth in reaching performance goals.	• Seek meaningful work. • Want to grow and use creative skills. • Technology savvy • Grow professionally. • Skills training, mentorship & feedback	• Laid back • Low-key & independent • Entrepreneurial spirit • Value-friendly, flexible workplaces & productivity over hours spent at work.	• Hardworking • Ambitious • Seek luxury status symbols in their personal lives. • Take risks to pursue goals.	• Traditional values • Financial prudence • Interpersonal respect • Determination • Resilience • Work ethic • Analogue sensibilities

GENERATIONAL CHARACTERISTICS						
	 ALPHA GENERATION	 GENERATION Z	 MILLENNIALS	 GENERATION X	 BABY BOOMERS	 SILENT GENERATION
		• Value offline relationships and person-to-person interaction • Prioritise authenticity, truth & connectivity in their relationships & expect it from society	are necessary to stay at the company. • Self-confident • Not afraid to challenge the status quo/ management	• Seeks out efficiency & innovation. • Value autonomy to make own choices. • Create relationships with mentors. • Effectively manage work-life balance	• Dedicated to their jobs. • Attribute self-worth to their occupations • Finding work-life balance is challenging	• Loyal • Financially conservative
Social Media Channel of Choice	• Instagram, TikTok	• TikTok, Snap Chat, YouTube	• Instagram, Facebook, Pinterest	• Facebook, LinkedIn	• Facebook	
Most responsive to	• Video, Influencers	• Video, Influencers	• Reviews, Blogs	• Word-of-mouth, E-mail, Marketing	• Traditional Advertising	• Traditional Advertising
Device of Choice	• Smartphones/ tablets & voice-demand devices	• Smartphones	• Multi-Device	• Desktop and Laptop	• Prefer in-person interactions	• Prefer in-person interactions
Shaping Events	• A global pandemic, social justice movement, Brexit	• Smartphones, social media, seeing the financial struggles of parents	• The Great Recession, Technological Explosion of the Internet, social media	• End of the Cold War, with the Rise of personal computing, feeling lost between the two huge generations	• Post-WWII, Cold War, Hippie Movement	• World War II
Finances	• Digital natives will expect fully integrated, personalised consumer experiences. It is expected that they will be one of the most educated and wealthy generations.	• Like GenX (their parents) in financial attitudes but wanting to avoid debt after seeing Millennials" struggles	• Massive student debts delay major life purchases.	• Carrying the highest debt load while still raising children and saving for retirement	• Managing retirement with life expectancies on the rise	• Retired & financially vulnerable. • Lack of financial stability • Think of finances in terms of the rest of their lives
Shopping Characteristics	• Value- & service-driven consumers • Prefer one-day delivery, lightning-fast payments, value-added loyalty schemes & content creation. • Wants to use technology to make a difference.	• Have never known life without the internet. • Distrusting of branding and advertising • Prefers testimonials/ influencer content • Prefers to see real people in real situations.	• The largest group in the workforce • Does not like traditional ads • Prefers user-generated content, social selling, and word-of-mouth • Suspicious of being sold or lied to by brands.	• Prefers honest and clear product and marketing messages. • Require clear paths to purchase. • Most likely to conduct online research at home and shop in purchase • Most influenced by email marketing.	• Holds customer service above all other factors. • Most likely to abandon purchase based on customer service interaction. • Unlike testing new products	• Attracted loyalty and rewards programmes and places that offer discounts to pensioners. • Focused on value for money and product quality. • Prioritises products that are reliable, fairly priced & budget friendly.

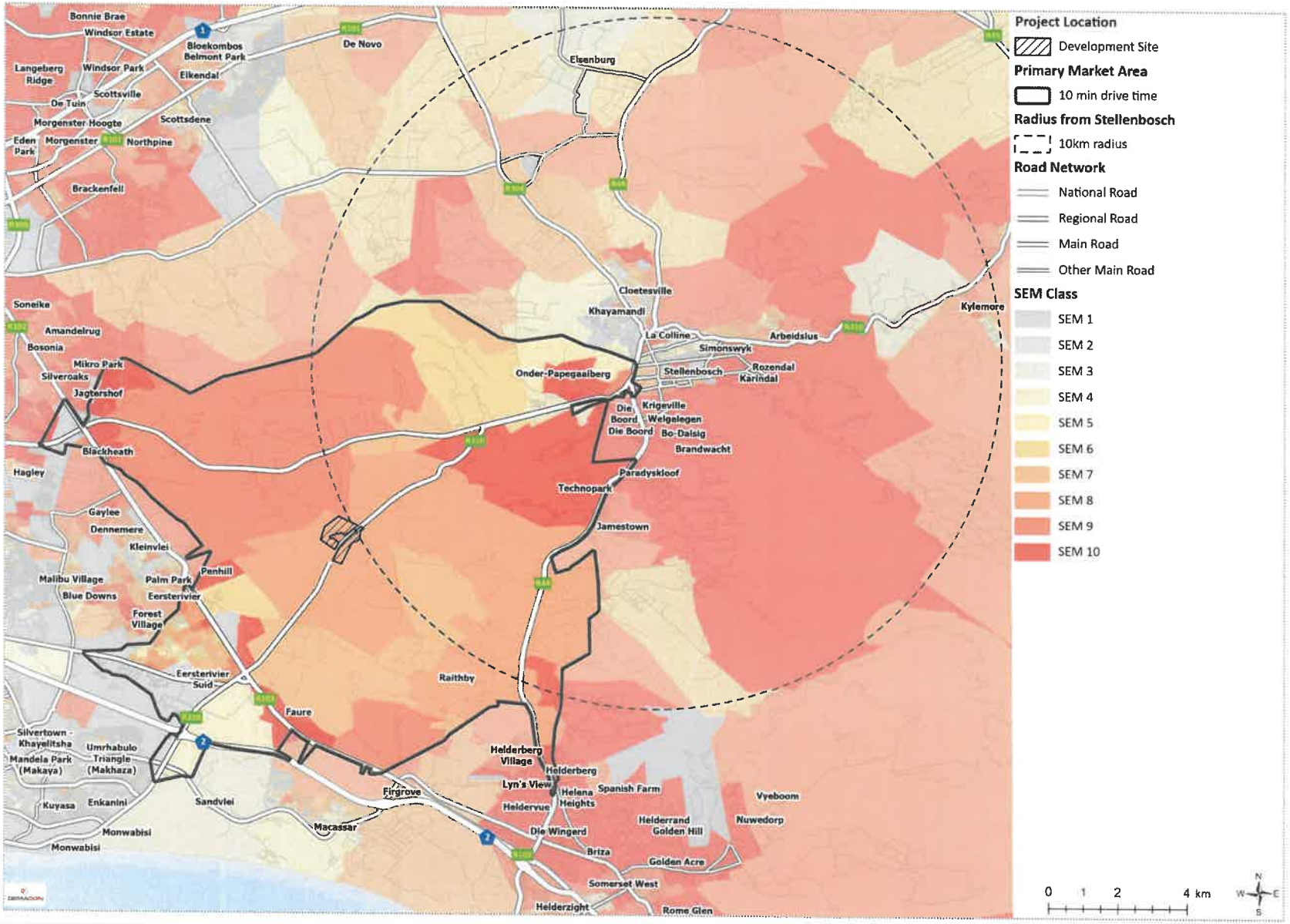
GENERATIONAL CHARACTERISTICS						
	 ALPHA GENERATION	 GENERATION Z	 MILLENNIALS	 GENERATION X	 BABY BOOMERS	 SILENT GENERATION
	• Prefers brands that have a positive impact on the world • Environment & Sustainability largest looming issues • Interest in products from sustainable sources that weren't made from or packaged in plastic • Desire to be engaged with on issues that matter to them	• Prefers brands that contribute to social & economic causes • Most likely to pre-shop on smartphones • Does not like Facebook/ Twitter • Dislikes ads that make life look perfect	• Prefers companies that support a cause • Very price conscious/ seeks the best value • Motivated by brand engagement, especially through social media	• Prefers unique, high-quality products. • Customer service is the most important driver of loyalty. • Incentivised by discounts/ freebies/ coupons. • Does not care for brand engagement	• Maintain brand loyalty. • Unlike using friend/ family referrals in decision making • Prefer in-store shopping • Prefers loyalty programmes that are straightforward. • Prefers simplicity and easy-to-understand content. • Will use social media as an entry point into brand or product research	• Purchases necessities & only small luxuries • Prefers brand names. • Prefers to shop in-store. • Prefers products that are practical and solve a problem that they have
Tourism Preferences and Travel Trends	• Starting to influence their families' travel choices	• Influences their families' travel choices. • Most likely to rely on metasearch engines when planning a travel • Rely on travel agents, blogs & social sites • When booking, they prefer search engines • Prefer hotels, but also like to stay at relatives' or friends' house • Budget is a key factor while travelling & they tend to spend more on flights and shopping • When choosing a destination, they consider the number of pictures they will be able to share on	• Take more trips than other generations. • No longer mostly relying on Online Travel Agencies during travel planning even if it's still the favourite platform to book • Least likely generation to stay in alternative accommodations – prefers hotels • Oriented towards once-in-a-lifetime experiences & beaten-path locations • Also interested in relaxing all day in spas and resorts • Gets inspired on social media - prefers watching	• When planning a trip, they mostly rely on Online Travel Agencies but also show interest towards travel review sites. • Prefer Online Travel Agencies when booking. • Shows more interest towards resorts & alternative accommodations • Their travel choices are family-oriented • Choosing the destination on social media, they prefer watching videos posted by experts to get inspired, while they do not pay too much attention to blogs and articles	• More aware of the destination where they're going, but still want help & support during the booking process. • My main travel motivation is relaxation & sightseeing • Can afford to take the longest holidays • During the planning of a trip, they mostly rely on Online Travel Agencies' portals & search engines • Visits more destination sites	• Health factors significantly into their travel plans • Demonstrates loyalty to travel agents

GENERATIONAL CHARACTERISTICS						
	 ALPHA GENERATION	 GENERATION Z	 MILLENNIALS	 GENERATION X	 BABY BOOMERS	 SILENT GENERATION
		social media and the uniqueness of the experience • Social media are very important to Gen Zs, & they get inspired by pictures posted by friends and are attracted by appealing ads & pictures • Most are inclined to use smartphones in more stages of their holiday, now competing with desktop devices.	pictures and videos posted by friends • More likely to get inspired by blogs and by hashtags • Desktop is the preferred device, but there is a growing use of smartphones and tablets in every stage of the holiday	• More inclined to use tablets before and during their holiday, even if the desktop is still their favourite device	compared to other generations • Inspired by a good offer advertisement & by pictures posted by experts • Usually attracted by informative ads & less by pictures • When booking, they prefer Online Travel Agencies mainly accessing the internet from a desktop device • Budget is not a key component while travelling and compared to other generations, they tend to spend more on food & less on attractions and tours and shopping	

Weighted Average Annual Household Income



SEM Profile


Project Location
Development Site
Primary Market Area
10 min drive time
Radius from Stellenbosch
10km radius
Road Network
National Road
Regional Road
Main Road
Other Main Road
SEM Class
SEM 1
SEM 2
SEM 3
SEM 4
SEM 5
SEM 6
SEM 7
SEM 8
SEM 9
SEM 10
0 1 2 4 km
Bonnie Brae
Windsor Estate
Bloekombos
Belmont Park
De Novo
Eisenburg
Langeberg Ridge
Windsor Park
Elikendal
Scottsville
De Tuin
Morgenster Hoogte
Scottsdene
Eden Park
Morgenster
Northpine
Brackenfell
Soneike
Amandelrug
Bosonia
Mikro Park
Silveroaks
Jagtershof
Blackheath
Hagley
Gaylee
Dennemere
Kleinvlei
Malibu Village
Palm Park
Penhill
Blue Downs
Eersterivier
Forest Village
Eersterivier Suid
Faure
Silvertown - Khayelitsha
Umrhabulo Triangle (Makhaza)
Mandela Park (Makaya)
Kuyasa
Enkanini
Sandvlei
Monwabisi
Macassar
Firgrove
Raithby
Helderberg Village
Helderberg
Lyn's View
Helena Heights
Spanish Farm
Heldervue
Die Wingerd
Briza
Helderrand
Golden Hill
Vyeboom
Nuwedorp
Golden Acre
Somerset West
Helderzight
Rome Glen
Cloetesville
Khayamandi
La Colline
Arbeidslus
Kylemore
Simonswyk
Onder-Papegaaiberg
Stellenbosch
Rozendal
Karindal
Die Boord
Krigeville
Welgelegen
Die Boord
Bo-Dalsig
Brandwacht
Paradyskloof
Technopark
Jamestown

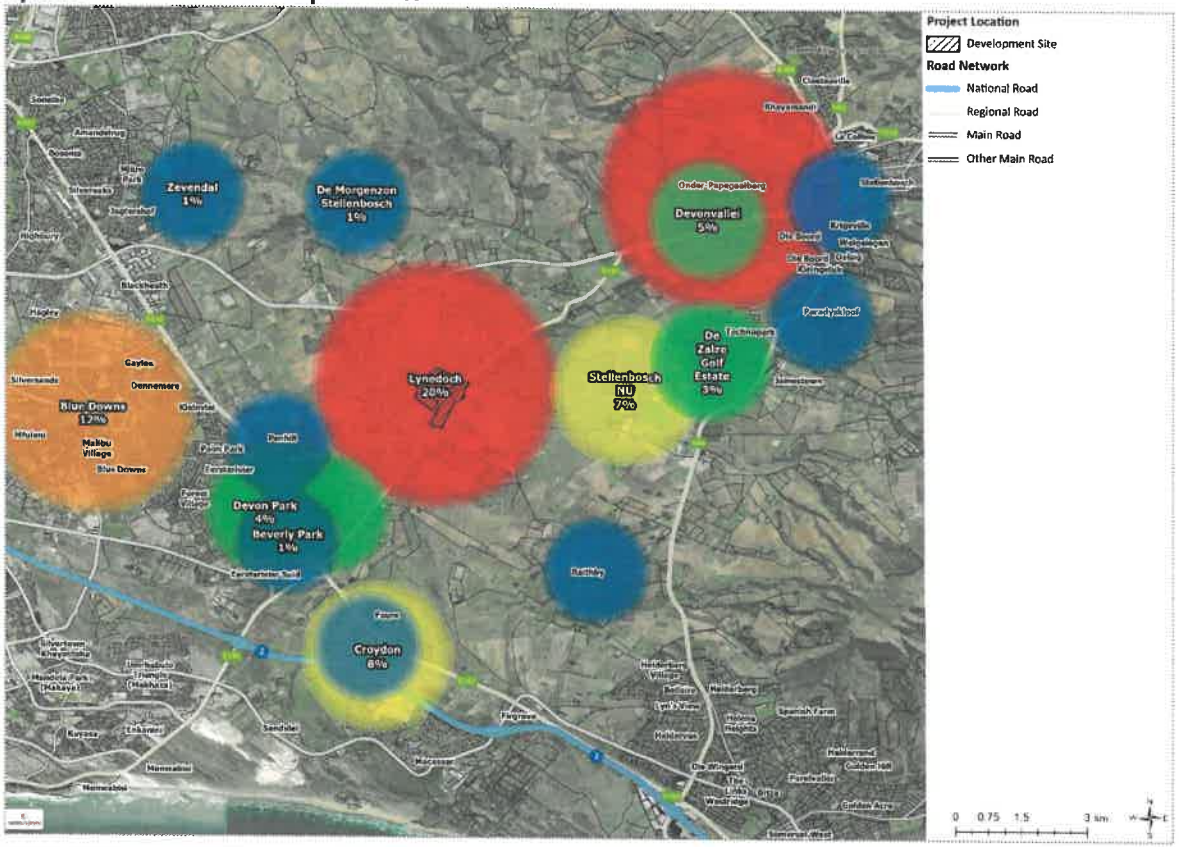
SURVEY RESULTS SUMMARY – HOUSEHOLD SURVEY

The consumer survey identifies key characteristics and consumer preferences in the primary market area of the proposed development. The consumer survey seeks to highlight stated consumer preferences with regard to a proposed **mixed-use development** located along the R310 (Baden Powell Drive) in LYNEDOCH, approximately 12,5km south-west of Stellenbosch, Western Cape Province.

DISTRIBUTION OF RESPONDENTS

The map below, geographically illustrates the spatial distribution of the respondents. From the map the majority of respondents who participated was located in Lynedoch, Onder Papegaaiberg, Blue Downs, Croydon, Stellenbosch NU, Devonvallei and Devon Park.

Spatial distribution of respondents



The Distribution of Respondents:

- Lynedoch
- Onder Papegaaiberg
- Blue Downs
- Croydon
- Stellenbosch NU
- Devonvallei
- Devon Park
- Val de Vie
- De Wijnlanden
- De Zalze Golf Estate
- Eerste River
- Beverly Park
- Croydon Vineyard
- De Morgenzon Stellenbosch
- Dewalser
- Paarl
- Paradyskloof
- Penhill
- Raithby
- Stellenbosch Bo Dorp area
- Zevendal

Key outcomes from the survey include:

SOCIO-ECONOMIC INFORMATION

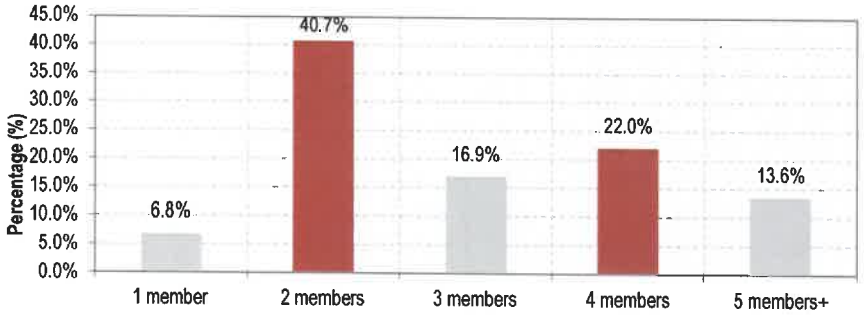
Describe your household

Respondent households are primarily characterised as

- Parents with adult children **28.8%**
- Mature adults **27.1%**
- Parents with small children **22.0%**

How many MEMBERS do you have in your household?

The prevalence of parents with adult and small children highlights that a sizeable cohort of households surveyed consist of **2 people (40.7%) and 4 people (22.0%)** in a household.



What is your HOME LANGUAGE?

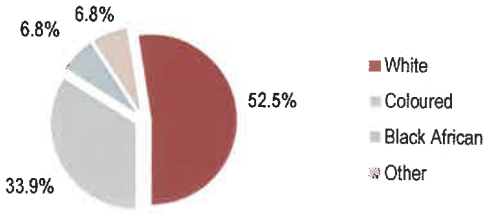
The primary **languages** spoken by households surveyed include:

Afrikaans – 76.3%
English – 15.3%
IsiZulu – 3.4%
Setwana – 3.4%
Tsonga – 1.7%

ETHNIC Group

The majority of respondents (52.5%) indicated they are **White** and 33.9% Coloured.

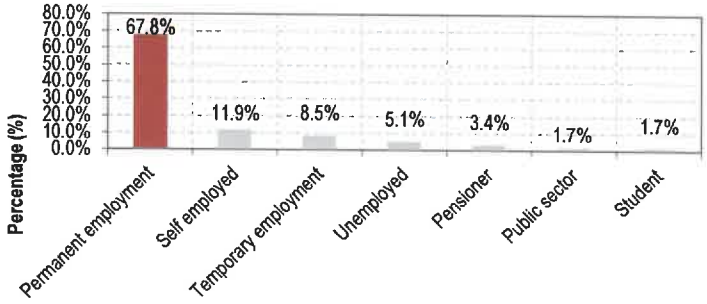




EMPLOYMENT Status

Respondents are typically **permanently employed (67.8%)** or **self-employed (11.9%).**

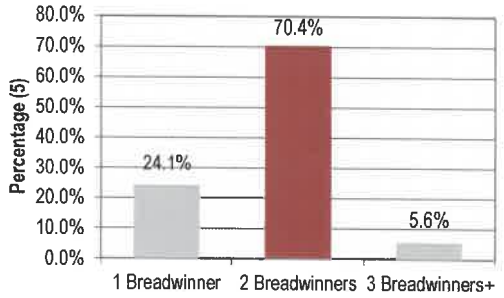




Number of BREADWINNERS in household:

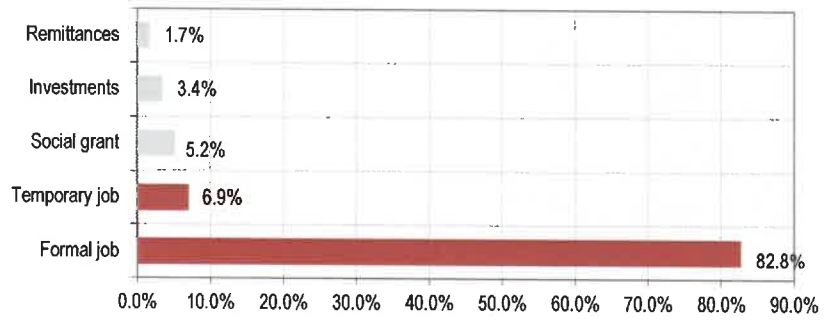


1 breadwinner 24.1%
2 **breadwinners 70.4%**
3 breadwinners 5.6%



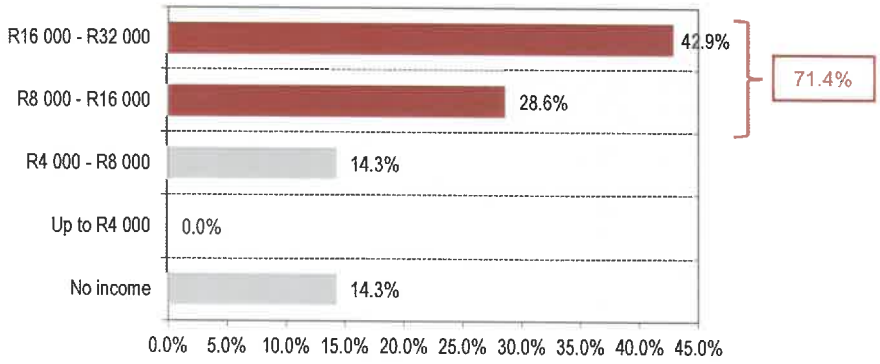
INCOME sources:

The majority of households **(82.8%)** earn their income from a **formal job**, 6.9% from a **temporary job** and 5.2% from a **social grant.**



Average monthly HOUSEHOLD INCOME profile (before deductions):

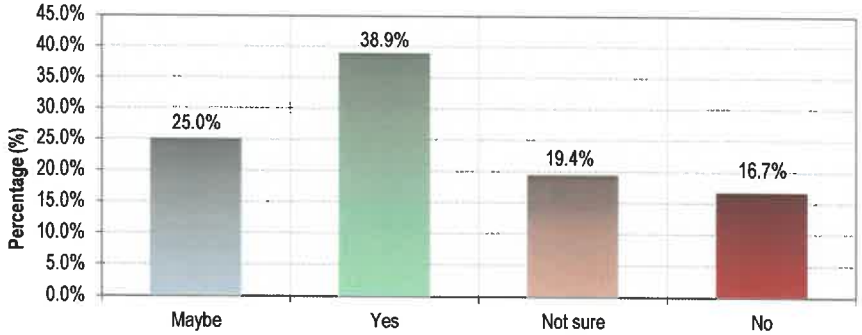
Data shows that the majority of respondents 42.9% (households) are primarily **middle-income households** earning between R16 000 to R32 000 followed by 28.6% earning between R8 000 and R16 000 per month.



RESIDENTIAL SUPPORT AND PREFERENCES

Perceived DEMAND for a new residential development in the Lynedoch area?

The majority of respondents **(38.9%)** indicated there is a **demand** for a new residential development in the Lynedoch area.

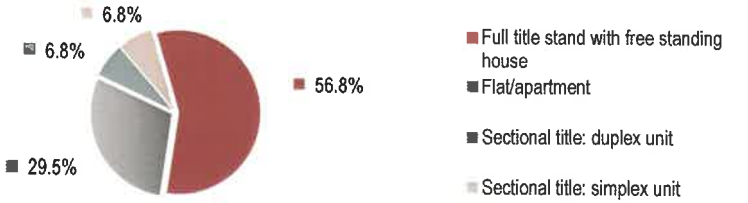


What type of development is there a demand for?

47.8% of the respondents prefer an **affordable / middle income** development.

Type of DWELLING UNITS in the residential development

The type of dwelling unit preferred is a full title stand with **freestanding house (56.8%)**, and **flats / apartments** (29.5%).

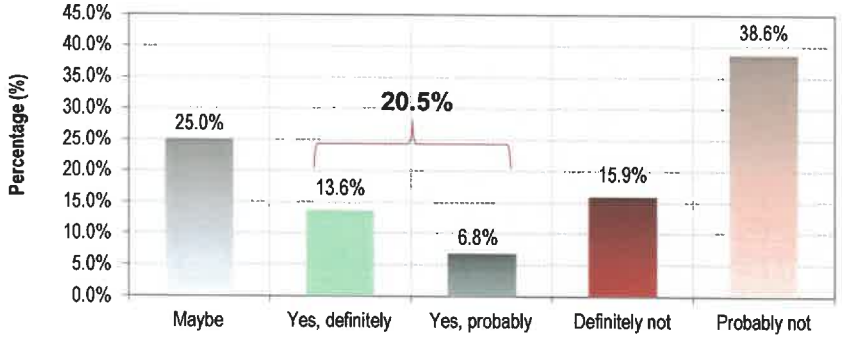


To your mind, what will be critical success factors for such new residential development.

Respondents highlighted **safety and security** (93.5%), **product quality,** (87.0%) and **affordability** (78.3%) as the three most important factors when considering a residential development:

Would you consider MOVING to this development?

54.1% of respondents would definitely / probably consider moving to this development.



Residential Unit Composition

Respondent stated preferences include:

BEDROOMS — **2, 3, 4** (**10.5%, 78.9% & 10.5%** respectively)

BATHROOMS — **1 to 2** (**95.7% & 4.3%** respectively)

LIVING AREAS — **1 & 2** (**34.8% & 65.2%** respectively)

Which of the following should also form part of the RESIDENTIAL UNIT offering?

- Patio With Built-In Braai – 22.4%
- Private Garden – 20.7%
- Domestic Toilet – 15.5%
- Car Port for Visitor Parking – 15.5%
- Double Garage – 13.8%
- Single Garage – 12.1%

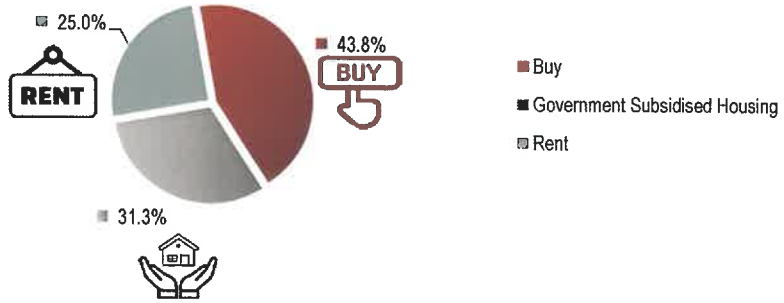
Which of the following should also form part of the RESIDENTIAL DEVELOPMENT

- Wifi Facilities - 18.1%
- Communal Recreational Area (E.G. Clubhouse/Braai Facilities) - 16.7%
- Back-Up Power Generation - 15.3%
- Cafeteria/ Kiosk - 11.1%
- Laundromat - 11.1%

AFFORDABILITY

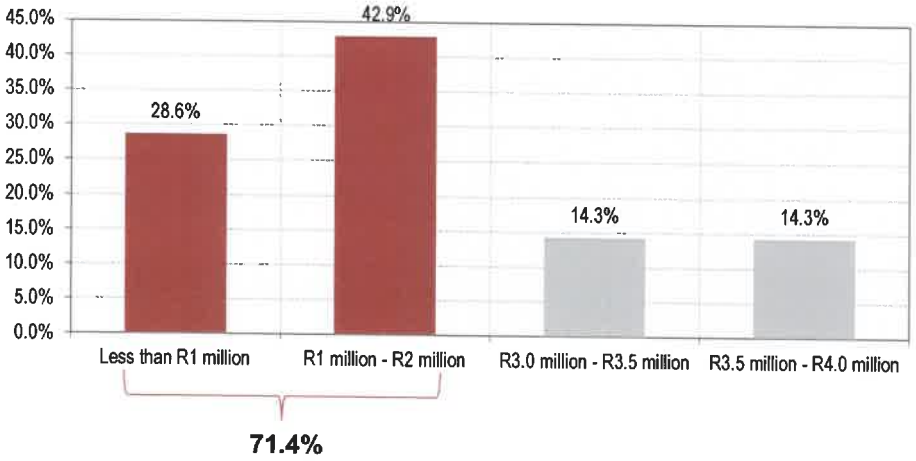
Affordability Profile

43.8% of respondents identified they will be able to **BUY, 31.3%** would be able to afford a **government subsidised house,** and **25.0%** would rent based on the affordability profile.



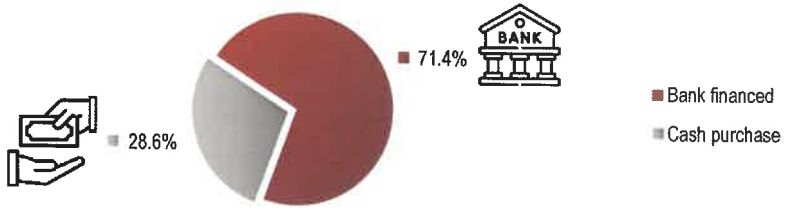
If you were to BUY a new residential property what would be a REASONABLE MARKET PRICE?

42.9% of respondents indicated that they would buy a property in region of **R1 million to R2 million**, followed by **28.6%** for **less than R1 million.**



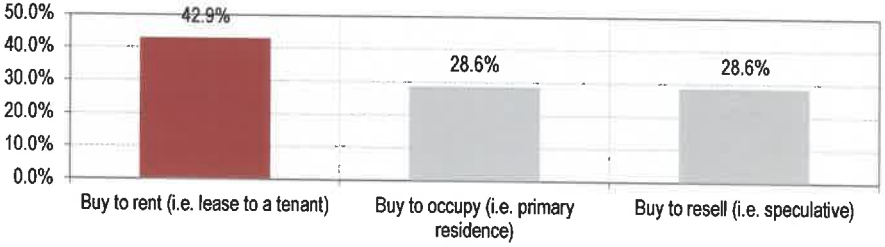
Would the purchase of a property/house be BANK-FINANCED OR BOUGHT CASH?

The majority of respondents **(71.4%)** the property would be bank-financed and 28.6% would do a cash purchase.



Would the purchase be for your OWN USAGE, to LEASE OUT or to RESELL?

42.9% of all respondents would purchase a property to lease to a tenant, whereas 28.6% would buy to occupy or buy to resell. A smaller proportion (14.3%) of all respondents indicated that they would rent it out as student accommodation.



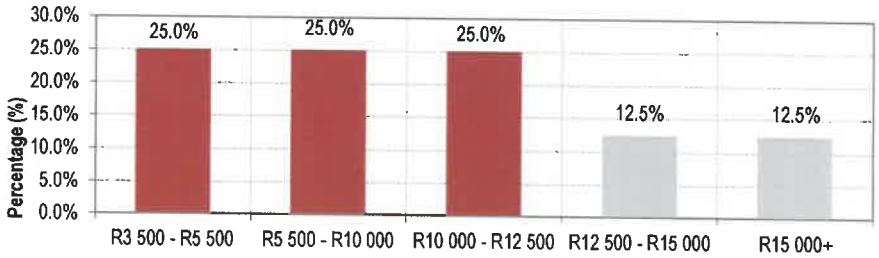
Would the purchase be to use the unit specifically as STUDENT ACCOMMODATION?



14.3% of respondents would purchase the unit specifically as **student accommodation.**

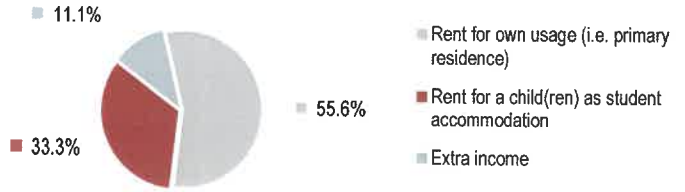
RENTAL Profile

Respondents opting to **rent** a property are mainly willing to rent for **less than R12 500 (75.0%)** followed by 25.0% willing to rent for R12 500 and more per month.



If you were to rent, would you rent for your OWN USAGE (i.e., your household) or would you rent for a child(ren) as STUDENT ACCOMMODATION?

55.6% of respondents would rent the unit for own usage, 33.3% for a child as student accommodation and 11.1% for an extra icome.

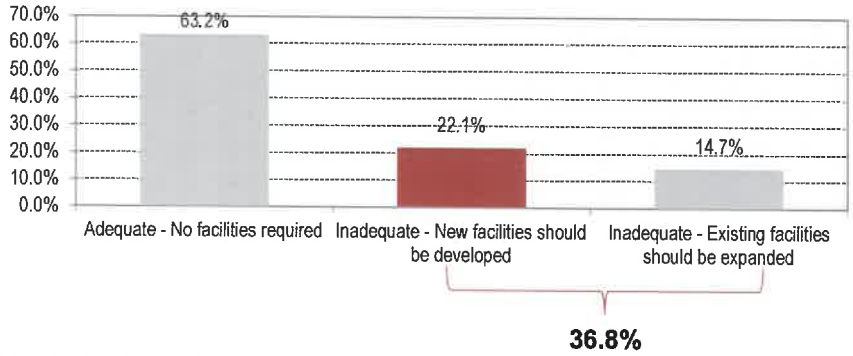


RETAIL SUPPORT AND PREFERENCES

Retail Expenditure & Leakages

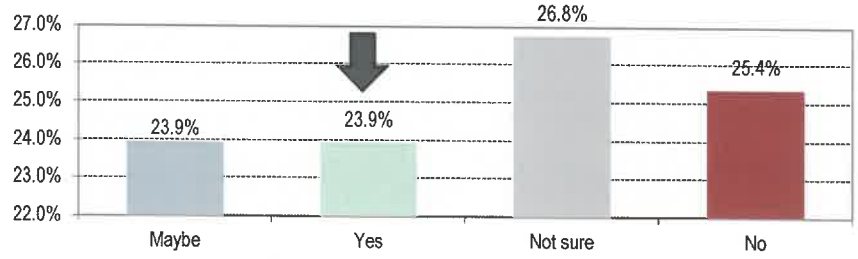
Describe the RETAIL OFFERING in the area.

Approximately **36.8%** indicated that the retail offering is inadequate of which **22.1%** believe **new facilities should be developed.**



In your opinion, is there a NEED FOR AN ADDITIONAL SHOPPING CENTRE in the area?

23.9% of respondents believe there is a need for an additional shopping centre.



FAVOURITE SHOPPING CENTRES in the area

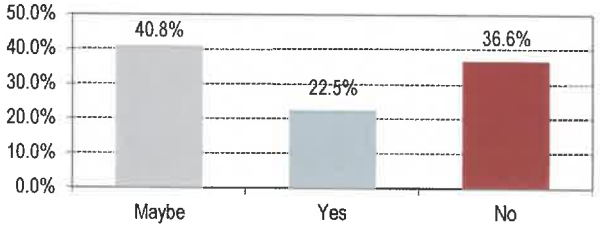
Eikestand Mall in Stellenbosch is the overall favourite shopping centre (44.3%), followed by **Somerset West Mall** (23.2%).

EIKESTAD MALL STELLENBOSCH **44.3%**

SOMERSET MALL **23.2%**

SANBURY SQUARE SANBURY **12.7%**

Would you SHOP at the new shopping centre if built if part of the larger mixed-use precinct?



22.5% of respondents indicate they **would shop** at the new centre if built and 40.8% **maybe.**

SHOPS believed to be in demand.

Butchery 24.3%

Clothing Store 24.3%

Entertainment 16.2%

Supermarket 98.1%

SERVICES believed to be in demand.

Banks 27.0%

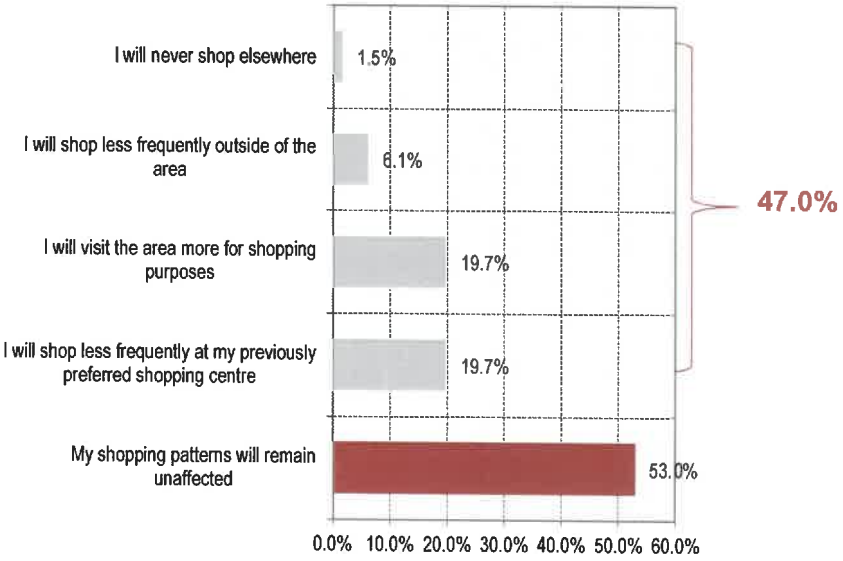
Hairdressers 14.9%

Entertainment 16.2%

Supermarket 98.1%

Shopping BEHAVIOUR

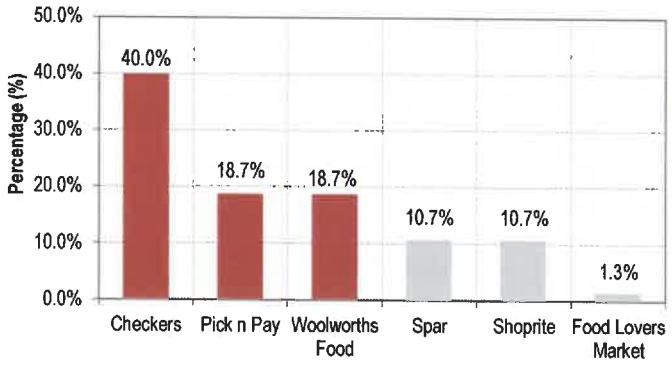
47.0% suggests a moderate degree of anticipated consumer behaviour elasticity.



Grocery Anchor Preferences

Preferred Grocery Anchor

Shoprite (40.0%), Boxer / Spar (18.7%) are the preferred grocery anchors.

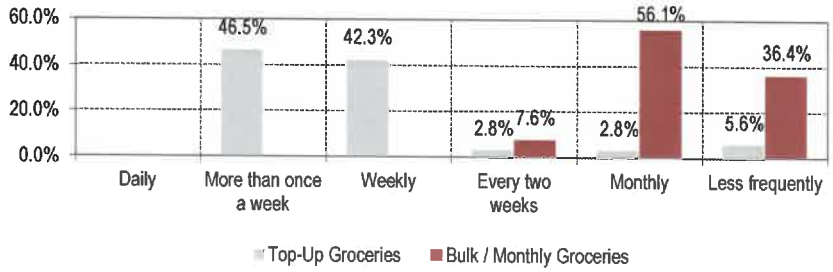


40.0% prefer Checkers

18.7% prefer Pick n Pay

WOOLWORTHS FOOD

Please indicate the FREQUENCY of your grocery shopping



Frequency of your grocery shopping:

Top-up groceries:	*Bulk groceries:*
✓ More than once a week – 46.5% ✓ Weekly – 42.3%	✓ Monthly – 56.1% ✓ Less frequently – 36.4%

ANCILLARY SUPPORT AND PREFERENCES

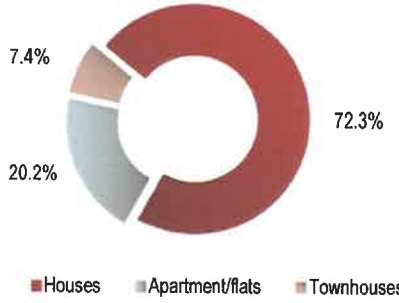
In summary, a demand for the following facilities was highlighted by respondents:

- ✓ Respondents believe that some ancillary services have a high demand in the market area:
  - **Office space:** high perceived demand exists for office space in the market area,
    - **Municipal satellite offices** and
    - **Small offices** have the highest demand.
  - **Automotive services:** low to very low perceived demand exists for an
    - **Automotive and motor vehicle parts,** and
    - **Tyre and wheel alignment centres** have the highest demand.
  - **Industrial and warehouse services:** very low perceived demand exists for any industrial or warehouse facilities in the market area.
    - A mini-warehouse with units of **150–300m²** is the most in demand.
  - **Healthcare facilities** = high and very high perceived demand for a healthcare facility in the market area.
    - A **private day clinic** and a
    - **Doctor's offices** and
    - **General healthcare** are the healthcare facilities who have the highest demand.
  - **Education facilities** = high and very high perceived demand for an education facility in the market area.
    - A **public school** and a
    - **Private pre-primary school/creche** are the two healthcare facilities who have the highest demand.
  - Overall respondents believe that a high and very high perceived demand for a **student accommodation facility** in the market area.
    - **Bachelor units** and
    - **One-bedroom units** have the highest demand.

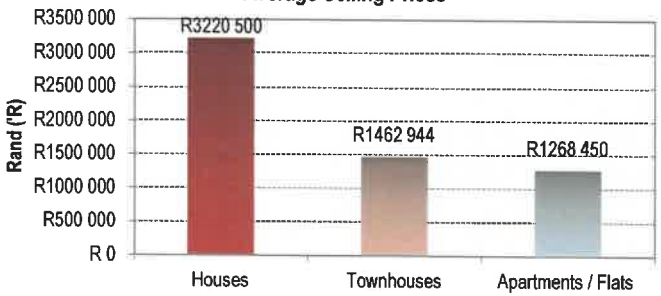
RESIDENTIAL SALES DATA - CURRENT LISTINGS

SUMMARY OF SALES

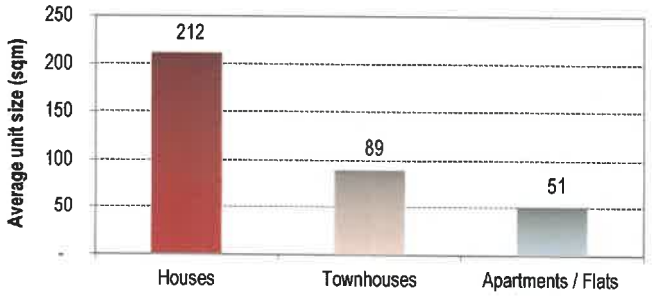
Summary of residential supply in terms of number of transactions



Average Selling Prices



Average Unit Sizes (sqm)



Townhouses

Average Price **R1 462 944**

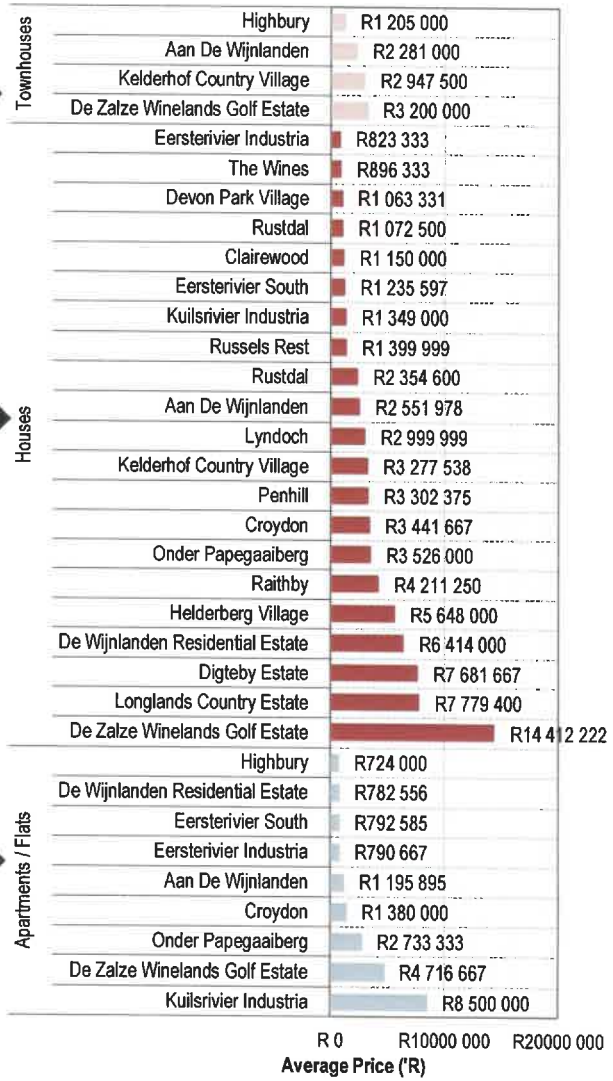
Houses

Average Price **R3 220 500**

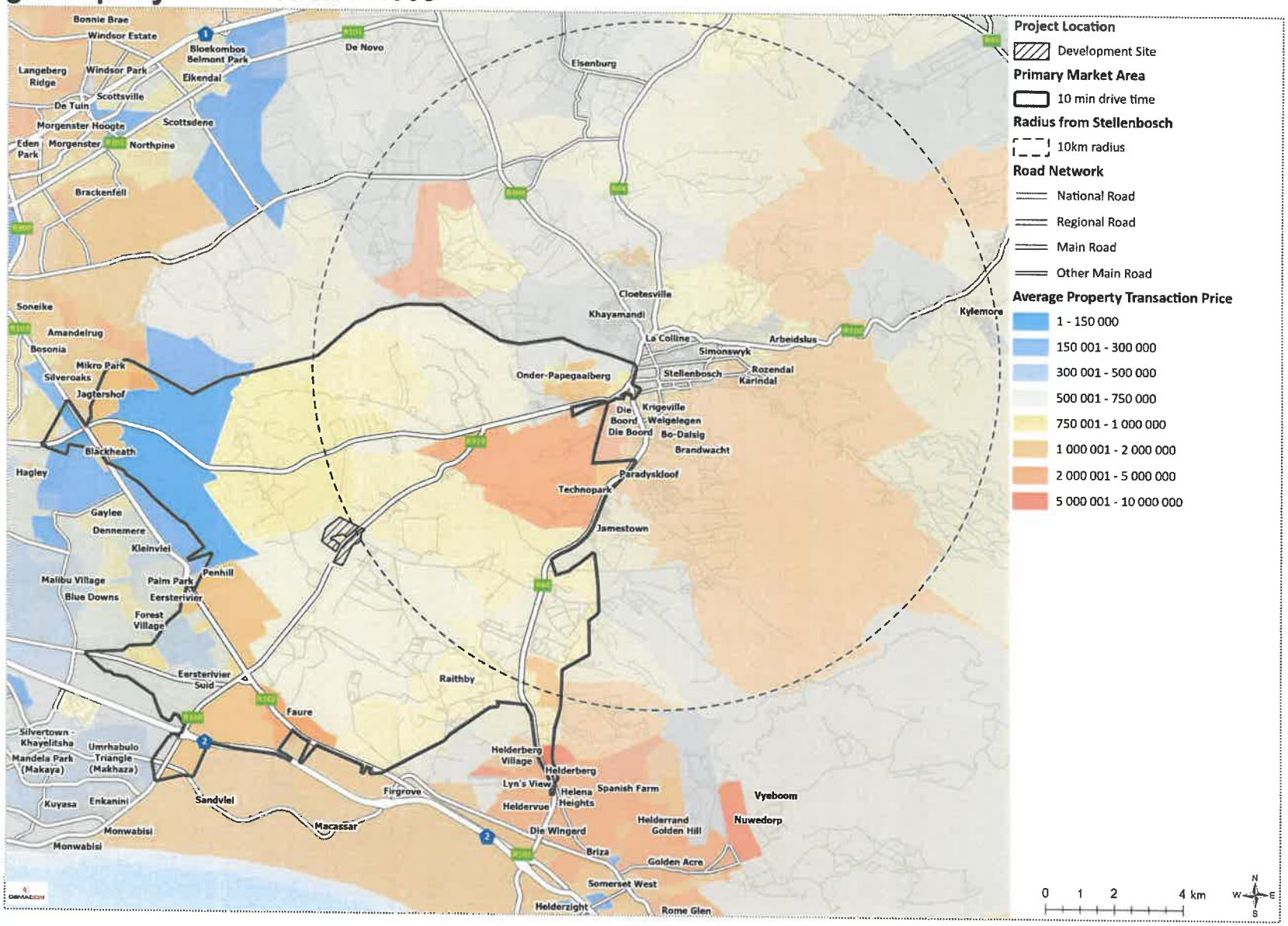
Apartment / Flats

Average Price **R1 268 450**

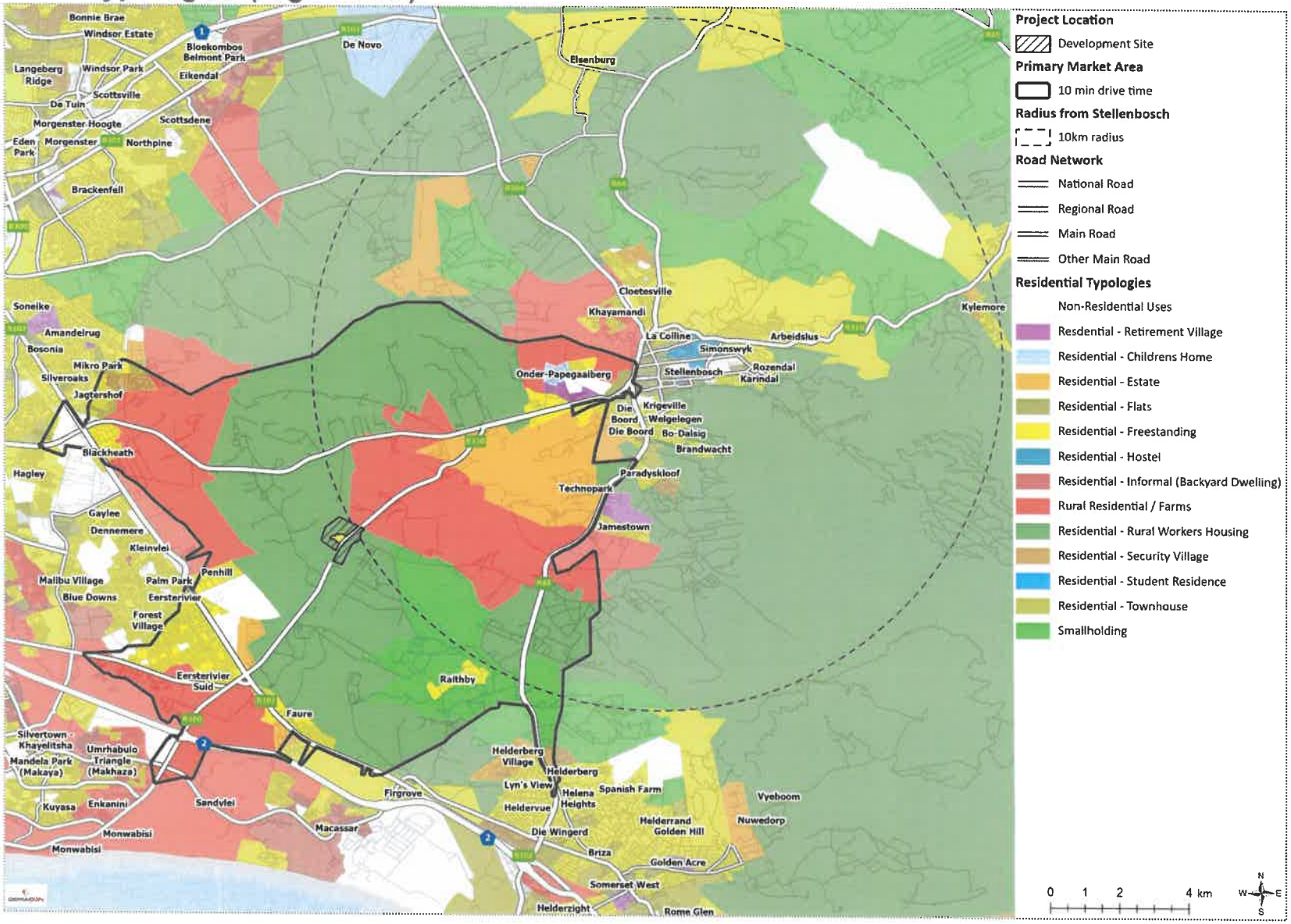
AVERAGE SALES PRICE PER SUBURB



Average Property Transaction Prices

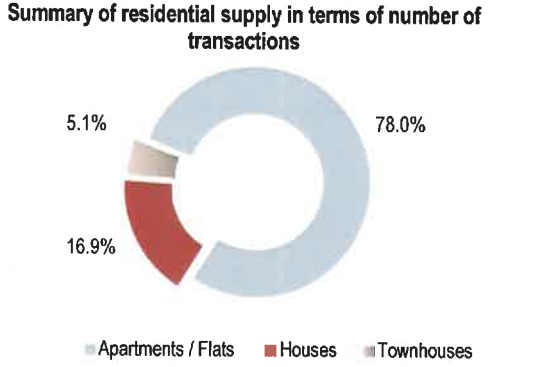


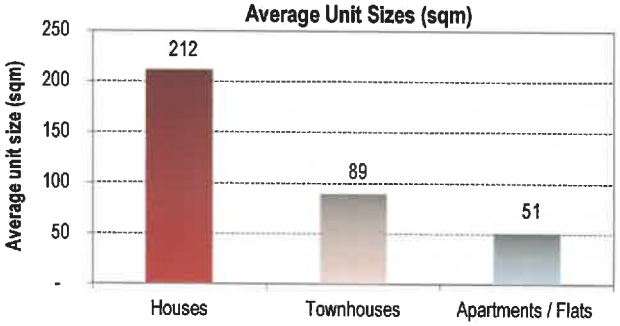
Residential Typologies (High-Level)

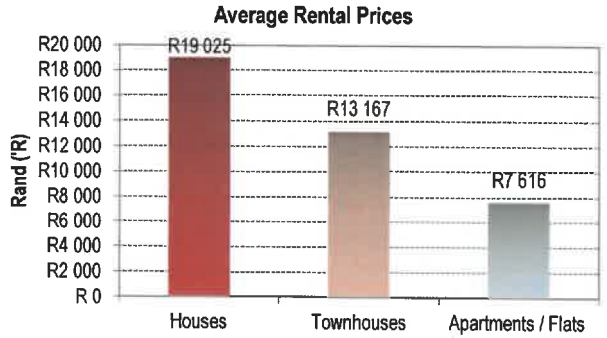


RESIDENTIAL RENTAL DATA - CURRENT LISTINGS (Primary Market Area)

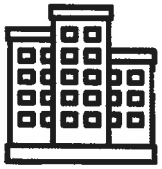
SUMMARY OF RENTALS







Apartment / Flats



Average Rental **R7 616**

Houses



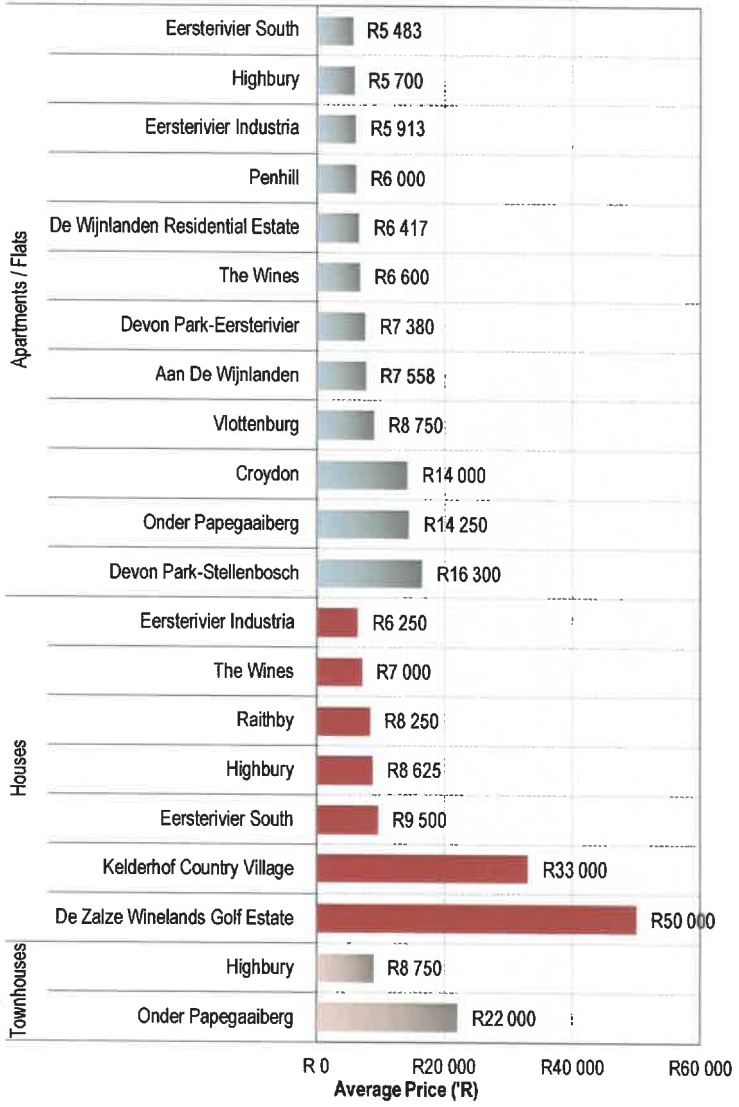
Average Rental **R19 025**

Townhouses



Average Rental **R13 167**

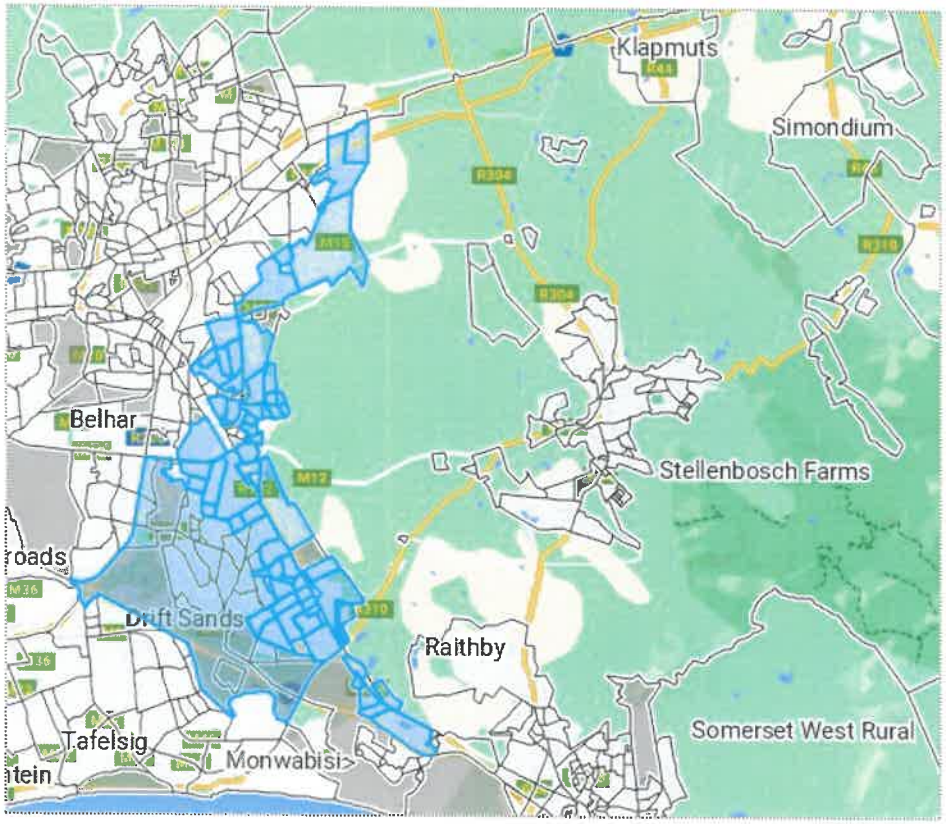
AVERAGE RENTAL PRICE PER SUBURB



RESIDENTIAL RENTAL DATA - CURRENT TOWNHOUSE LISTINGS

(West of the Primary Market Area)

SUMMARY OF TOWNHOUSE RENTALS



The following summarizes current rentals of townhouses in the areas west of Lynedoch.

Total Townhouse Listings **15**

Distribution of Bedrooms **2 bedrooms & 3 bedrooms**

2 Bedroom Units Price Range: **R6 200 - R14 500**

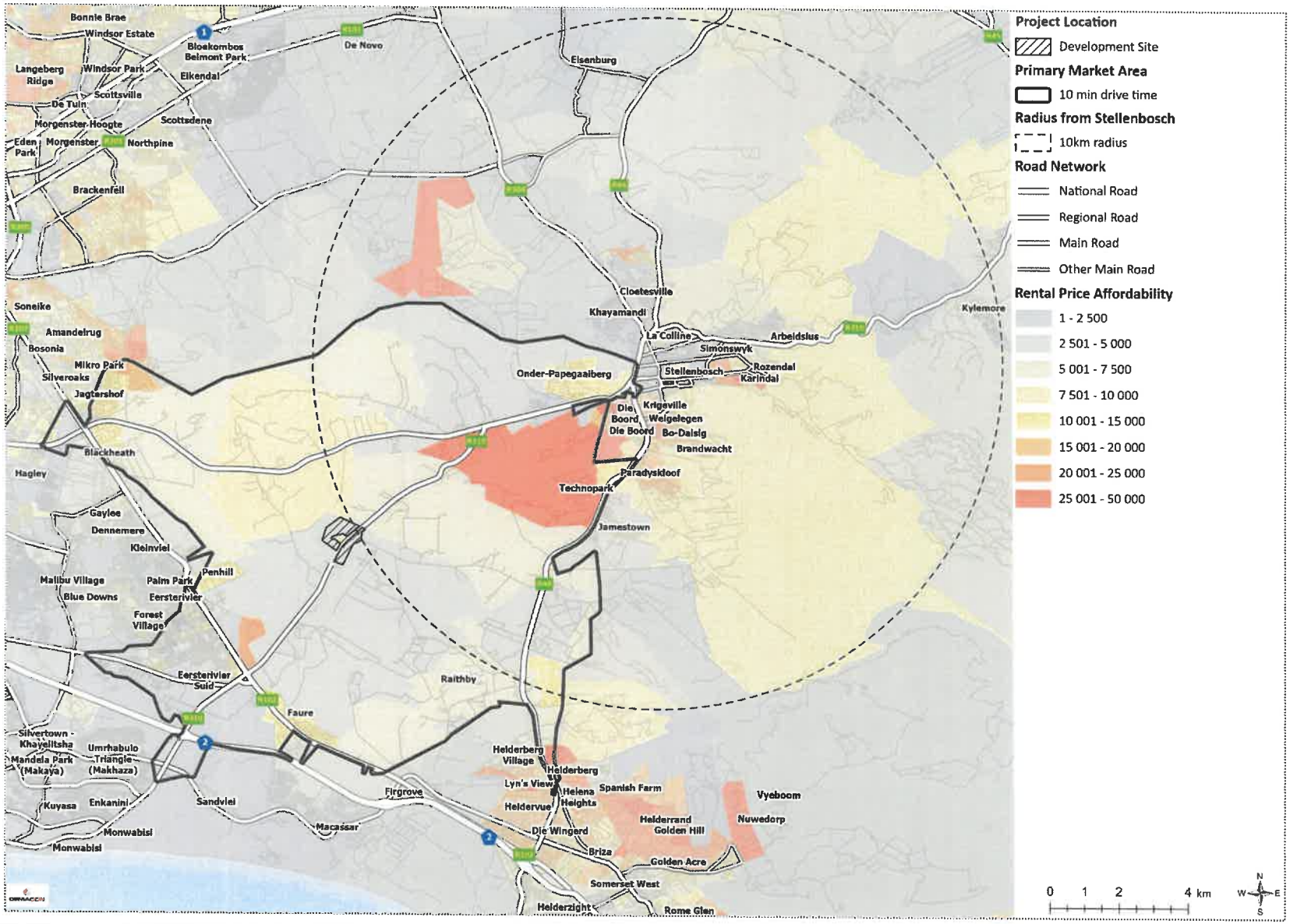
3 Bedroom Units Price Range: **R15 500 - R22 000**

Findings:

- There are 15 townhouse listings within these areas.
- The lower-end rentals represent largely older stock, whereas the higher rentals reflect new / modern stock.
- The vast majority of rental listings are 2-bedroom townhouses.

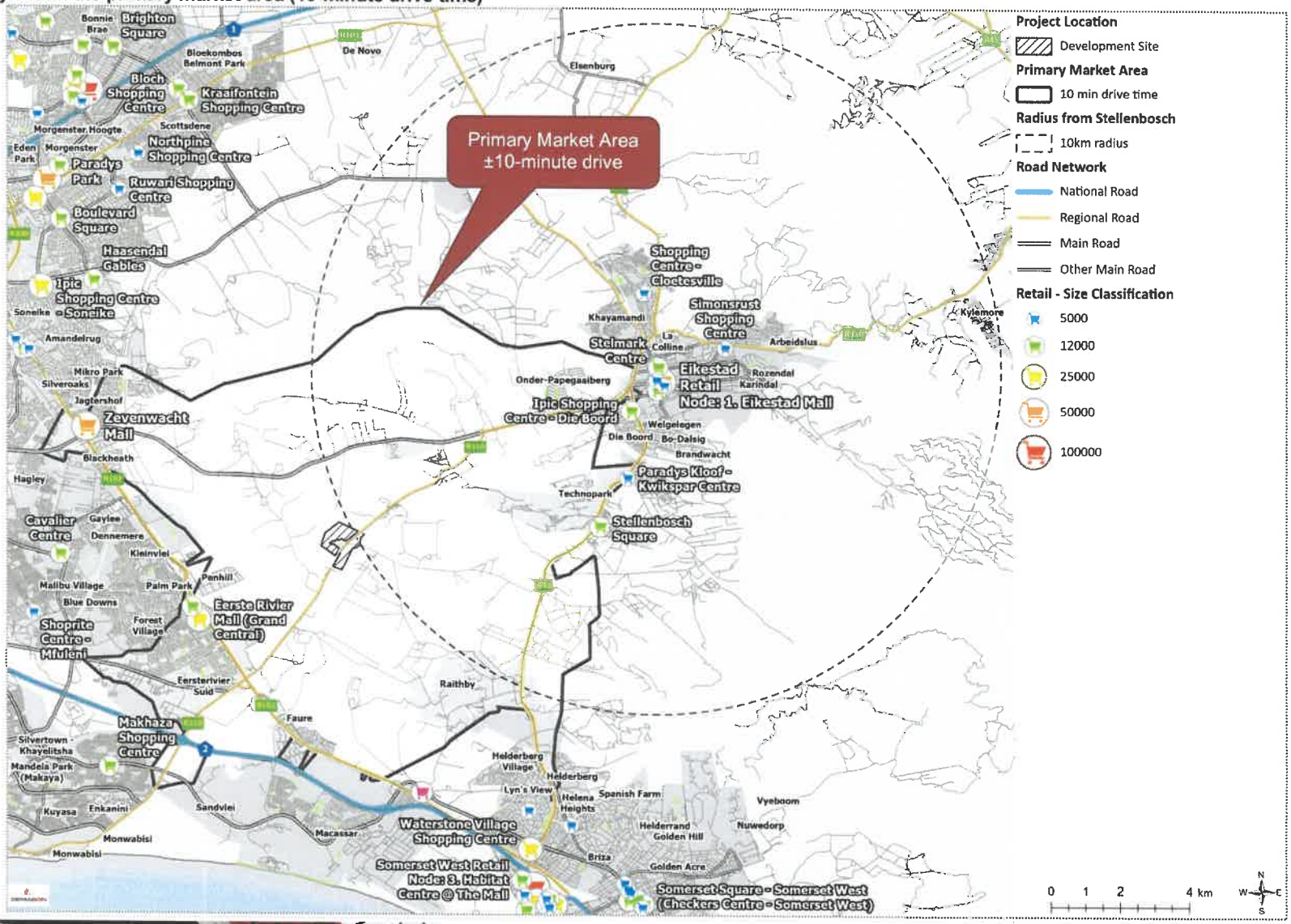
178

Rental Affordability



SHOPPING CENTRE SUPPLY SUMMARY

Retail supply within the primary market area (10-minute drive time)



SHOPPING CENTRE SUPPLY SUMMARY

Existing retail supply within the primary market area (±10-minute drive time isochrone)

NAME OF SHOPPING CENTRE	STREET ADDRESS	CLASSIFICATION	GLA
Zevenwacht Mall	Cnr Polkadraai & Van Riebeek Roads, Kuilsriver	Minor Regional Centre	39 517
Eerste Rivier Mall (Grand Central)	Plain Street, Clairwood, Eersterivier	Neighbourhood Centre	14 000
City Centre - Eerste River	18 Forest Road, Clairwood, Eersterivier	Neighbourhood Centre	6 670
TOTAL (m²)			60 187

Source: Demacon ex SASCS, 2021

There are no shopping centres within the immediate vicinity of the site.

❖ **PROPOSED RETAIL SUPPLY**

The table below indicates the proposed retail supply within the market area.

Proposed Retail Supply within the immediate surrounding area

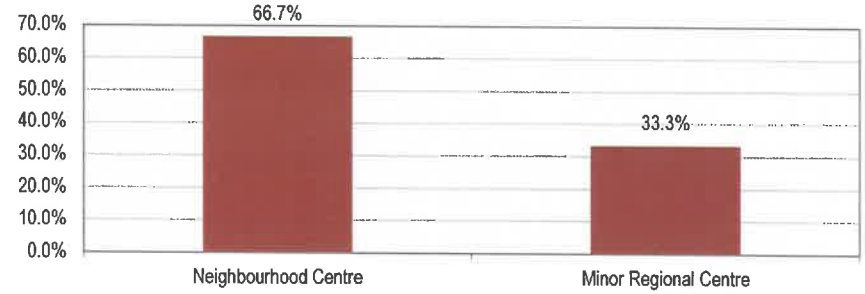
Name of Shopping Centre	Street Address	Classification	GLA	Name of Developer	Main Anchors
Firgrove	Firgrove Precinct	Convenience Centre	5 000	Lynx Real Estate	This is a mixed-use development but forms part of a larger area as it has some commercial and small retail
TOTAL (m²)			5 000		

Source: Demacon ex SASCS, 2023

Findings:

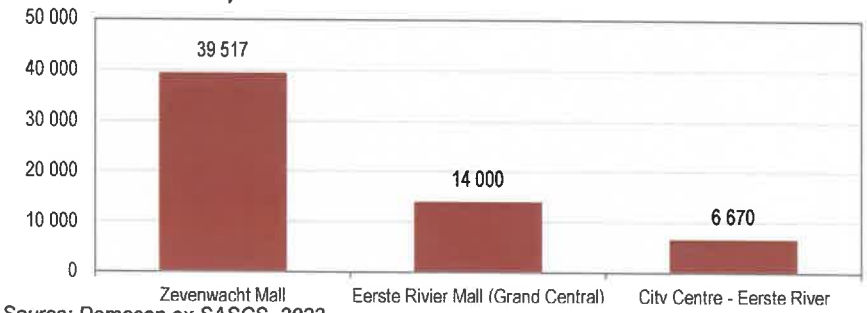
- ✓ The total existing supply of **shopping centre** retail floor space within the 10-minute drive time amounts to approximately **60 187m² GLA.**
- ✓ The existing supply within the immediate surrounding area amounts to **±130 465m² GLA**,
- ✓ There are no shopping centres within the primary market area (10 min drive time), only 1 shopping centre located to the south of Lynedoch namely Firgrove Centre with a proposed size of 5 000m² GLA.
- ✓ *To conclude, the above supply figures cannot directly be correlated with the demand of the market area due to the fact that most of the centres are trading off multiple trade areas and trade area overlap occurs.*

Summary of the Retail Supply in the primary market area – Centres by Category (10-minute drive time isochrone)



Source: Demacon ex SASCS, 2023

Summary of centres by Total Floor Area for the primary market area (10-minute drive time isochrone)

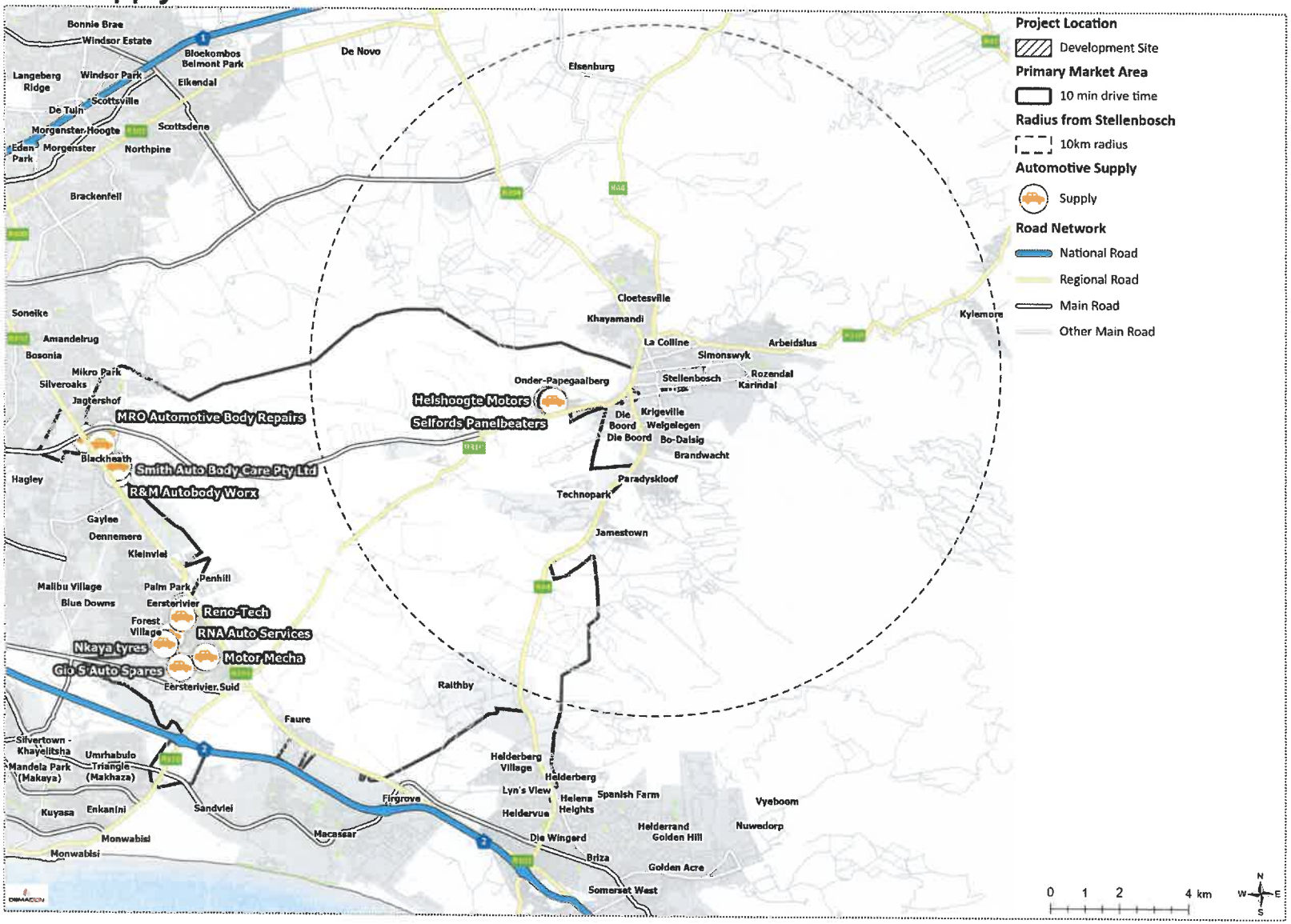


Source: Demacon ex SASCS, 2023

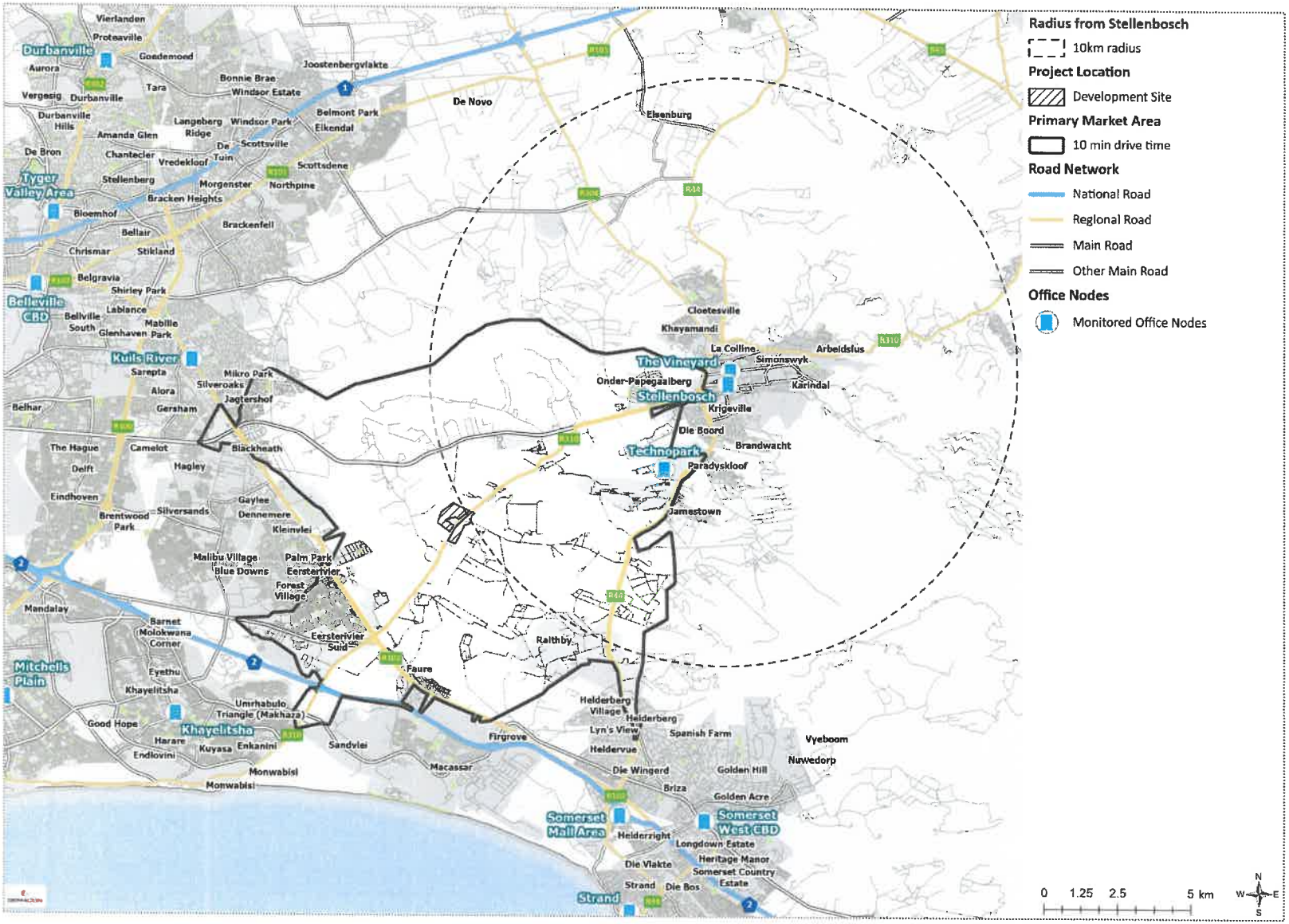
Findings:

- ✓ As seen from the above, there are **3 shopping centres** within 10-min drive time isochrone, consisting of:
  - 2 Neighbourhood Centres
  - 1 Minor Regional Mall

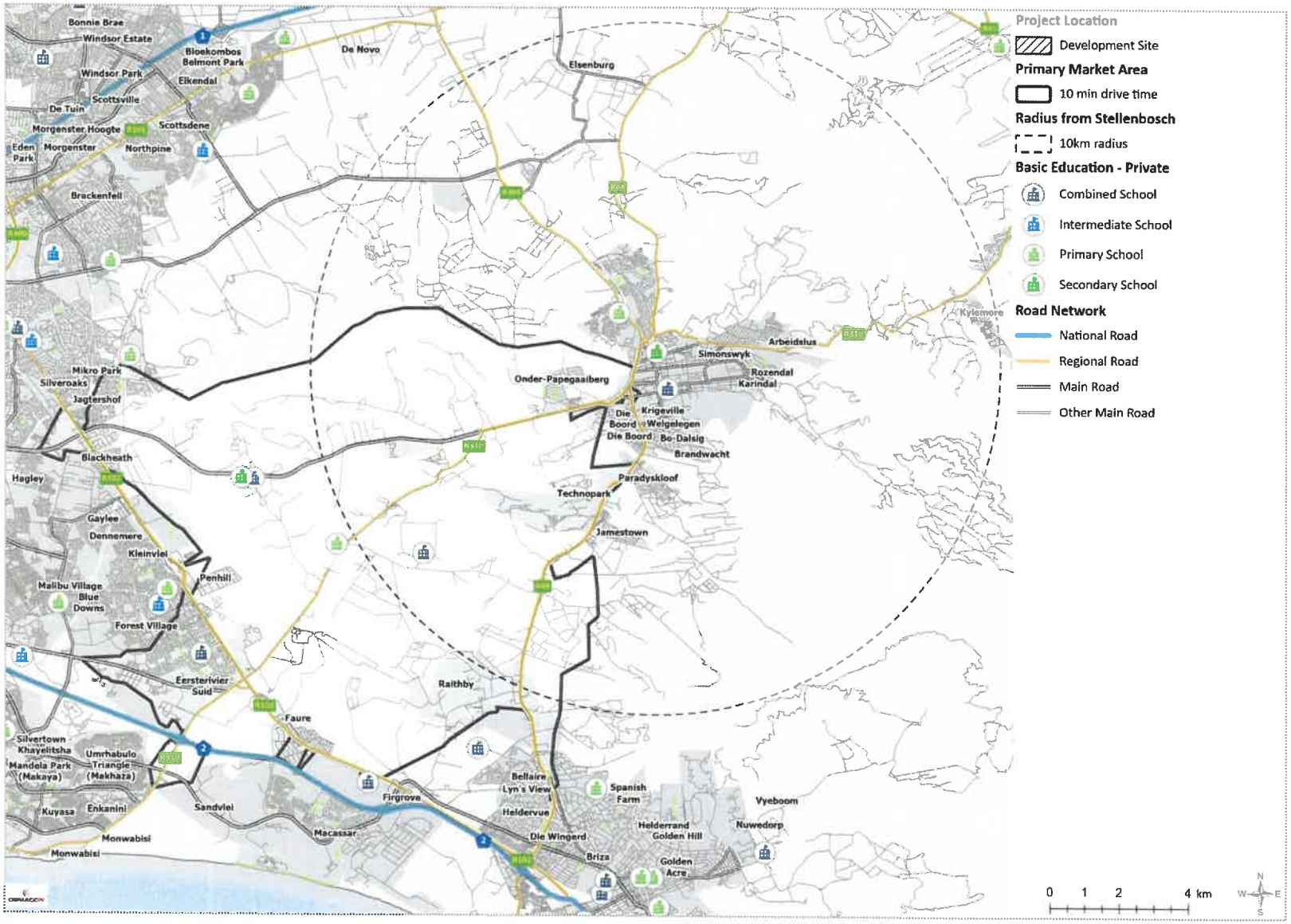
Automotive Supply



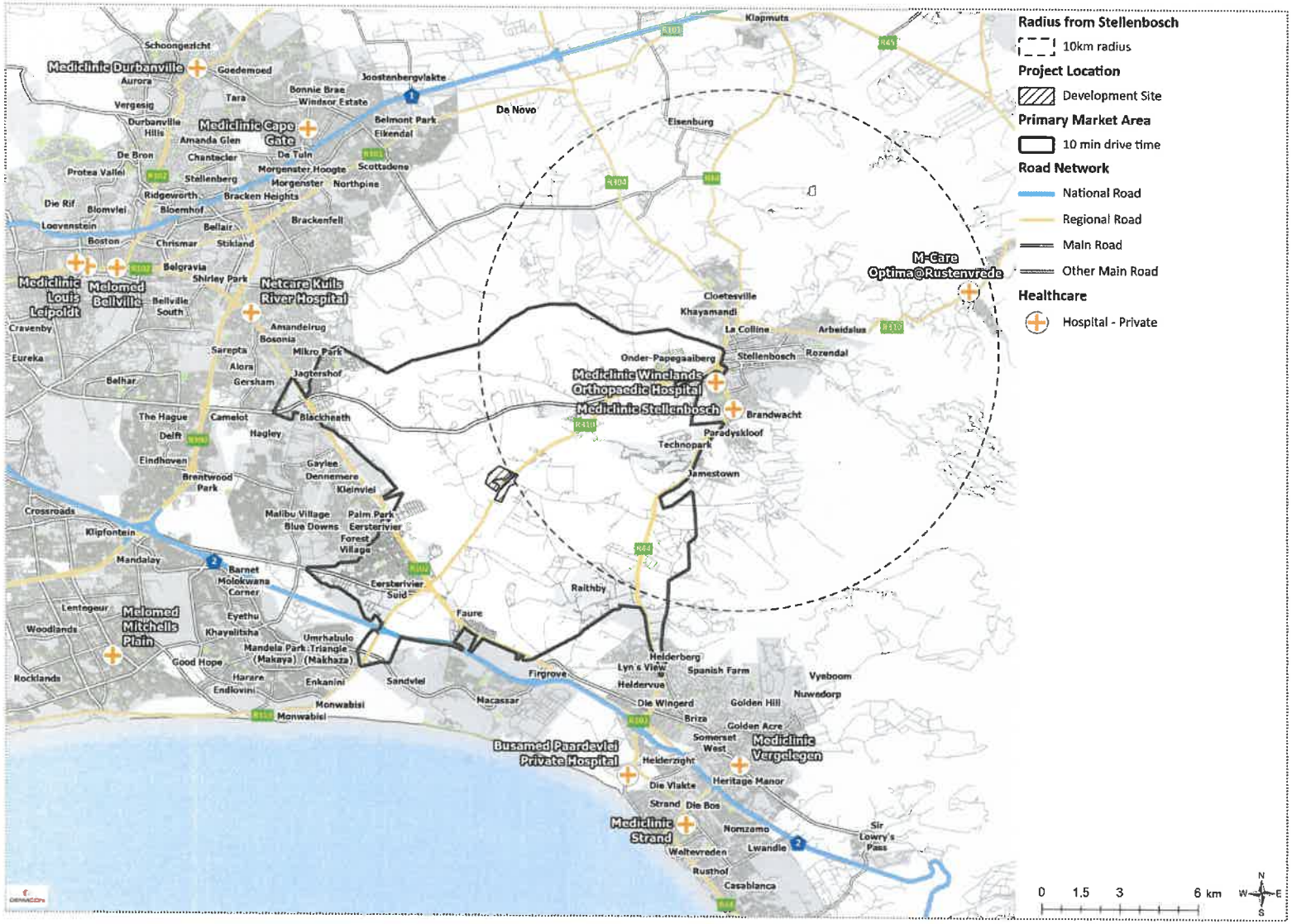
Monitored Office Nodes



Private Education

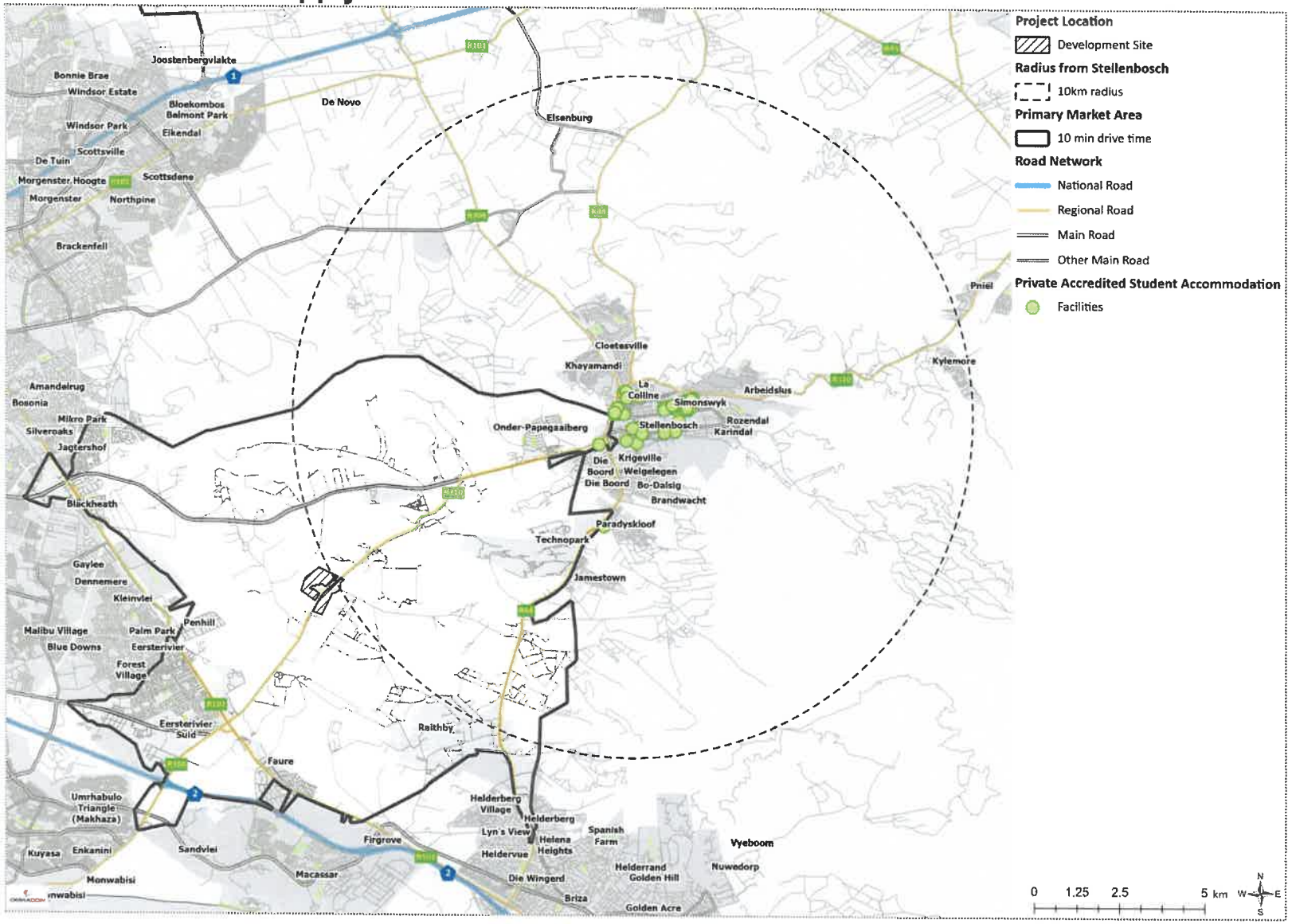


Healthcare Facilities

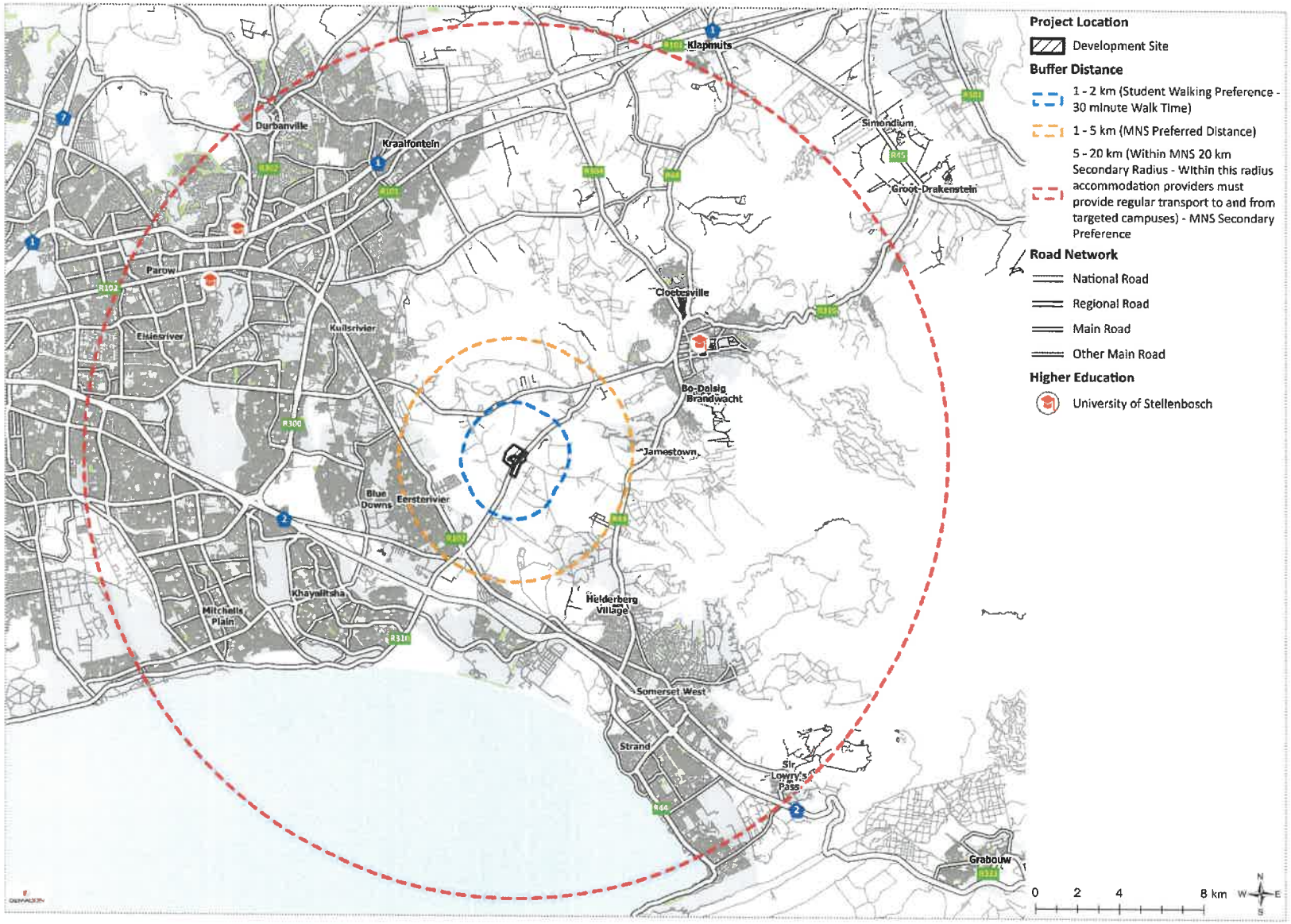


There are no private hospitals within the primary market area.

Student accommodation supply



Spatial Distribution of Institutional Student Accommodation



KEY FINDINGS & RECOMMENDATIONS

The table below provides a summary of the demand potential for the **Lynedoch Mixed-Use Development**.

Key Findings and Recommendations

Land Use	Market Gap Development Prospects	High Level Recommendations
RESIDENTIAL **Low density cluster homes & walk-ups**	**Market Gap:** ✓ **Development Prospects:** Moderate to High **Site rating:** 73.2% **Potential:** ±300 units	**BONDED UNITS (Short to Medium Term – 3 to 5 years)** ✓ An estimated 322 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 64 units. ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 46 units per annum. ✓ A total of **±300 units** could be developed and taken-up over the short term (80% take-up). ✓ Optimum point of market entry: **2024+** ✓ Configuration of units: **Low density cluster homes & walk-ups** ✓ A first phase of **100 to 150 units** is recommended (3- to 5-year take-up forecast). ✓ **Optimum Distribution Range Configuration** (based on market demand profile) – target market *

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m^2)
47.3%	24.6%	74	R650 000 - R800 000	15	R5 500 – R7 000	Bachelor	35 - 40
	22.7%	68	R800 000 - R1.3 million	14	R7 000 – R10 000	1 bedroom, 1 bathroom	45 – 50
33.3%	17.3%	52	R1.3 million - R1.7 million	10	R10 000 – R15 000	1.5-bedroom, 1 bathroom	50 - 60
	16.0%	48	R1.7 million - R2.5 million	10	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	60 - 70
19.5%	13.2%	40	R2.5 million - R3.5 million	8	R20 000 - R30 000	2 bedrooms, 2 bathrooms	70 – 80
	6.3%	19	R3.5 million+	4	R30 000+	3 bedrooms, 2 bathrooms	80+
TOTAL	100.0%	±300		±61*			

Source: Demacon Modelling, 2023
**part of the 300 units*

	Market Gap: ✓ **Development Prospects:** Moderate to High	**BONDED UNITS (Medium to Longer Term – 5 to 10 years)** ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units. ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum. ✓ A total of **±750 units** could be developed and taken-up over the medium to longer term (80% take-up) over a 5-to-10-year period. ✓ Optimum point of market entry: **2024+** ✓ Configuration of units: **Low density cluster homes & walk-ups**

Land Use	Market Gap Development Prospects	High Level Recommendations

Potential:
±750 units

✓ **Optimum Distribution Range Configuration** (based on market demand profile) – target market *

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m²)
47.3%	24.6%	184	R650 000 - R800 000	37	R5 500 – R7 000	Bachelor	35 - 40
	22.7%	170	R800 000 - R1.3 million	34	R7 000 – R10 000	1 bedroom, 1 bathroom	45 – 50
33.3%	17.3%	130	R1.3 million - R1.7 million	26	R10 000 – R15 000	1.5-bedroom, 1 bathroom	50 - 60
	16.0%	120	R1.7 million - R2.5 million	24	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	60 - 70
19.5%	13.2%	99	R2.5 million - R3.5 million	20	R20 000 - R30 000	2 bedrooms, 2 bathrooms	70 – 80
	6.3%	47	R3.5 million+	10	R30 000+	3 bedrooms, 2 bathrooms	80+
TOTAL	100.0%	±750		±152*			

Source: Demacon Modelling, 2023
**part of the 750 units*

Market Gap:

Development Prospects:
Moderate to High

Potential:
±1 500 units

BONDED UNITS (Long Term – 10 to 15 years)

- ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
- ✓ A total of **±1 500 units** could be developed and taken-up over the long term (10- to 15-year period).
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**
- ✓ **Optimum Distribution Range Configuration** (based on market demand profile) – target market *

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m²)
47.3%	24.6%	369	R650 000 - R800 000	75	R5 500 – R7 000	Bachelor	35 - 40
	22.7%	340	R800 000 - R1.3 million	69	R7 000 – R10 000	1 bedroom, 1 bathroom	45 – 50
33.3%	17.3%	259	R1.3 million - R1.7 million	52	R10 000 – R15 000	1.5-bedroom, 1 bathroom	50 - 60
	16.0%	239	R1.7 million - R2.5 million	48	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	60 - 70
19.5%	13.2%	198	R2.5 million - R3.5 million	40	R20 000 - R30 000	2 bedrooms, 2 bathrooms	70 – 80
	6.3%	94	R3.5 million+	19	R30 000+	3 bedrooms, 2 bathrooms	80+
TOTAL	100.0%	±1 500		±303*			

Source: Demacon Modelling, 2023
**part of the 1 500 units*

Note: As the project gains momentum and becomes an established address, take-up is likely to accelerate.

Land Use	Market Gap Development Prospects	High Level Recommendations
RETAIL **Small Convenience Centre**	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 74.3% **Potential:** ±2 278m² GLA *(Baseline Scenario)* ±2 869m² GLA *(Optimistic Scenario)*	**Two scenarios were modelled:** 1. Both scenarios consider a 5-minute drive time, 2. The **optimistic scenario** is based on a *higher market share*. Over and above, the site stands to benefit from daily transient trade due to its favourable location adjacent to Baden Powell Drive. **Demand Modelling Results:** ✓ In the context of residual nodal capacity calculations, the demand calculations indicate an optimum size of **±2 278m² GLA** in terms of the *baseline scenario* and **±2 869m² GLA** in terms of the *optimistic scenario*. ✓ Considering the growth dynamics of the area, the *optimistic* scenario is deemed realistic achievable. ✓ The optimum point of market entry could be **2029+** ✓ An opportunity over the short to medium term exists for a **Small Convenience Centre.** ✓ The proposed shopping centre should be able to attain an annual sales potential of approximately **R60 million** (*baseline scenario*) and **R75 million** (*optimistic scenario*) based on benchmark trading densities. ✓ Permanent on-site job creation of **±76** (baseline) or **±96** (optimistic), based on the SEM 2 to 5+ calculation. ✓ Performance will be dependent on, inter alia, appropriate tenant composition. ✓ Ample parking should be provided at a ratio of **4 bays per 100m²** retail GLA. ✓ The parking area should be accessible, convenient, paved and well-lit in the evenings. **Main Tenants (Small Convenience Centre):** ✓ Small café / superette ✓ Restaurant(s) ✓ Few small convenience stores. **Summary of Retail Demand**

	Baseline Scenario (Rand / sqm)	Optimistic Scenario (Rand / sqm)
Total Annual Growth in Market Demand (Sqm/A)	411	465
Centre Share of Growth (Sqm/A)	92	116
Point Of Market Entry	2029+	2029+
Additional Growth in Demand for Centre (Sqm)	831	1 047
Retail GLA At OPME	1 937	2 440
Services GLA at OPME	341	429
OPME Centre Size (sqm GLA)	**±2 278m²**	**±2 869m²**
On-Site Job Creation	76	96
Retail Sales Potential (R2023 Value)	R60 081 770	R75 656 444
Total Capital Investment (R2023 Value)	R43 289 861	R54 511 659
Additional Parking Bays Required	137	172
Parking Infrastructure & Landscaping Cost	R3 253 575	R4 096 982

Source: Demacon Demand Modelling, 2023

Land Use	Market Gap Development Prospects	High Level Recommendations
AUTOMOTIVE **Automotive Service Centre with Ancillary Uses**	**Market Gap:** **Development Prospects:** Moderate **Site Rating:** 74.3% **Potential:** ±455m² *(Initial phase)* ±862m² *(Medium to long term)*	**Recommended Sizes:** ✓ Trade sector market demand of **Stellenbosch Local Region** increases cumulatively from 50 670m² GLA in 2028 to 157 938m² GLA in 2043. ✓ Viable market-based take-up for the proposed development over the next 5 to 10 years is approximately **455m² GLA** and **862m² GLA** over the medium to long term. ✓ This floor space could include either a motor dealership, automotive workshop, or any other automotive related activities. ✓ Optimum point of market entry: **2028+** for the initial phase and **2033+** for the medium to long term. ✓ This floor space could include one of the following automotive services: • **Car service centre, fitment and repair centre** e.g., Bosch Car Services, Tyres & More, Car Care Clinic, Car Service City etc. • **Commercial servicing and repairs** • Selected **automotive ancillary services** such as a car wash performing not only washing but cosmetic repair services, valet services. e.g. Sparkling Car Care, AutoZone, Car Wash Worx **Recommended Sizes (Take-up forecast)**

Recommended Sizes	Initial Phase (5-10yrs) Rand per annum / m²	Medium to long term Rand per annum / m²
Capital investment (2023 constant values)	R8 651 201	R16 371 804
Employment opportunities	15	29
Parking	18	34
Parking infrastructure & landscaping cost (2023 constant values)	R433 471	R820 314
Point of market entry	2028+	2033+
Size of development (sqm) (up to 2028 & 2038)	**±455m²**	**±862m²**

Source: Demacon Demand Model, 2023

OFFICES **Office with administrative functions**	**Market Gap:** **Development Prospects:** Moderate **Site Rating:** 72.9% **Potential:** ±2 082m²	**Recommended Sizes:** ✓ The office market has rebounded much quicker than anticipated with an accelerated "return-to-office" that has less than 5% of office workers still working from home. ✓ Market demand for office floor space in the sub-regional economy, increases cumulatively from 8 394m² GLA in 2028 to 95 744m² GLA in 2043. ✓ Over the medium to long term, the project could attract office take-up of approximately **2 082m² GLA (2033).** ✓ This space includes GLA for offices and related facilities, but excludes parking, storage and basements. ✓ It is recommended that low- to medium-density office development could be supported as part of the proposed mixed-use development. ✓ Take-up will predominantly be from small enterprises and SMMEs: • **Service-orientated occupants**: dentist offices, medical practitioners, local surgeons, attorneys, financial services etc. • **Local government service functions, administrative functions, and/or institutional functions.**

Land Use	Market Gap Development Prospects	High Level Recommendations
		• Targeting these tenants could strengthen the demand for and the take-up of office space demand in the mixed-use node. ✓ Optimum point of market entry: **2029+**

Recommended office park space options (10-year demand and take-up forecast)

Variables	Rand per annum / m²
Capital Investment (2023 constant values)	R37 481 572
Optimum size (GLA – 2033)	**±2 082m²**
Employment (on-site)	104
Parking bays	83
Parking infrastructure & landscaping cost (2023 constant values)	R1 982 359
Point of market entry	2029+

Source: Demacon Demand Model, 2023

PRIVATE HEALTHCARE
Private Day Clinic



Market Gap:

Development Prospects: Moderate

Site Rating: 69.8%

Potential: ±5 – 7 beds

Recommended Sizes:

✓ There is approximately 29 785 medically insured persons in the primary market area, from a total estimate population of **74 510** - a total of 40.0% of the market population.
✓ For demand modelling purposes, the number of private beds catering required to the needs of the medically insured segment of the market is 4.8 private beds per 1 000 medically insured persons.
✓ The above yields a total demand for 168 private beds in the market area (2023), increasing to 170 in 2028 and 172 in 2033.
✓ Potential exists for a **private day clinic** with approximately **5 - 7 beds** over the next 5 to 10 years.
✓ The optimum point of market entry: **2028+.**

Recommended Sizes

	2023	2028	2033
Market potential (total number of viable beds for facility)	**5**	**6**	**7**
Total additional area requirement (sqm hospital floor space)	357	425	488
Model Calibration & Sensitivity			
Beds / 1000 total population as benchmark:			
Population ('000)	35.0	35.4	35.8
National Average (Private beds per 1000 population)	4.80	4.80	4.80
Study area private beds per 1000 total population (as per Demacon Model)	4.19	4.17	4.15
	87.3%	**86.9%**	**86.5%**

Interpretation: <100% = Conservative market potential estimation, >100% = Liberal market potential estimation (likely to produce oversupply in market)

Land Use	Market Gap Development Prospects	High Level Recommendations
PRIVATE SCHOOL	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 73.8% **Potential:** ±350 to 400 learners	**Recommended Sizes** ✓ It can be concluded that there is a moderate demand for a private school as part of the larger development. ✓ Potential exists for the development of a facility catering to approximately **350 to 365 pupils** over the short term to medium term, increasing to **370 to 400 pupils** over the medium to long term (2038) at full capacity. ✓ Optimum point of market entry: **2028+** ✓ Potential exists for say **350 to 400 learners.**

Recommended Sizes

	2023	2028	2033	2038
Total number of people	48 729	49 761	50 815	51 891
• Ages 5 – 9 (7.9%)	581	593	606	619
• Ages 10 – 14 (8.0%)	588	600	613	626
• Ages 15 – 19 (8.7%)	639	652	666	680
Target Age Segment	12 050	12 305	12 566	12 832
Private School Attendance	1 808	1 846	1 885	1 925
• Ages 5 - 9	271	277	283	289
• Ages 10 - 14	362	369	377	385
• Ages 15 - 19	**316**	**323**	**330**	**337**
Minimum	271	277	283	289
Maximum	362	369	377	385
Average	**316**	**323**	**330**	**337**
Secondary Injection	40	41	42	43
Total Demand	**356**	**364**	**372**	**380**

Source: Demacon Demand Model, 2023

STUDENT ACCOMMODATION	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 72.7%	**Findings:** ✓ The market demand modelling estimate shows that between 2023 and 2033 approximately 4 373 new students could be enrolled as full-time contact students at the university of Stellenbosch. Likewise, student accommodation (supply) is forecast to increase by 698 beds (based on the historic supply-side growth trajectory). Early indications based on the preceding information suggest, that over the medium-term, a shortfall of student accommodation beds could emerge (3- to 5-years). ✓ Given the National Planning Commissions aspirations (80% of students accommodated in accredited student accommodation) and minimum benchmarks (Minium Norms and Standards), present student accommodation supply in the market area appears to be fairly saturated. Considering that the total student accommodation target market (i.e., demand) will increase systematically over time (from 71% to 80% as per National student accommodation guidelines and aspirations), the saturated market will transition to a market with a measurable student accommodation market demand gap over the medium-term. Furthermore, the rate at which student accommodation supply is currently growing is below the student enrolment growth rate of the University – consequent to which a shortfall in accommodation is likely to emerge over the medium term).

Land Use	Market Gap Development Prospects	High Level Recommendations
	Potential: **±118 units** **199 beds**	✓ The net additional demand for student accommodation in the competitive market is estimated to be: • Between 1 800 and 2 300 beds in the near term and • Up to 4 400 to 4 700 beds in the medium-term ✓ Given the dynamic nature of demand side growth (systematically expanding student numbers), compared to the relatively inelastic supply side expansion (supply is added in growth spurts over time), periodic over and under supply is bound to occur. ✓ Considering the preceding, further analyses reveal that the bulk of student accommodation demand is catered to by institutional accommodation provided in the vicinity of the University (within the prescribed 5 km minimum norms and standards radius) – in the case of Stellenbosch this is even closer at a maximum 3 km radius. The following table illustrates that the cumulative effective market gap primarily consists of non-NSFAS students that might be required to source accommodation outside of current and future proposed accredited accommodation providers. Growth in NSFAS students as a market source is likely to continue through 2025 and onwards as existing and potential future supply becomes saturated and NSFAS students might need to consider accommodation options outside existing accredited providers. **Demand Modelling**

		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Full-Time Enrolled Contact Students		20 687	21 084	21 491	21 905	22 328	22 761	23 202	23 651	24 112	24 581	25 060
Accredited Student Accommodation Available (Institutional and Private)		14 635	14 702	14 769	14 837	14 906	14 975	15 045	15 116	15 188	15 260	15 333
Percentage of Students Accommodated in Available Accommodation		70.7%	69.7%	68.7%	67.7%	66.8%	65.8%	64.8%	63.9%	63.0%	62.1%	61.2%
Market Gap at 100% of Students		6 052	6 382	6 722	7 068	7 422	7 786	8 157	8 535	8 924	9 321	9 727
Student Accommodation Target Market % (Increasing Incrementally)		71%	72%	73%	74%	75%	76%	77%	78%	79%	80%	80%
Total Target Market (Number)		14 688	15 180	15 688	16 210	16 746	17 298	17 866	18 448	19 048	19 665	20 048
Total Market Gap (Cumulative)		53	478	919	1 373	1 840	2 323	2 821	3 332	3 860	4 405	4 715
Effective Market Gap (Cumulative)		53	478	919	1 373	1 840	2 323	2 821	3 332	3 860	4 405	4 715
Annualised Take-Up (Cumulative)	Low (units)	1	10	18	27	37	46	56	67	77	88	94
	High (units)	2	14	28	41	55	70	85	100	116	132	141

Land Use	Market Gap Development Prospects	High Level Recommendations										
		Average (units)	2	12	23	34	46	58	71	84	97	110	118

The market demand modelling estimate shows that between 2023 and 2033 approximately 4 373 new students could be enrolled as full-time contact students at the university of Stellenbosch. Likewise, student accommodation (supply) is forecast to increase by 698 beds (based on the historic supply-side growth trajectory). Early indications based on the preceding information suggest, that over the medium-term, a shortfall of student accommodation beds could emerge (3- to 5-years).

Given the National Planning Commissions aspirations (80% of students accommodated in accredited student accommodation) and minimum benchmarks (Minium Norms and Standards), present student accommodation supply in the market area appears to be fairly saturated. Considering that the total student accommodation target market (i.e., demand) will increase systematically over time (from 71% to 80% as per National student accommodation guidelines and aspirations), the saturated market will transition to a market with a measurable student accommodation market demand gap over the medium-term. Furthermore, the rate at which student accommodation supply is currently growing is below the student enrolment growth rate of the University – consequent to which a shortfall in accommodation is likely to emerge over the medium term).

The net additional demand for student accommodation in the competitive market is estimated to be:

- Between 1 800 and 2 300 beds in the near term and
- Up to 4 400 to 4 700 beds in the medium-term

Given the dynamic nature of demand side growth (systematically expanding student numbers), compared to the relatively inelastic supply side expansion (supply is added in growth spurts over time), periodic over and under supply is bound to occur. Considering the preceding, further analyses reveal that the bulk of student accommodation demand is catered to by institutional accommodation provided in the vicinity of the University (within the prescribed 5 km minimum norms and standards radius) – in the case of Stellenbosch this is even closer at a maximum 3 km radius. The following table illustrates that the cumulative effective market gap primarily consists of non-NSFAS students that might be required to source accommodation outside of current and future proposed accredited accommodation providers. Growth in NSFAS students as a market source is likely to continue through 2025 and onwards as existing and potential future supply becomes saturated and NSFAS students might need to consider accommodation options outside existing accredited providers.

Distribution of the Effective Market Gap between NSFAS and Non-NSFAS Students - Residual Demand between 2023 and 2033

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Number of **NSFAS Students** that will Require Accommodation outside Existing Supply and Estimated Future Supply	0	0	78	160	244	331	420	512	606	703	763
Total Number of **Non-NSFAS Students** that will Require Accommodation outside Existing Supply and Estimated Future Supply	53	478	841	1 213	1 596	1 992	2 401	2 820	3 254	3 702	3 952

Land Use	Market Gap Development Prospects	High Level Recommendations										
		Effective Market Gap (Cumulative) – Residual demand for student accommodation not accommodated in existing and estimated future accredited student accommodation supply	**53**	**478**	**919**	**1 373**	**1 840**	**2 323**	**2 821**	**3 332**	**3 860**	**4 405**	**4 715**
		Annualised Take-Up (Cumulative) Low (units)	1	10	18	27	37	46	56	67	77	88	94
		Annualised Take-Up (Cumulative) High (units)	2	14	28	41	55	70	85	100	116	132	141
		Annualised Take-Up (Cumulative) Average (units)	2	12	23	34	46	58	71	84	97	110	118

Source: DEMACON, 2023

Given the location of the proposed development and associated development concept, it is estimated that the proposed project could garner some market share al be it low. In the context of the preceding, the forecast medium- term demand is unlikely to exceed ±150 beds.

Several key aspects should be taken into consideration when evaluating the potential of the proposed project to capitalise on the student accommodation market and the potential of the project to garner market share:

- The proposed project is located approximately 10 km from the University of Stellenbosch. Therefore, the proposed project is removed from the core student accommodation supply area of the University (approximately 95% to 98% of current accredited and non-accredited supply are within a 2 to 3 km radius of the University) and also falls outside the preferred distance for student accommodation accreditation as set out by the National Minimum Norms and Standards documentation and related accreditation criteria for universities.
- The proposed project would have to overcome initial inertia in order to capture at least some interest from students and investors in student accommodation (should these be offered to the open market) against the backdrop of predetermined design considerations for student specific accommodation (and associated facilities and amenities) and the likely risk that the development may well not be granted accreditation.
- Furthermore, the distance that the proposed project is from the University and Stellenbosch town would impose, thereby introducing and additional travel cost driver on students residing in the project. An attempt could be made to offset these effects by offering substantially more affordable accommodation compared to providers in Stellenbosch. Construction and relate costs will dictate the viability and sustainability of such a strategy – most probably R6 500 to R7 500 rands per bed per month.
- The development concept of the proposed project does not articulate an aspirate to align with National Minimum Norms and Standards for purpose-built student accommodation and all the intricacies concerning the degree of services, configuration options and amenities (entertainment, student life programmes, furnished rooms and kitchens, free access to internet, access to student orientated services such as printing, room cleaning services, etc.). As a consequence, the proposed project could potentially be hamstrung in its drive to be competitive, regardless of discounted rental rates.
- Purely on the basis of distance, the project will find it challenging to receive accreditation from the University. Over and above the distance deterrence function, students will be removed from the hub of student life activity in town. It will take the project some years to build sufficient critical mass in order to sustain some minimum level of retail potential.

Land Use	Market Gap Development Prospects	High Level Recommendations

- Accreditation only occurs a project has been complete, which introduces a further real risk: student accommodation requires a comparatively higher development density, whereas the norm in the surrounding rural environment is for lower density luxury living. This reality would introduce infinite challenges, should a later conversion considered on the basis of an accreditation rejection/denial.

Considering the above, the proposed development will likely need to consider a systematic approach to attracting and introducing students in a conventional open-market development (as opposed to a branded student accommodation village) to the proposed development given that it will take time to build the necessary critical mass of facilities and services to be supported.

Recommended configuration for the development:

Percentage Range of Student Beds per Unit Configuration



Recommended configuration and Pricing Structure

Bedroom Types	Percentage (%)	Number of units	Unit Rental Rates
1 bedroom	30%	105	R8 000 - R10 000
2 bedrooms	70%	45	R10 000 - R12 000
	100%	150	

Source: Demacon 2023

Considering project locality and the need to be able to cater to a broader market segment, a 30:70 uit split is recommended. Furthermore, a differentiated product offering could be provided to students at a ±10% discount rate to account for the travel distance and associated costs between Lynedoch and the Stellenbosch campus (±20km return trip per day @ R1 000 petrol money per month).

LYNEDOCH MIXED-USE DEVELOPMENT LAND BUDGET & PHASING

The individual land uses are allocated in the table below.

Land Use Budget & Phasing – 10 year timeframe

Land Use	Proposed Size	Net demand (ha)	Surplus buffer (10%)	Including roads (15%)	Composition (% of land)	OPME*	Market Gap
Residential Bonded (Low Density)	±630 units	25.2	27.73	31.89	82.2%	2024+	Moderate to High
Student Accommodation (Medium Density)	±120 units	2.0	2.20	2.53	6.5%	2024+	Moderate
Retail (Small Convenience Centre)	±2 869m²	0.8	0.90	1.04	2.7%	2029+	Moderate
Trade (Automotive)	±455m²	0.1	0.14	0.16	0.4%	2028+	Moderate
Offices / Administrative Functions	±2 082m²	0.5	0.57	0.66	1.7%	2029+	Moderate
Private Day Clinic	±488m² (5 to 7 beds)	0.1	0.13	0.15	0.4%	2028+	Moderate
Private School	±3 720m² (350 to 400 pupils)	1.9	2.05	2.35	6.1%	2028+	Moderate
Total Hectare Take-Up		**30.7**	**33.72**	**38.78**	**100.0%**		

Source: Demacon Demand Modelling, 2023
**Optimum point of market entry*

A total of **38.78 hectares** could be developed and taken up over a 10-year timeframe. This includes 88.7% (34.41 ha) for residential uses and 11.3% (4.37 ha) for non-residential uses. The site is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. Take-up is forecast to accelerate as the development gains traction in the market.

Considering the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45.48 ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development.

INTRODUCTION

1

CHAPTER

1. INTRODUCTION

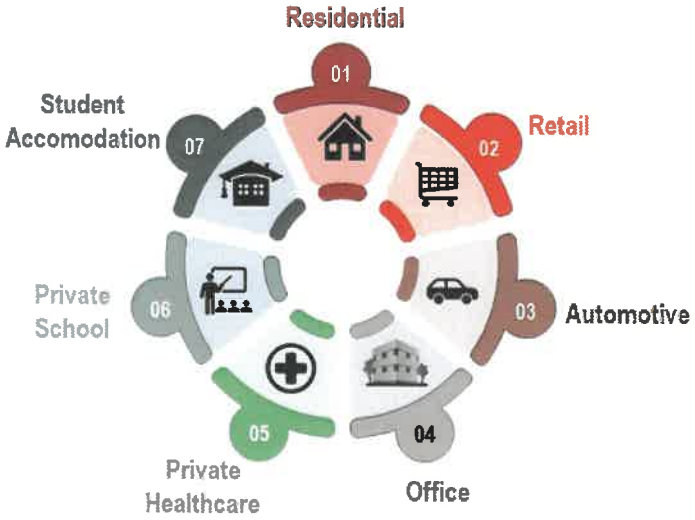
1.1 BACKGROUND

Chapter one provides an introduction and concise roadmap of Lynedoch Mixed-Use Development. The chapter also provides concise background to the project, a site description as well as a report outline.

1.2 PROJECT BRIEF & OBJECTIVES

DEMACON Market Studies were commissioned by **Uniqon** to assess the demographic profile, economic drivers and trends, highest and best land uses and development & growth potential of the proposed **Lynedoch mixed use development** in the **Stellenbosch area**, with the optimum mix and sizes of the highest and best land uses to be informed by the market study.

Land uses under consideration include:



In the context of the above, a market study is therefore required to assess the viability and optimum composition of a potential mixed use development concept in terms of, *inter alia:*

- ✓ identify the optimum combination of highest and best uses (HBUs) for the site (taking due cognisance of market and development trends and demands in the sub-region)
- ✓ refine the above to a **short list** of potential activities / real estate markets to be analysed
- ✓ demographic *status quo* and trends of the anticipated **target market**, including point of origin, affordability levels, etc.
- ✓ local and sub-regional economic *status quo* and trends, including **main economic drivers and trends** in the region
- ✓ **location analysis and property description**
- ✓ **SDF** / Urban Design Framework Alignment
- ✓ catalytic effect of **new and / or comparable projects** in the market
- ✓ market activity and growth
- ✓ **main competitors / supply** in the market, i.e., comparable projects aimed at similar target market (existing and proposed)
- ✓ forecast **take-up** rates
- ✓ **extrapolated market profile**, i.e., future resident population (and demand implications for ancillary facilities)
- ✓ corresponding **product offer and type**
- ✓ **timing / phased implementation** and optimum point of market entry
- ✓ future **demand thresholds and target markets per land use**
- ✓ **Market potential assessment** (including 5- and 10-year growth forecast)
- ✓ **Recommendations and conclusions**, including optimum land use mix and project size (including optimum size quantified for each respective project component, optimum points of market entry / phasing, recommended typologies, product and pricing profiles, competition analysis, future growth, and expansion potential, etc.) – including photos, diagrams, graphs, maps, etc.

1.3 RESEARCH METHODOLOGY

The methodology consists of five steps that provide key analysis outcomes used to assess the viability and optimum composition of a potential development concept. The following diagram provides a concise overview of the methodological approach employed for the study.

In the context of the above, comprehensive market research will be structured in terms of the following main steps:

Project Inception

Refinement of the project brief, timeframe, and deliverables. Relevant base data and documents will be collated, and project specific detail acquire from the client.

Macro & Micro Market Analyses (Economic & Demographic)

This step will include market area based locational, economic, and demographic components.

Supply / Competitor Analysis

Based on the initial development proposal and anticipated trade area, relevant competitors will be identified and analysed in terms of aspects such a size, composition, classification, etc. Various sources will be consulted to identify development proposals in the sub-region.

Market Potential / Demand Modelling

Real estate sub-sector-specific instruments will be applied to estimate total demand, market share, future growth, take-up rates and project-specif market potential, taking due cognisance of strategic location and sub-regional economic drivers.

Conclusions & Recommendations

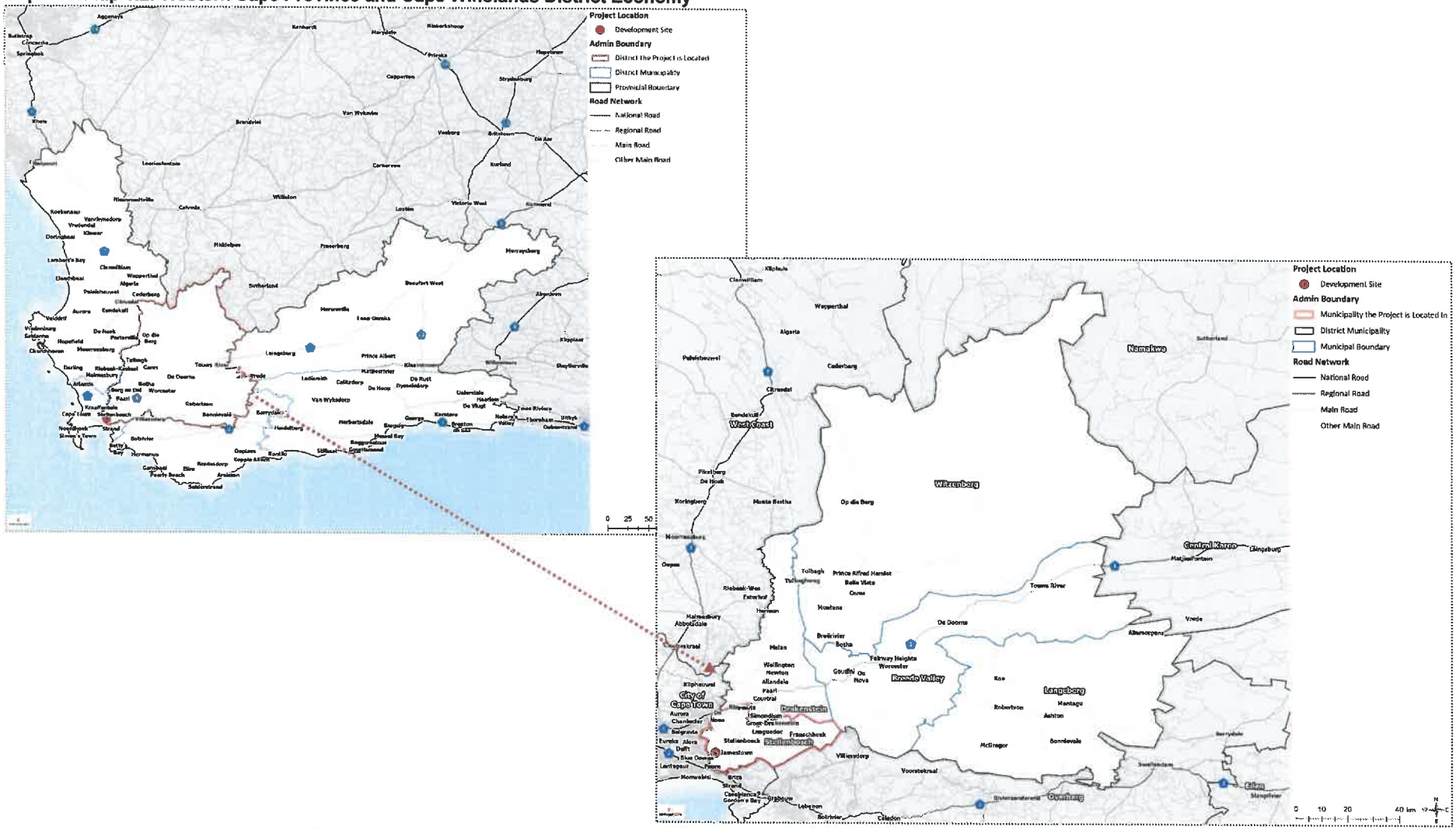
Market based development recommendations will be made with regard to market potential for the proposed development.

DEMACON's approach is market-based, and the company applies its extensive involvement as well as research and market intelligence on the subject matter to complement the market study.

1.4 STUDY AREA DELINEATION

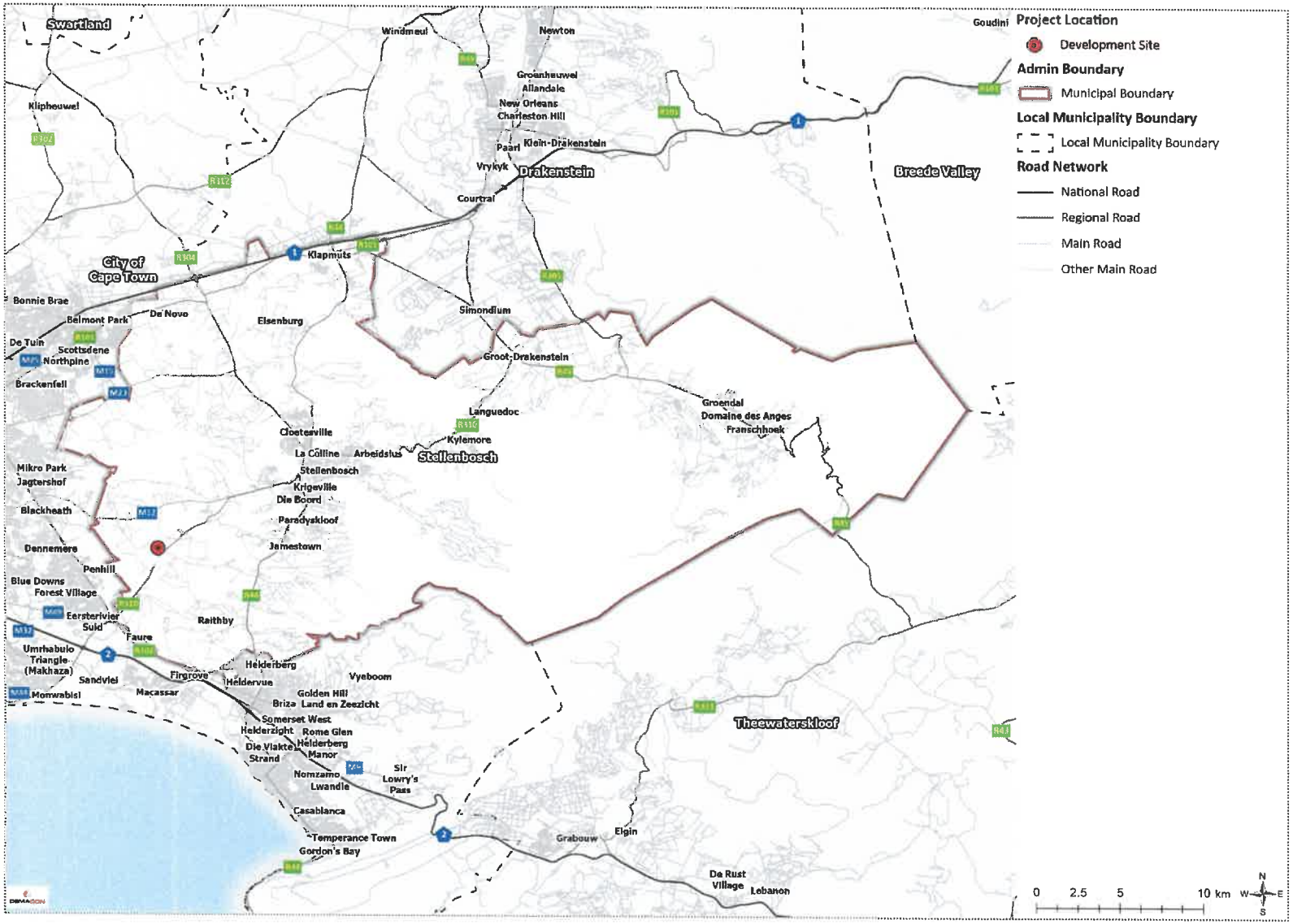
❖ PROVINCIAL & DISTRICT CONTEXT

Map 1.1 - Map 1.2: Western Cape Province and Cape Winelands District Economy



❖ LOCAL CONTEXT

Map 1.3: Site in the context of Stellenbosch Local Economy



❖ LOCALITY AND DESCRIPTION OF SITES

The proposed development is located in **Lynedoch**, **Stellenbosch Local Municipality, Western Cape Province**. The sites extend north and south of the R310 road (Baden Powell Drive). The focus of the market study is **Portion 28 to the north of the R310** which measures **±45.48 ha**.

Map 1.4: Location of Site & Arial View

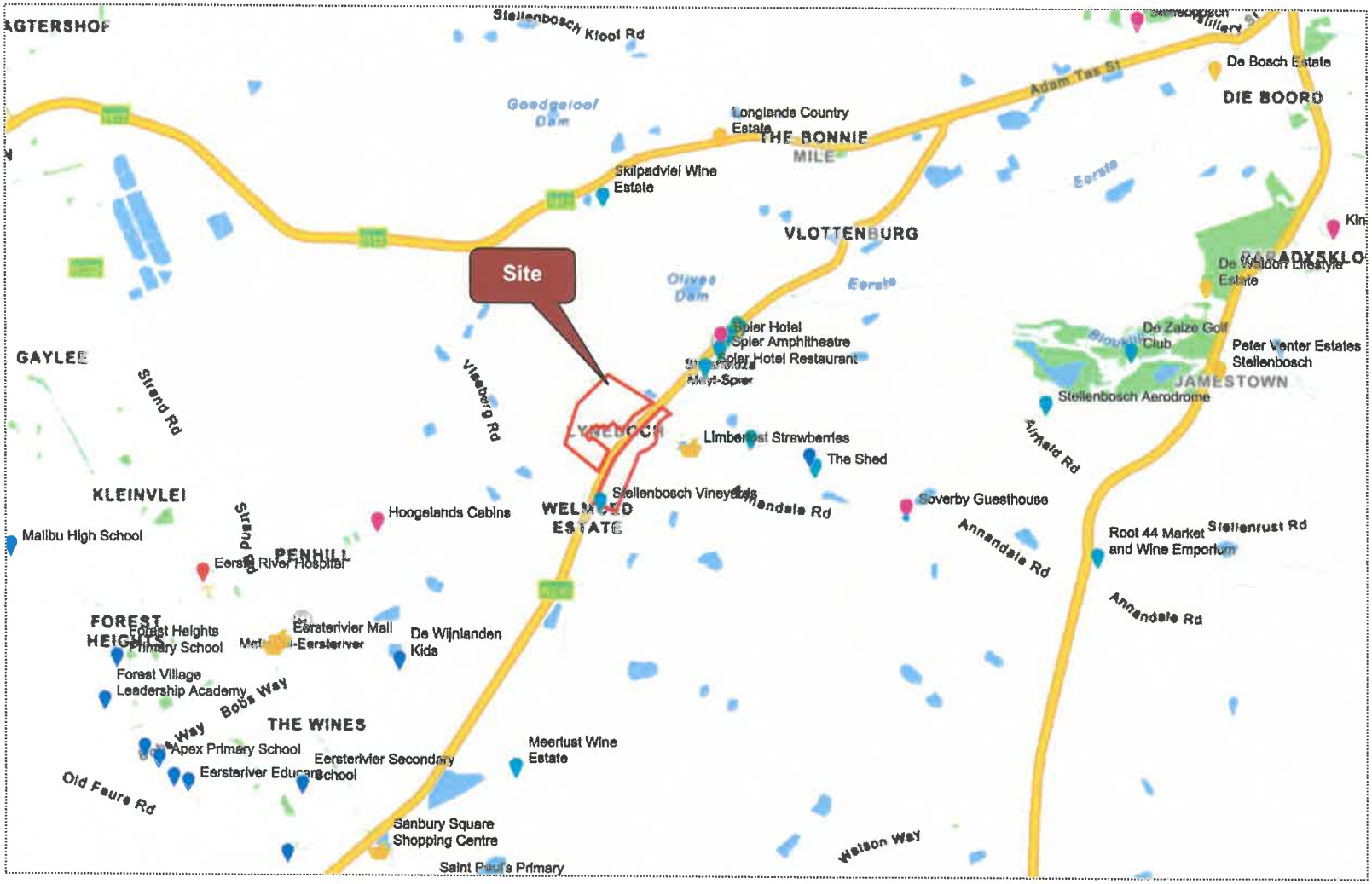
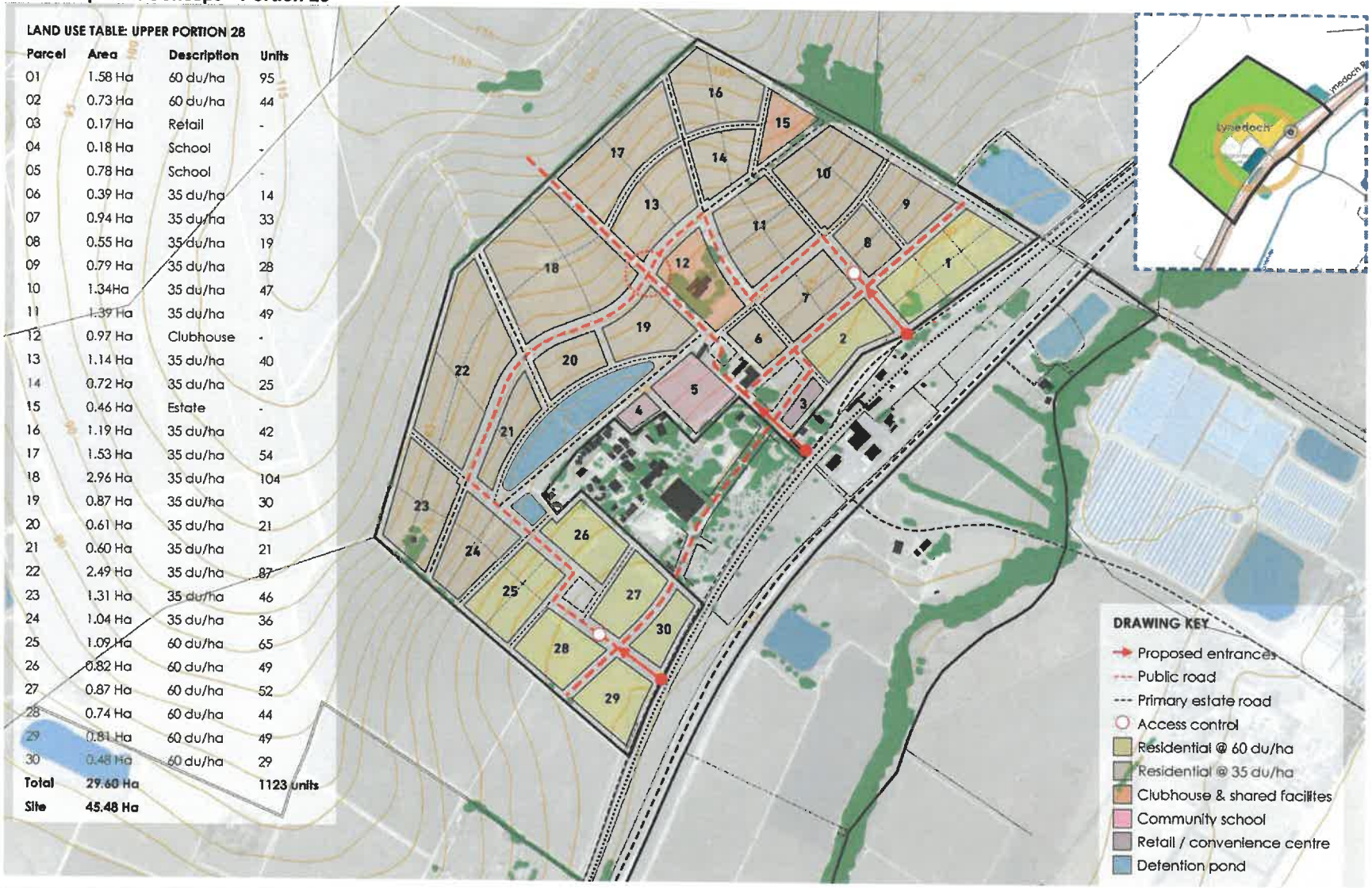


Table 1.1: Surrounding area

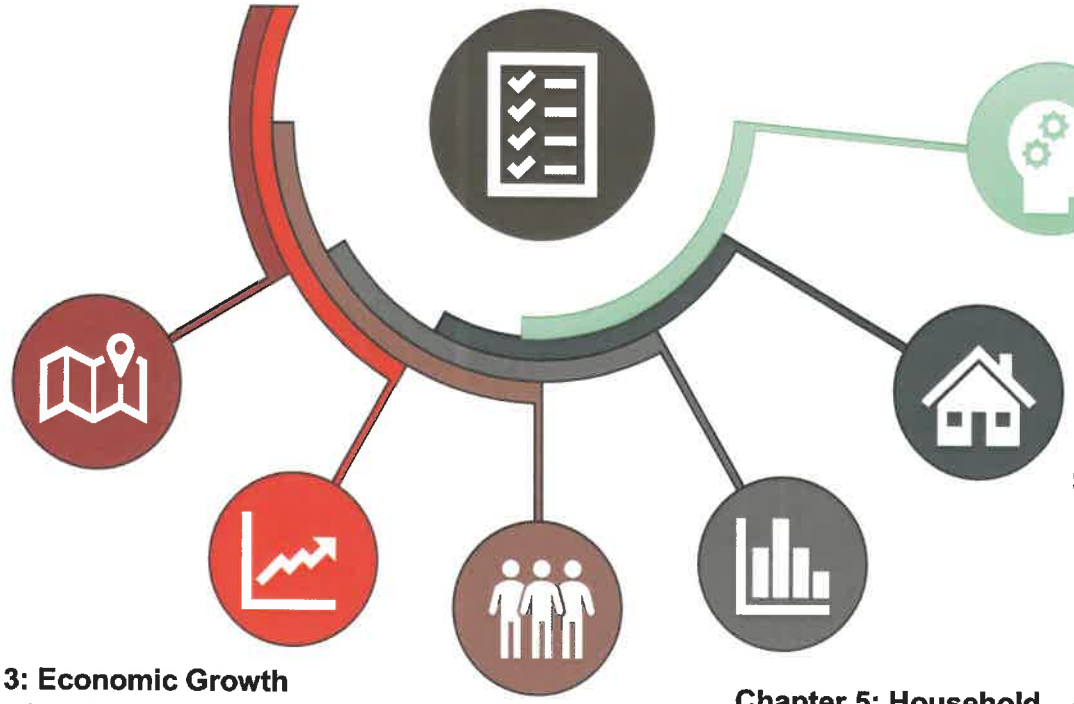
Retail 	• Spier Farm Café • Sanbury Square Shopping Centre • Eersteriver Mall • Shoprite Eerste River • Limberlost Strawberries	**Education** 	• Apex Primary School • Apex High School • Eersteriver Educare • Eersteriver Secondary School • Forest Heights Primary School • Forest Village Leadership Academy • Malibu high School • Saint Paul's Primary School • Stellenbosch Waldorf School • Spark Blue downs Primary • Spurwing Primary School • De Wijnlanden Kids
Short Stay Accommodation 	• Kingsview Estate • Spier hotel • Hoogelands Cabins • Soverby Guesthouse	**Health** 	• Eerste River Hospital (public hospital)
Residential Estates 	• De Bosch Estate • De Waldorft Lifestyle Estate • Kingsview Estate • Croydon Olive Estate • Longlands Country Estate • Croydon Vineyard Estate • Westruther Estate • Kelderhof Country Village	**Other** 	• Cranberry Creek Gardens • De Zalze Golf Club • Meerlust Wine Estate • Spier Hotel Restuarant • Spier Amphitheatre • Spier Wine Tasting • Spier Wine Farm • Spier Cellar • The Shed • Spier Wine Farm

Map 1.5: Development Concept – Portion 28



1.5 REPORT OUTLINE

The report is outlined in the following sections:



Chapter 2: Location Analysis

focuses on the location aspects in the market with the objective of estimating the development potential within the designated area.

Chapter 3: Economic Growth & Drivers

outline the salient features of the market area economy in terms of selected time series economic indicators; most notably the economic profile and growth trends within the local economy.

Chapter 4: Demographic Market Profile

Demographic *status quo* and trends of the anticipated target market, including point of origin, affordability levels, etc.

Chapter 5: Household Survey

conduct a random sample perception survey in the surrounding area, which represents a large captive market for potential buyers.

Chapter 6 – 12: Market Supply & Demand Analysis

identify the supply and demand for residential, retail, automotive, office, private school, private healthcare & student accommodation within the market area, to determine the development potential / expansion, recommended size, optimum point of market entry, etc.

Chapter 13: Development Recommendations

optimum product offering, based on revealed preferences, target market and demand modelling.

POLICY AND STRATEGIC PLANNING CONTEXT

2

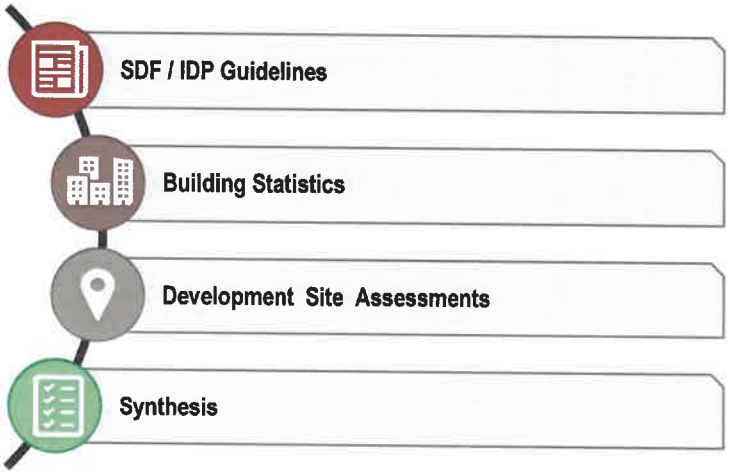
CHAPTER

2. POLICY AND STRATEGIC PLANNING CONTEXT

2.1 INTRODUCTION

Chapter Two focuses on the location aspects in the market with the objective of estimating the development potential within the designated area of activity. The chapter therefore investigates the general character, development frameworks and development trends evident in the greater activity area to gain insight into urban processes and to inform development decisions.

Market potential is influenced by; *inter alia*, the characteristics of the development site. Certain types of developments each have specific location requirements and should subsequently be assessed in terms of selected location criteria. To this effect, various site evaluation models are utilised. The policy and strategic planning context chapter is outlined in terms of the following headings:



2.2 STELLENBOSCH SPATIAL DEVELOPMENT FRAMEWORK, 2019

Stellenbosch Municipality (SM) is located in the heart of the Cape Winelands. The municipality is bounded to the east and south by the Drakenstein, Wemmershoek and Limietberg mountain ranges.

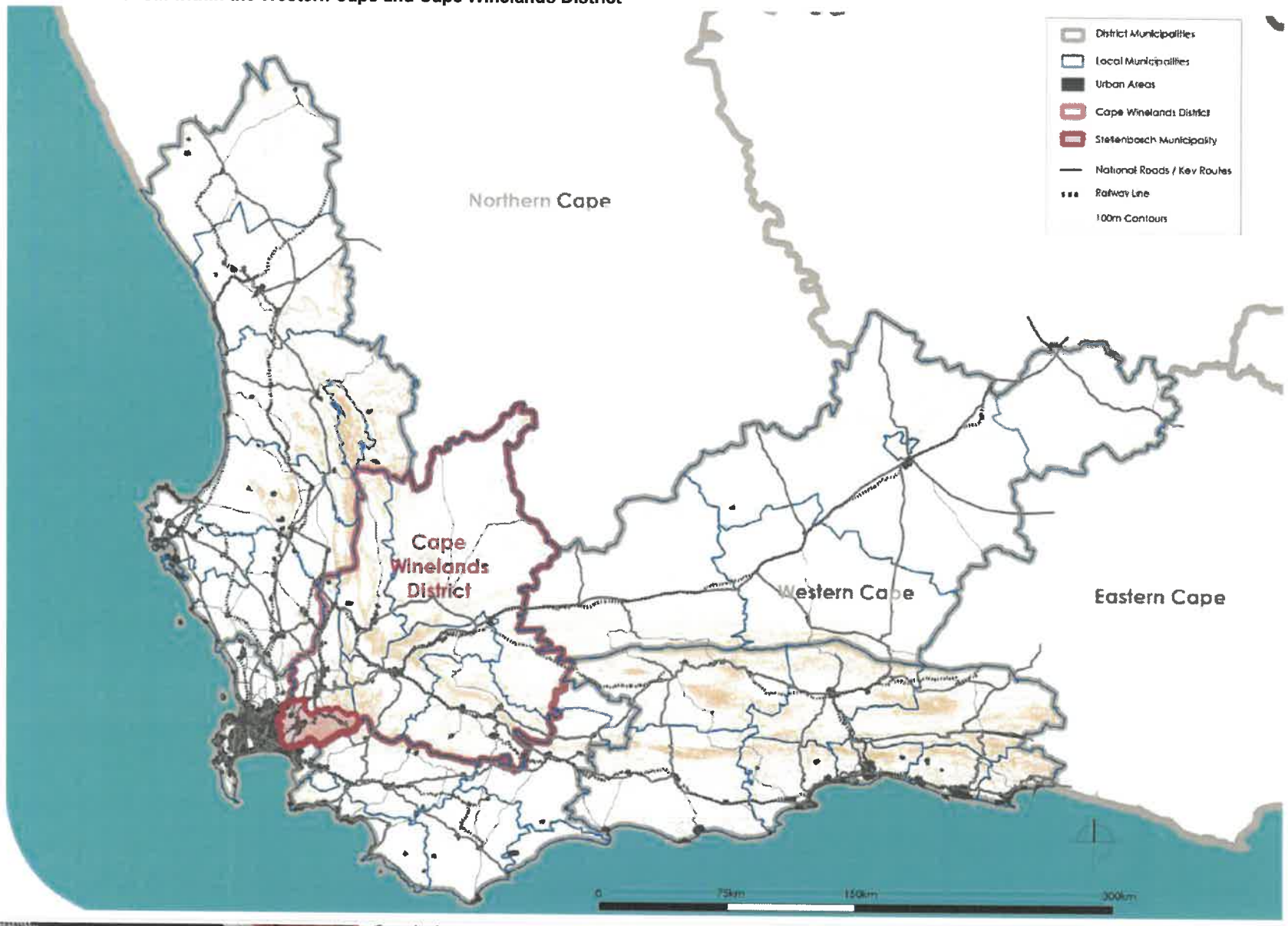
The Hottentots Holland range (i.e., Stellenbosch, Jonkershoek and Simonsberg Mountains) and the Bottelary Hills form the backdrop to the town of Stellenbosch itself. Significant portions of the municipality fall within globally recognised biosphere areas with large tracts of land designated as public and private conservation areas.

Politically, SM forms part of the Cape Winelands District Municipality (CWDM) of the Western Cape Province of South Africa. The municipality adjoins the City of Cape Town (CCT) to the west and south and the Breede Valley, Drakenstein and Theewaterskloof Municipalities to the east and north. Functionally, SM forms part of the Greater Cape Town metropolitan area. SM covers a geographical area of approximately 830km².

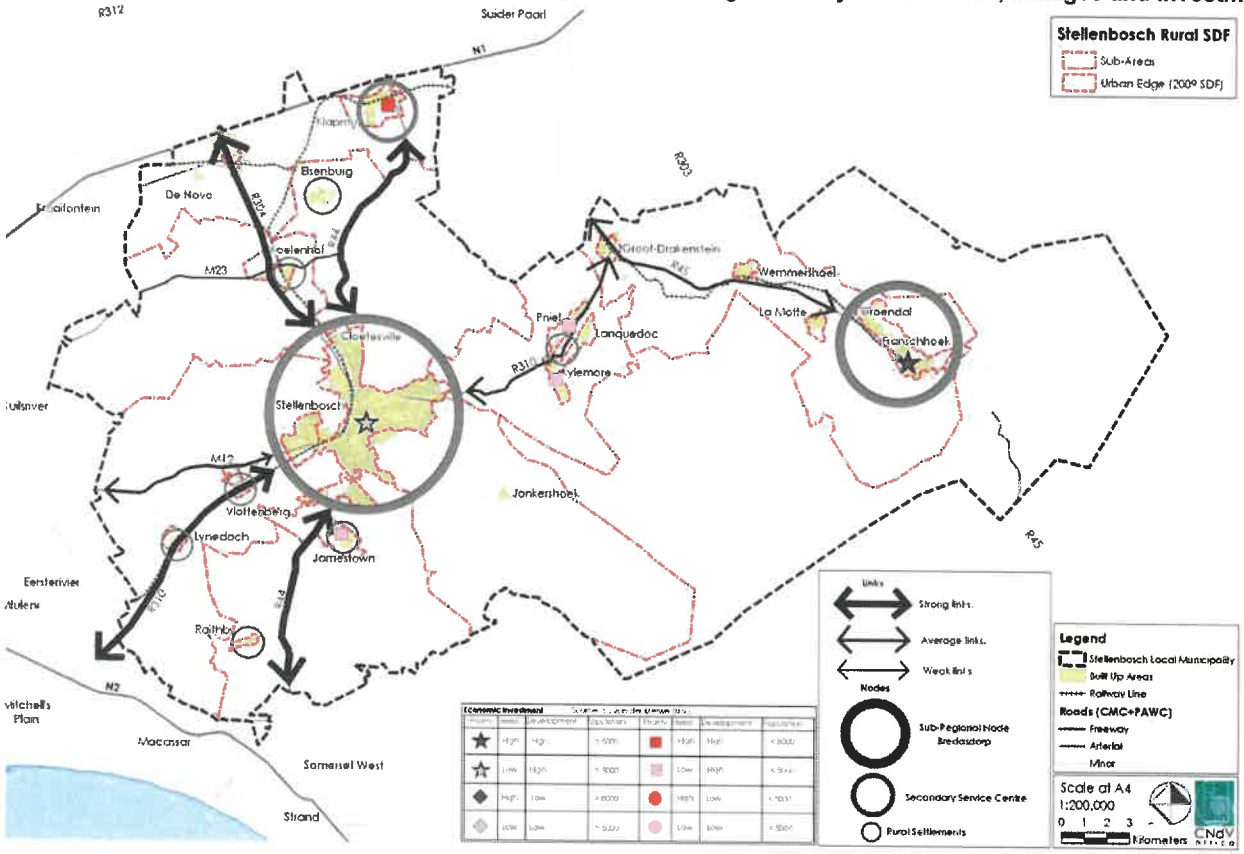
The main settlements in SM are the historic towns of Stellenbosch and Franschhoek, and Klapmuts. There are also a number of smaller villages, including Jamestown (contiguous with Stellenbosch town), Pniel, Johannesdal, Lanquedoc, Lynedoch, and Raithby. New nodes are emerging around agricultural service centres, for example, Koelenhof and Vlottenburg.

As SM is sought after for the opportunity and quality of living it offers, much of the municipal area is constantly under pressure for development; in the form of various types of residential development, and commercial development ranging from shopping malls to tourist and visitors' facilities in the rural areas surrounding towns. Building on the existing highly valued institutions, the education sector is also seeking further development opportunity. The SM Municipal Spatial Development Framework will play a key role in managing these pressures.

Map 2.1: The location of SM within the Western Cape and Cape Winelands District



Map 2.2: The 2013 Approved Stellenbosch SDF diagram illustrating hierarchy of settlement, linkages and investment priorities.



Since approval of the MSDF in 2013 and 2017, MSDF related work has focused on:

- The development of scenarios of land demand to inform the development of a preferred 20-year growth strategy, development path, and nodal development concepts for SM. This work culminated in status quo and draft Urban Development Strategy (UDS) documents during 2017.
- An analysis and synthesis of the rural areas of Stellenbosch Municipality with a view to prepare a Rural Area Plan (RAP).
- Draft heritage surveys and inventories of largescale landscape areas in the rural domain of the municipality informing proposed heritage areas (complementing previous inventory work completed for urban areas).
- Area-based planning investigations for parts of the municipality, notably Stellenbosch town, Klapmuts, and the area north of Kayamandi.
- In parallel to MSDF work, considerable progress has been made, in collaboration with the Western Cape Government through application of the Provincial Sustainable Transport Programme (PSTP), with developing a strategy for sustainable transport planning, infrastructure provision, and management in Stellenbosch.
- In preparing the current MSDF, previous studies, policy documents, and plans have been considered.

2.2.1 STATUS QUO, ISSUES, CHALLENGES AND OPPORTUNITIES

The sections below outline the status quo in SM in relation to the themes identified in the SPLUMA guidelines and identifies specific challenges and opportunities informing the MSDF.

2.2.1.1 Built Environment Context

The challenges face the built environment of the SM have been documented in a variety of sector plans prepared by the municipality, including a Water Master Plan (2011) and (2017), a Stormwater Masterplan (2013), a Sewer Master Plan (2017), a Comprehensive Integrated Transport Plan 2016-2020.

(2016), an Electrical Infrastructure Master Plan (2015) as well as area-specific plans such as the Klapmuts Special Area Development Plan (2017); and the draft UDS (dated 2017), and draft Stellenbosch Municipality Rural Area Plan (2017), the RAP and previous MSDFs. The table below provides a summary of the issues and challenges of relevance to the MSDF.

Attributes

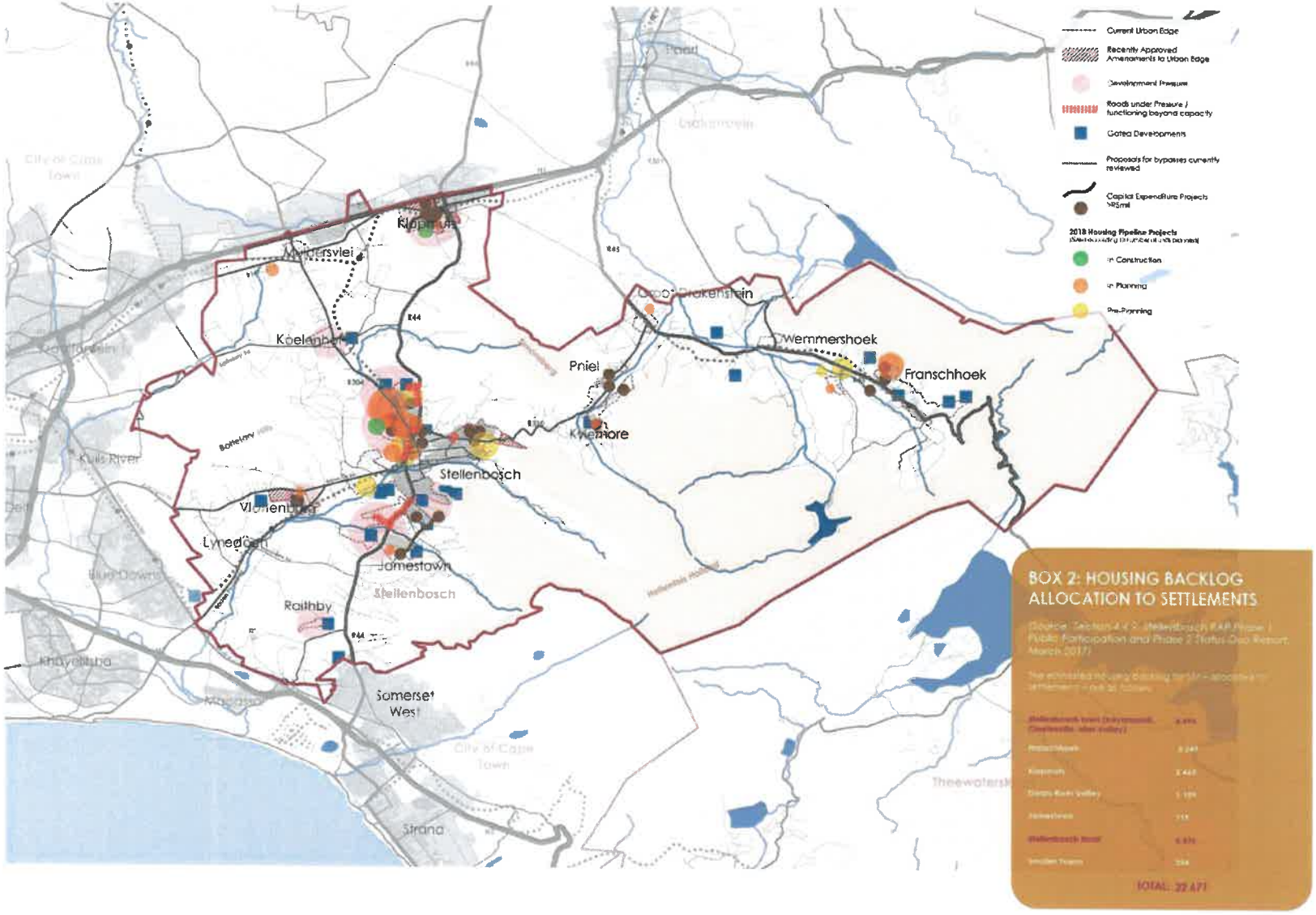
Table 2.1: Stellenbosch's Built Environment context - key attributes summarised.

THEME	ATTRIBUTES	
Settlement Pattern and Role	• Stellenbosch town remains the most significant settlement within SM, followed by Klapmuts, • Franschhoek, and a number of smaller dispersed settlements	
Rural Settlement	• There is a backlog of over 3 000 housing opportunities in rural areas (based on information from the Draft Rural Plan).	
Land Use and Density	• Dwelling densities have increased in Stellenbosch town, Klapmuts and Franschhoek but are still significantly lower than the targeted density set in planning policy and studies of 25 du/ha. • In 2015 the average density in Stellenbosch was 8,17 dwelling units per hectare, with Franschhoek only slightly higher at 10,22 units and Klapmuts falling between these two at 9,94 (densities vary significantly between neighbourhoods within settlements). • In the municipal area, the split in housing typology between 1996 and 2015 is: dwelling houses (74%), flats (17%), other residential buildings (6%), and townhouses (3%).	• The office development market in the municipal area has been relatively flat over recent years compared to the highs of 2005-2010. • The retail property development market in the municipal area is highly sporadic in nature with several spikes in building activity interspersed with short- to medium-term troughs. • Trends in the industrial property development market in the municipal area are hard to discern, with some years showing a substantial spike in building activity compared to previous years and other years showing very little (or no) building activity.
Regional Infrastructure	• Plans to upgrade various regional mobility routes (R44, R310 and R304) are likely to improve regional mobility. However, the impact of these at a local level are likely to be minimal without targeted interventions to resolve local congestion.	• Regional water supply remains constrained; however, recent rains and major augmentation schemes being implemented by national and provincial departments are likely to improve the security of supply over the medium term.
Facilities and Social Services	• There appears to be an adequate number of facilities within reach of the majority of households to meet the educational and health care needs of SM, but challenges relate to operational and household affordability as well as the capacity of these facilities (e.g., overcrowded schools in poorer neighbourhoods)	
Municipal Infrastructure	• SM's water is of good quality and complies with National Standards. • The SM has been replacing old water meters on an ongoing basis. Systems have been upgraded to address the accuracy of data readings. • The SM faces capacity problems at various wastewater treatment works. Various projects have commenced to undertake expansion and rehabilitation works. • 97% of households in SM have access to sanitation services above the minimum service levels. • SM is highly dependent on the CCT for water security, with most of the towns making up SM having a supplementary supply from the City. In the light of the projected growth of Stellenbosch, this is not viewed as a sustainable situation.	• SM's significant challenges are the augmentation of existing water sources, the replacement and upgrading of old infrastructure, the provision of sustainable basic services to informal settlements and to ensure the provision of basic services to rural communities located on farms. • According to the Electrical Infrastructure Master Plan (2015), the overall condition of the existing infrastructure is good given the age of the equipment. On the whole the electrical network is fairly robust, and should support future developments, provided timeous upgrades are implemented as outlined in the Master Plan. • The stormwater infrastructure is in a good condition, with a few exceptions where localized upgrading is required.

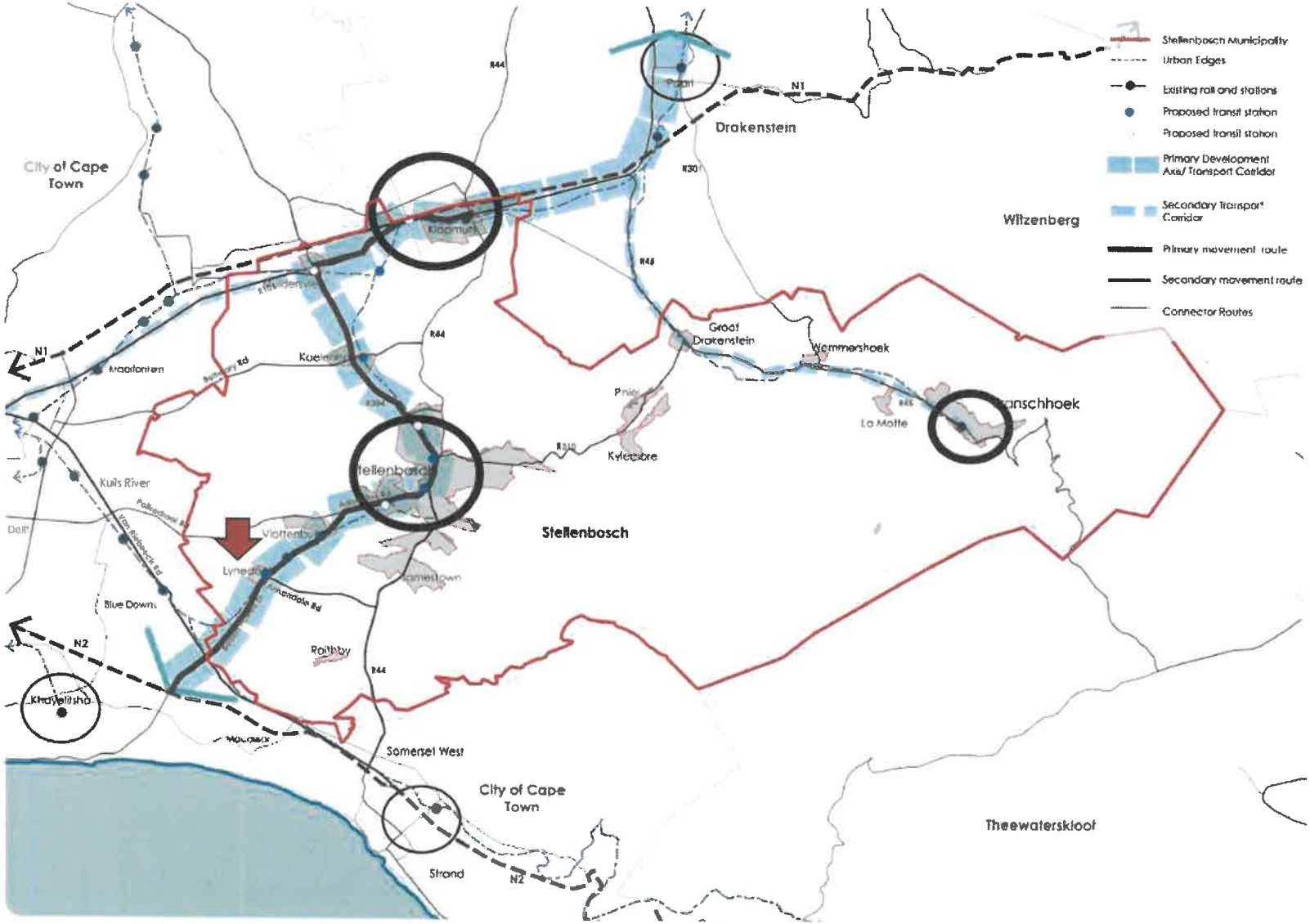
THEME	ATTRIBUTES	
	• The Devon Valley landfill site has a remaining life of less than two years.	
Service-Related Protests	• Service-related protests and land invasions occur intermittently.	
Municipal Land Ownership	• A total of 40.4% or 33 544ha of the land in SM is owned by either government or Municipality. • The rest of the land, approximately 50 316ha, is privately owned.	• The SM owns 4 219.4ha of urban and rural land spread out in fragments across the entire municipal area. The tradability of this land is by choice, low as the Municipality prefers long-term lease agreements as contractual arrangements with third parties rather than selling outright. Arguably, this is one of the reason ns why house prices are so high in Stellenbosch town. The supply side is artificially constrained.
Housing and Shelter	• The percentage of households in formal housing has decreased from 75,1% in 2011 to 65,1%, illustrating the difficulty keeping pace with housing demand of the growing number of lower income households. • The current housing demand waiting list comprise some 15 780 applicants (Western Cape Housing Demand Database extract for Stellenbosch, May 2018). • The middle to high income housing demand was projected to be 1 850 units in 2016 (Urban Econ's Stellenbosch Market Assessment, 2016). • The student accommodation demand was recorded as 4 200 beds in 2016 (Urban Econ's Stellenbosch Market Assessment, 2016). • Cloetesville, Idas Valley, Kayamandi, and Jamestown; all within a 5km of radius of Central Stellenbosch make up 45% (7 035) of the SM's total BNG housing need. • Neither Idas Valley, Cloetesville, nor Kayamandi, have extensive land options to accommodate the current demand.	• 74% (11 615) of the applicants has been on the waiting list for longer than 10 years, 24% (3 818) of which are currently on the waiting list for more than 20 years. Cloetesville (84%), and Idas Valley (88%) have the highest proportion of applicants on the waiting list for 10 years or more. • Given the current profile of those on the waiting list for less than 10 years, it is evident that housing demand will be driven by applicants from Klapmuts and Kayamandi. • Those older than 40 years and on the waiting list for more than 10 years make up 8 390 (53%) of all applicants. More than 50% of Kylemore/ Pniel, Jamestown, Idas Valley and Franschhoek's housing demand have applicants that are older than 40 years and have been on the waiting list for more than 10 years. • The rate of housing delivery during the current MTREF period (466 units) and post the current MTREF period (8166) is not meeting demand. The housing backlog will thus increase, as well as the number of informally housed households.
LUM Trends	• Almost 70% of all recently submitted strategic land-development applications had a peripheral location (i.e., contributing to urban sprawl with associated costs), and even more (89%) of these applications were greenfields developments.	• A very high number (55%) of all land-development applications submitted to SM between 2007 and 2015, were for (or included) a permanent departure. This is evidence of a changing pattern in the use of land that is not yet accommodated in zoning schemes. • Only about 25% of all land-development applications submitted to SM pertains to rural land.
Large Land User Trends	• Distell – owner and user of the Adam Tas and Bergkelder land holdings – intends to relocate its operations to a centralized facility in Klapmuts (north of the N1).	
Property Market	• Considering all house-price bands in the urban areas, the mean and median values increased significantly in almost all areas between 2012 and 2016. The value increase of full-title and sectional-title properties combined in the urban areas was 47%, which equals an annual compound growth of 10%. • Between 2008 and 2017, nominal full-title property rentals in Stellenbosch town showed growth of roughly 8,1% per annum while sectional-title property rentals grew by about 10,5% per annum.	• Over the same period, building costs (as measured by the CPI) showed growth of roughly 6% p.a. This implies that over the past eight years residential rentals in Stellenbosch were able to grow in real terms.

THEME	ATTRIBUTES	
Movement and Access	• The Municipality contains 312km of roads and an additional 35km of roads which are 80/20 subsided by the Province. • Around 6km of the roads have block pavement surfacing, 11km of the roads are unpaved roads and most are paved roads with bituminous, flexible pavement surfacing. • Around 80% of the roads are Class 5 Access roads with the balance being Class 4 Collectors, with a few Class 3 roads mainly in the 80/20 Provincial subsidy category. • Road network condition assessments show an improvement in the overall condition of the SM's Road network over the last 12 years. The latest Road Asset Management Plan indicates that around 7km (2.5%) of the roads in SM are in poor or very poor condition. • The current modal split in SM is as follows: light vehicles: 87%; minibus taxis: 7,5%; bus: 4,5%; heavy vehicles: 1,5% (rail information is not available in the RMP). • Approximately 12% of all traffic within the SM are buses and mini-bus taxis (low compared to CCT with approximately 36% public transport usage). • The RMP found that the present road network – particularly provincial roads – fails to cope with the longer-term growth needs of the Stellenbosch area and some roads, particularly in the historic town area, may in future operate at capacity during peak periods (unless modal shift changes). • The RMP found that the following road sections function beyond capacity: The R304 before its intersection with the R44; The R44 (south) between Paradyskloof and the Van Reede intersection; Bird Street between the R44 and Du Toit Street; Merriman and Cluver Streets between Bird Street and Helshoogte Road; Dorp Street between the R44 and Piet Retief Street; Adam Tas Road between its junction with the R44 and Merriman Street.Piet Retief Street; Van Reede and Vrede Streets between the R44 and Piet Retief Street. • Access roads found to be under severe pressure are: The Welgevonden access road; Lang Street into Cloetesville; Rustenburg Road into Idas Valley; The Techno Park access road. • 60% of SM's households do not have access to a car and are dependent on unsupported informal public transport or travel on foot.	• Some 3 200 persons travel into town during the highest peak hour, if assumed 1 person per vehicle and no buses or taxis. • 70% of all trips entering Stellenbosch town are by private car. There is worsening peak period congestion, with average traffic speeds pushed down to 13km/h (below cycling speed) and a throughput per lane of only 600 persons per hour due to the very low vehicle occupancies. • Local (<5km) peak period person trips within the town of Stellenbosch total twice the number of longer distance (>5km) passenger commute trips. • Approximately 80% of the workforce employed in the municipal area live in the town of Stellenbosch and make trips of less than 5km in distance. • 95% of all NMT trips within the Stellenbosch town are made by low income residents. • Over 80% of all local trips by choice-user are made by car. • A bypass tying in with the R44 in the vicinity of the Annandale Road in the south and with the R304 in the vicinity of the Welgevonden Road intersection in the north is under investigation. The route is envisaged as a dual carriageway, over a distance of ±14 km, with no direct property access and grade separated intersections (interchanges). However, this proposal appears to have no official status. • Scheduled passenger trains in the Stellenbosch area run over a total rail line distance of 18 km, and trains stop at seven stations in the municipal area (Lynedoch, Spier, Vlottenburg, Stellenbosch town, Koelenhof, Muldersvlei and Klapmuts). Franschhoek, La Motte and • Wemmershoek are alongside the Franschhoek line which is no longer in operation). • Public bus services are limited. There are 28 scholar bus contracts within the Municipality, transporting up to 4 263 scholars. • According to the Transport Register there are 43 routes operated by mini-bus taxis. Currently, 114 mini-bus taxis have been surveyed and 157 operating licences have been issued. The majority of routes are operating at above 75% service capacity.

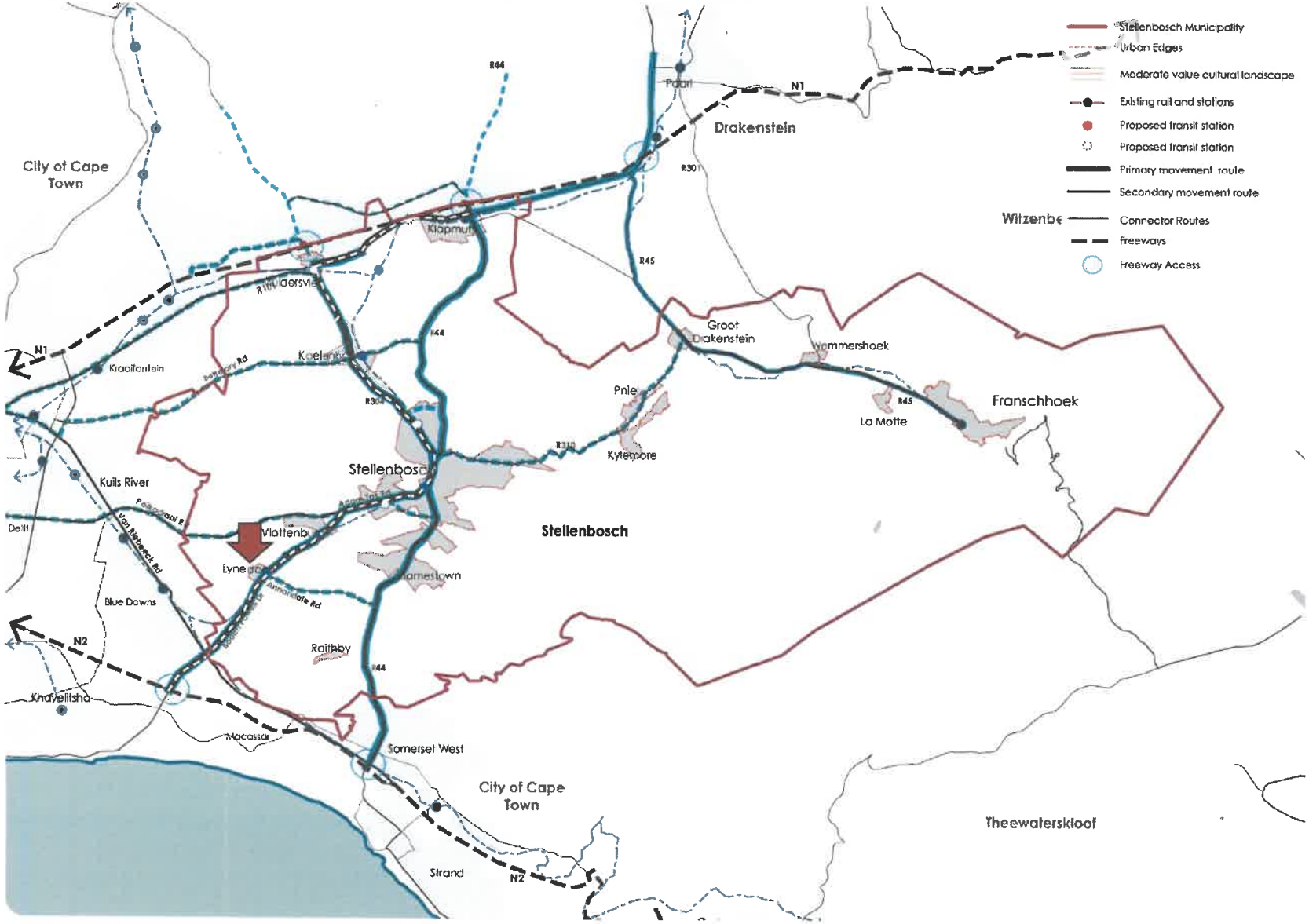
Map 2.3: Housing and development trends, bypasses and gated communities



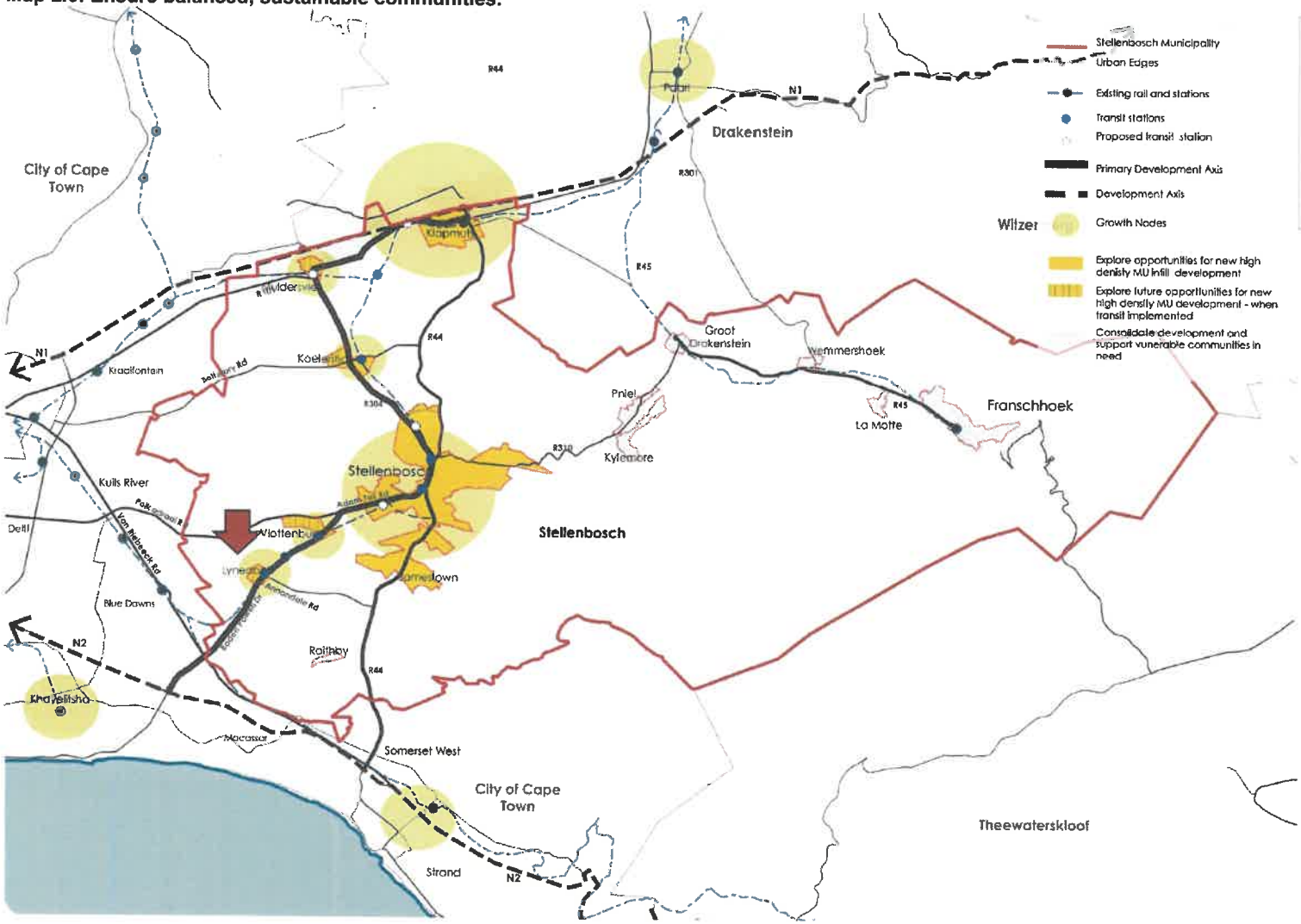
Map 2.4: Direct growth to areas of lesser natural and cultural significance as well as movement opportunity



Map 2.5: Clarify and respect the roles and functions of different elements of movement structure



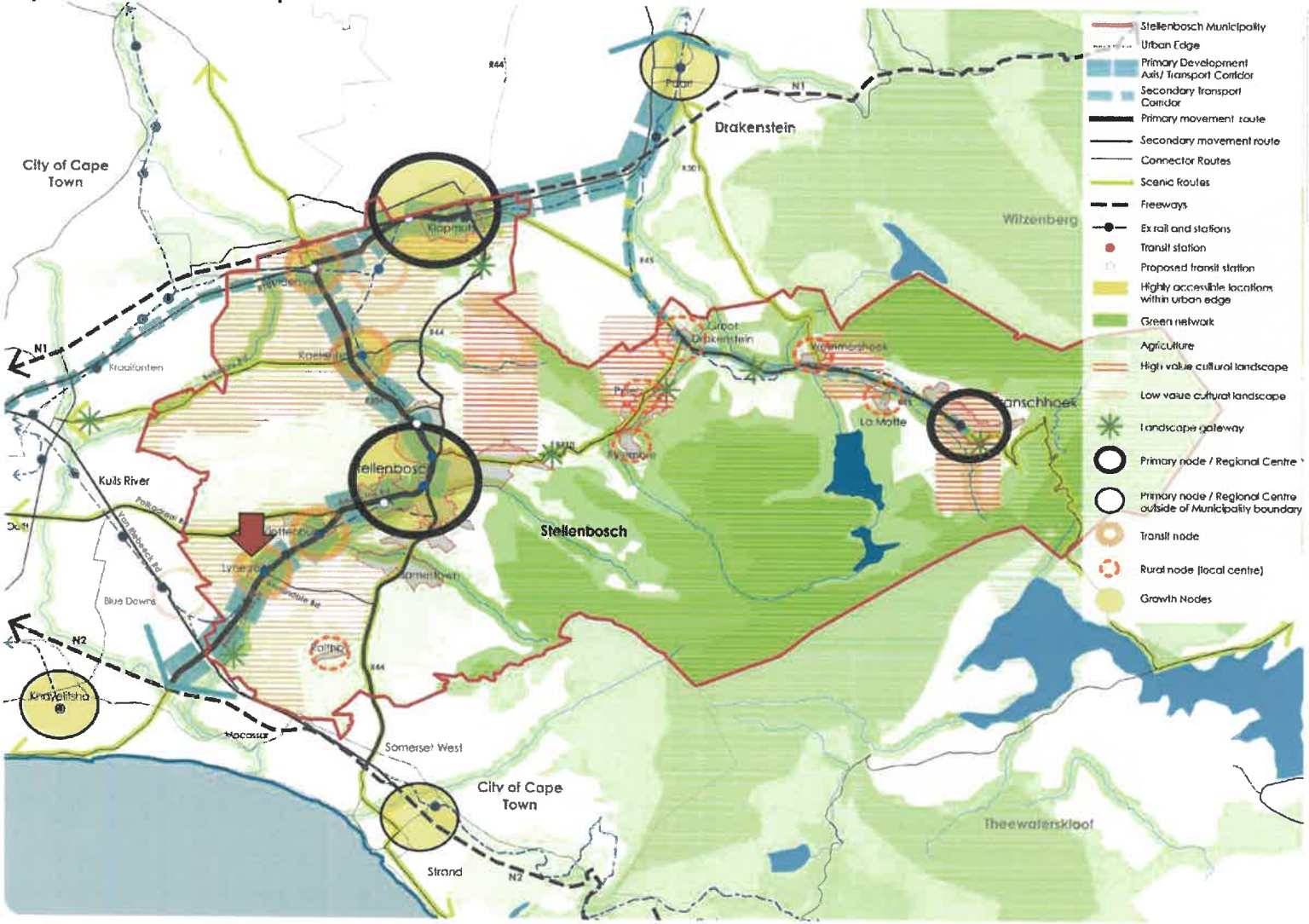
Map 2.6: Ensure balanced, sustainable communities.



Lynedoch is identified as:

- A **growth node**
- Opportunities for a new high density MU infill development.
- Future opportunities for new high-density MU – when transit implemented.

Map 2.7: Consolidated Concept



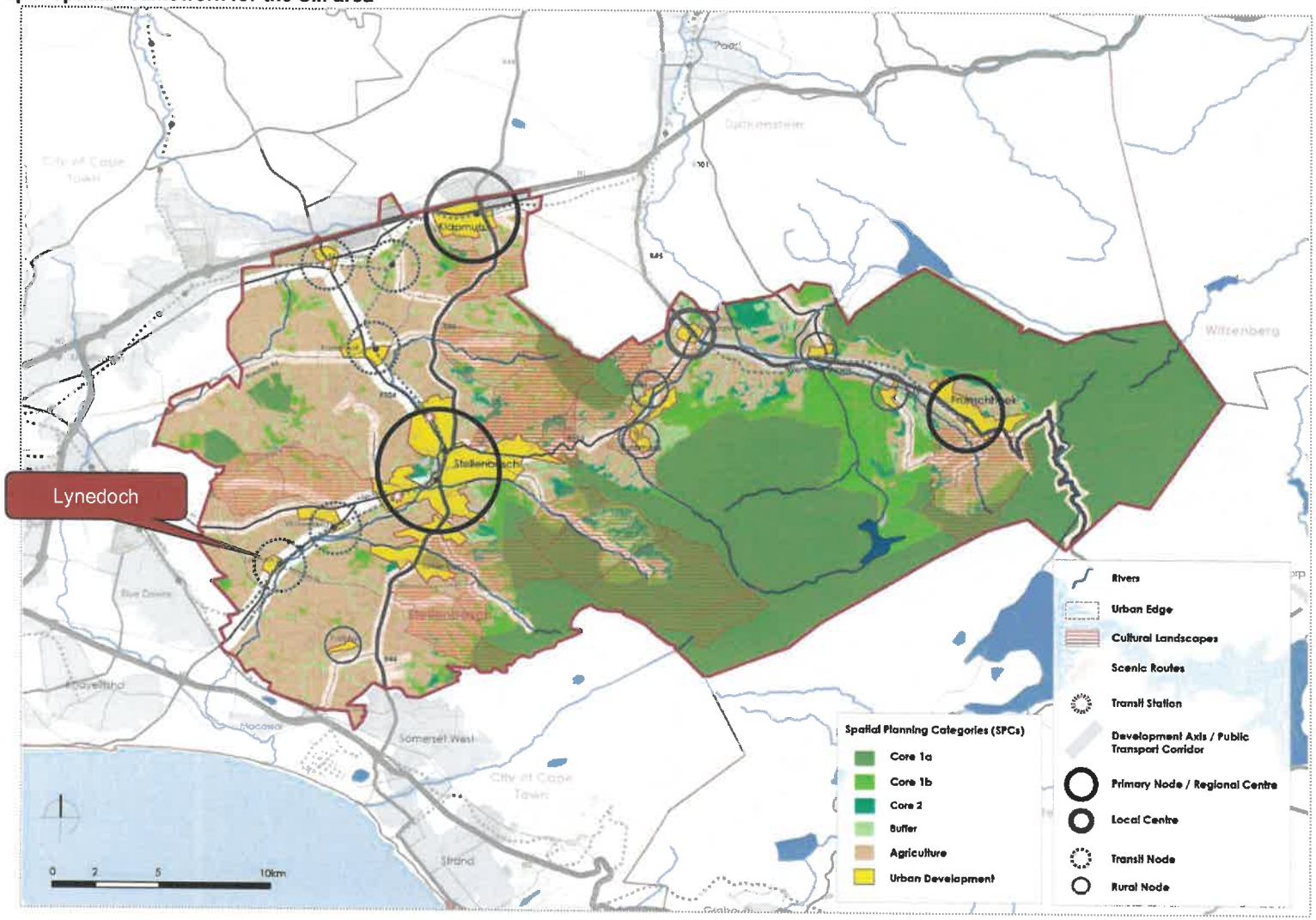
In terms of the consolidated concept, Lynedoch is:

- A primary development axis / transport corridor
- A **transit node,**
- A **growth node**
- **Highly accessible** location within the urban edge

2.2.2 PLANS AND SETTLEMENT PROPOSALS

The Stellenbosch Municipal Area as a Whole

Map 2.8: Municipal Spatial Framework for the SM area



The following table provides new projects / developments for **Stellenbosch Municipality**

Table 2.2: Plan Elements and Proposals for the Stellenbosch Municipality as a whole

New Development Actions	• Significant new mixed-use development	• Actively support the Adam Tas Corridor within Stellenbosch town for new mixed-use development. • Support the development of a "innovation precinct" or "smart city" in Klapmuts South.	• Support private sector led institutional arrangements to enable joint planning and redevelopment. • Support redevelopment by making available government land assets.
	• Significant new industrial development	• Actively support the development of Klapmuts North for industries and employment generating enterprises related to manufacturing, logistics, and warehousing.	• Support private sector led institutional arrangements to enable joint planning and development.
	• Significant new residential development	• Explore the feasibility and pre-conditions of Muldersvlei/ Koelenhof and Vlottenburg/ Lynedoch to be developed as more significant, inclusive settlements over the longer term (subject to the availability of public transport).	• Support private sector led institutional arrangements to enable joint planning and development.
	• Significant change to access and mobility provision	• Explore the feasibility of changing/ complementing the rail service along the Baden Powell Drive-Adam Tas-R304 corridor to a system providing a more frequent, flexible service better integrated into the urban realm. Alternatively, a regular bus service should be explored serving the same route.	• Support private sector led institutional arrangements to enable joint planning and unlocking of the opportunity.

Table 2.3: Plan Elements and Proposals for Koelenhof - Muldersvlei

New Development Actions	• Significant new mixed-use development • Significant new industrial development • Significant new residential development	• Over the longer term, Muldersvlei and Koelenhof along the R304 corridor could possibly accommodate more growth and be established as inclusive settlements offering a range of opportunities. However, these settlements are not prioritized for development at this stage. • Explore the feasibility of changing/ complementing the rail service along the Baden Powell Drive-Adam Tas-R304 corridor to a system providing a more frequent, flexible service better integrated into the urban realm. Alternatively, a regular bus service should be explored serving the same route. • Explore the development of De Novo as an emerging farmer incubator.	• Support private sector led institutional arrangements to enable joint planning and development.

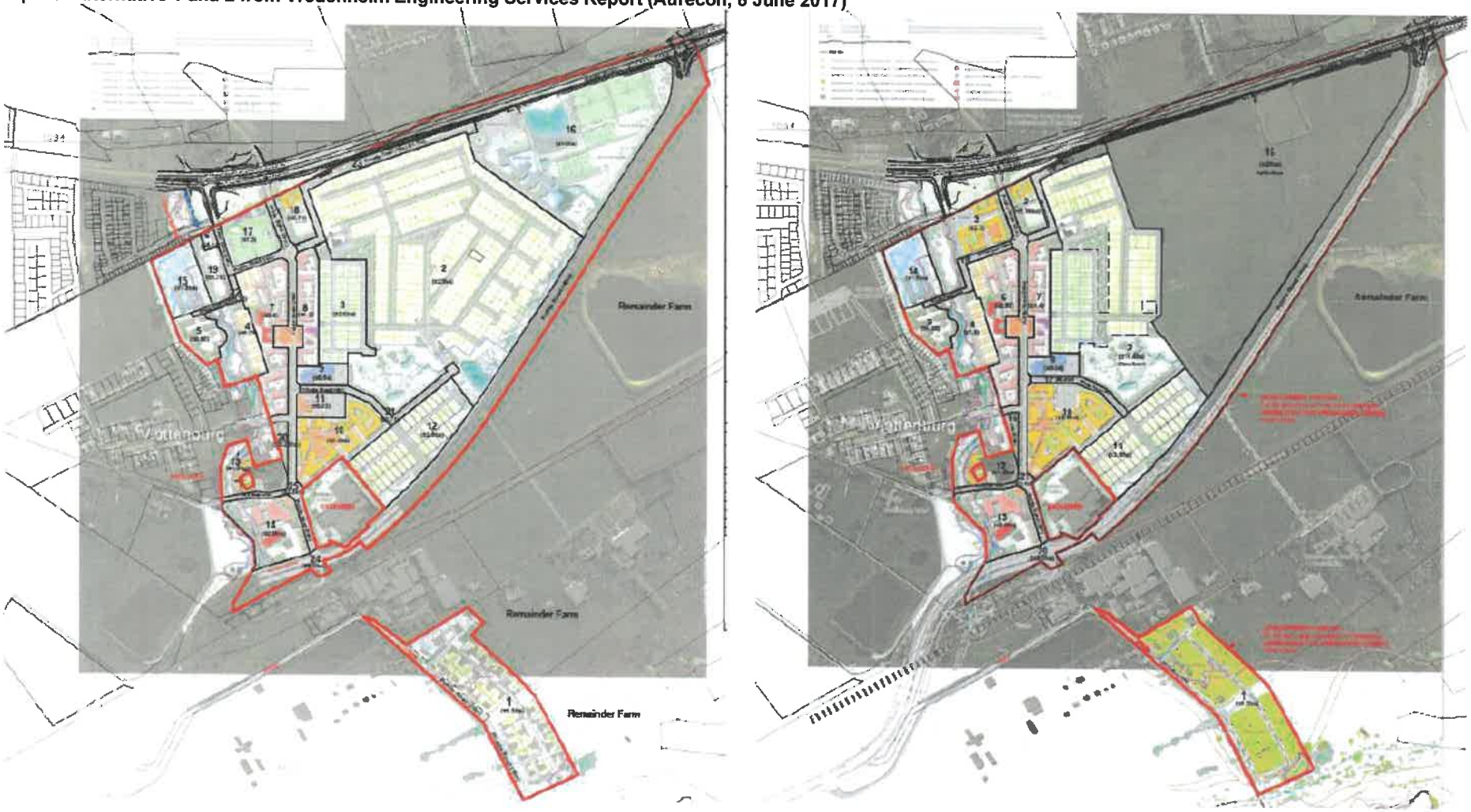
SMALL SETTLEMENTS ALONG BADEN POWELL DRIVE

❖ Vlottenburg

Vlottenburg is located approximately five km west of Stellenbosch town. Starting off as a processing node with Van Ryn Brandy Cellar and the Vlottenburg Winery, it steadily grew as a small residential node for a variety of income groups. The previous MSDF identified the area as a location for development of a structured village node. The development consortium's preferred village layout of some 77ha includes 375 single residential units, 90 townhouses, 343 walk-up apartments, 97 mixed use flats/ apartments a retail centre of 5 000m², hotel school, medical centre, mixed use buildings, hotel and conference facility, education facilities (including a private school), sports fields and private open space. A revised layout was prepared (and incorporated in the final EIA report) in response to comments received on the draft EIA report regarding the scale of the proposed development, and a proposal to amend the urban edge of Vlottenburg. The revised layout comprises a smaller overall

development footprint (52ha), includes most of the preferred layout, but with fewer single residential units, more mixed use flats/ apartments, and excludes the 5 000m² shops/ business premise, private school and the community sports field and clubhouse. In principle, it is believed that a structured village could be supported at Vlottenburg. It should, however, be inclusive in the opportunity provided, including a full range of housing types and local services. Critically, it should not proceed unless a more frequent, flexible public transport service can be provided along the Baden Powell-Adam Tas corridor.

Map 2.9: Alternative 1 and 2 from Vredenheim Engineering Services Report (Aurecon, 8 June 2017)

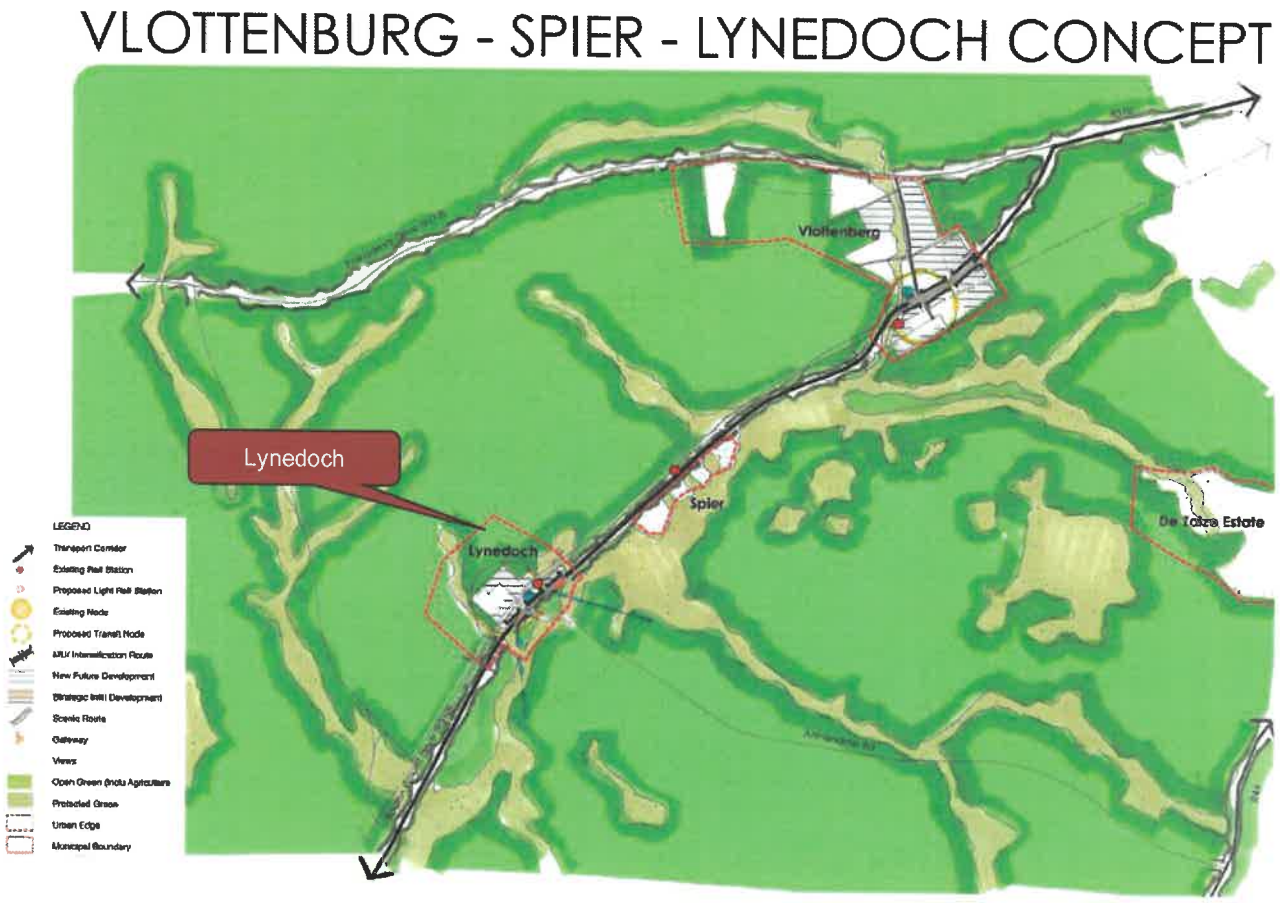


❖ **Spier**

The village at Spier, abutting the R310, is part of the 620ha historic Spier Farm. Housing a 150-room hotel, conference centre, restaurants, and winery, the village component has become a centre for the arts, recreation, and tourist destination. Sustainability is of key importance to the entire farm operation, and active programs are in place to maintain the environment and associated communities.

❖ **Lynedoch**

Lynedoch is a unique settlement – named Lynedoch Eco Village – situated halfway between Khayalitsha and Stellenbosch on the R310 and at the intersection of the R310 and Annandale Road. The village is home to the Sustainability Institute, which offers a number of degree and other education and training programmes in partnership with the University of Stellenbosch and other organisations, a number of schools, guest facility, and residences.



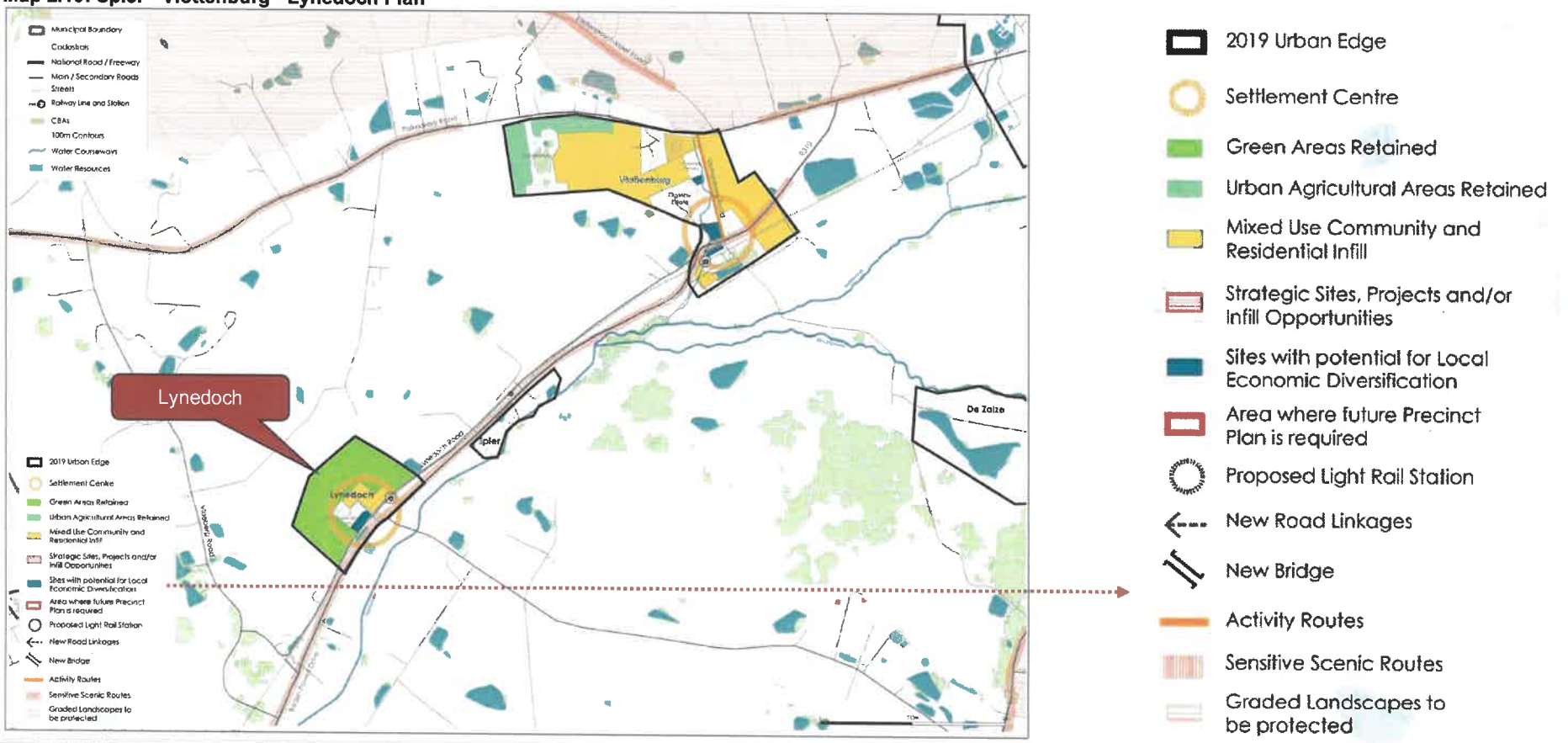
Development commenced almost 20 years ago, managed by a non-profit company called the Lynedoch Development Company (LDC). International and local development aid funders and local banks assisted to fund the development. Technical and institutional arrangements and procedures for the development of the village were structured to meet ecological, social and economic sustainability. The Lynedoch Homeowners Association (LHOA) was established to take primary responsibility for service delivery.

Achieving social inclusivity remains a key aim. The Constitution of the LHOA imposes on all homeowners severe restrictions on resale by making it compulsory that any seller of any property must first offer the property to the LHOA and only then offer it to a third party at a price that is not lower than the price proposed to the LHOA.

Table 2.4: Plan Elements and Proposals for Vlottenburg – Spier - Lynedoch

New Development Actions	• Significant new mixed-use development • Significant new residential development • Significant change to access and mobility provision	• Over the longer term, Vlottenburg, Spier, and Lynedoch along the Baden Powell-Adam Tas-R304 corridor could possibly accommodate more growth and be established as inclusive settlements offering a range of opportunities. However, these settlements are not prioritized for development at this stage. • Explore the feasibility of changing/ complementing the rail service along the Baden Powell Drive-Adam Tas-R304 corridor to a system providing a more frequent, flexible service better integrated into the urban realm. Alternatively, a regular bus service should be explored serving the same route.	• Support private sector led institutional arrangements to enable joint planning and development.

Map 2.10: Spier - Vlottenburg - Lynedoch Plan

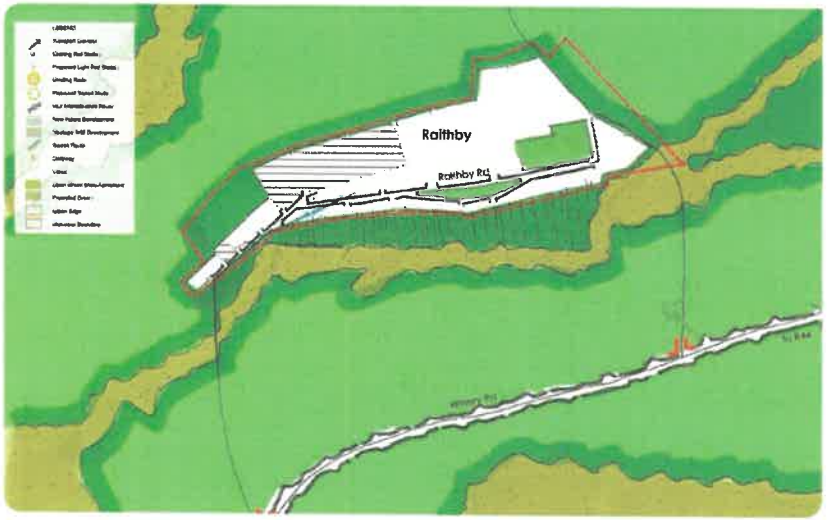


RAITHBY

Raithby is a small rural settlement, situated in the heart of the agricultural area roughly defined by the R310, R44, Old Main Road to the west, Main Road through Firgrove, and Helderberg Village to the south. Access to the village is via Raithby Road, which intersects with Winery Road, in turn providing access to Old Main Road and the R44 (some 1,25km from the village).

Raithby is regarded as the settlement within the Municipality that most strongly retains its characteristic 19th century Mission Town structure and pattern. Raithby Road runs parallel to the river course, with long, narrow "water erf" plots still occupying the space between them. Houses are set hard up against Raithby Road (and Hendricks Street, which encircles the commonage) and their back gardens are open, cultivated areas leading down to the stream. A steep rise beyond the stream course creates a green, cultivated and agricultural backdrop against which the garden allotments are viewed. The two key institutional buildings are located above Raithby Road: the Methodist Church and the school. These are set against the gentle rise of the hill beyond. Between these buildings and the houses is the commonage, which is an open area where the community can literally, and spatially, "come together".

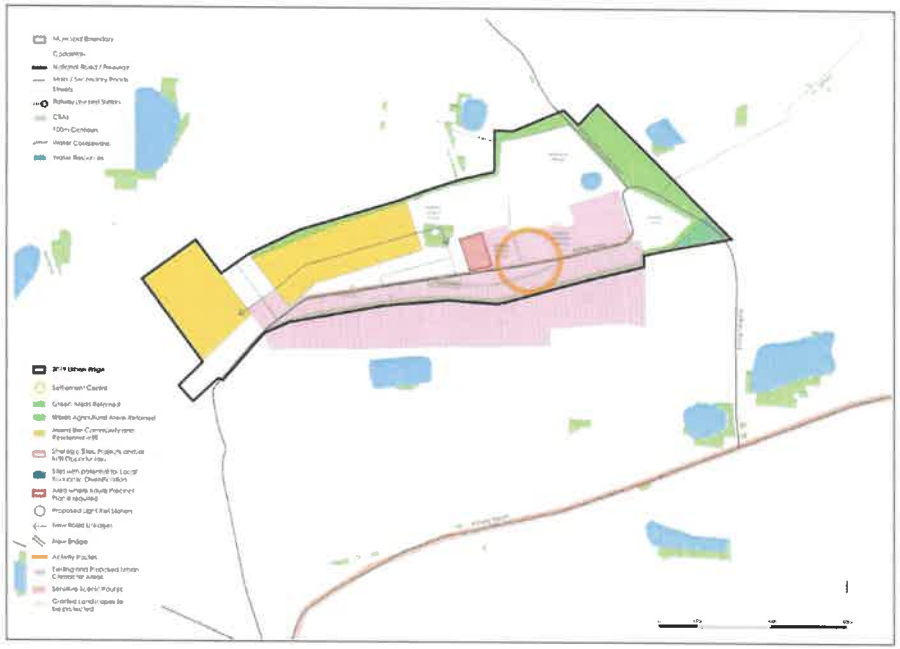
RAITHBY CONCEPT



The Municipal Zoning Scheme contains an overlay zoned, framed to protect the historical significance of the remaining water erven and environs. Since 2009, a single development entity has assembled some 650ha of farmland to the east and south of Raithby (up to the CCT waterworks facility and Helderberg Village) with a stated view to strengthen agriculture, the tourism and hospitality industry, and engineering services, and enable mixed use development. Clearly, there is intent to undertake significant development into the future.

However, there appears no justification for significant change to current municipal spatial planning in response to the land acquisition initiative. The focus of the MSDF is to retain the unique characteristics of the settlement.

Map 2.11: Raithby Concept



2.2.3 IMPLEMENTATION FRAMEWORK

2.2.3.1 Proposed Settlement Hierarchy

The proposed settlement hierarchy for SM, supporting the spatial plan and proposals for the settlement as a whole, is outlined in the Table below.

2.2.3.2 Priority Development Areas and Trends

Spatial areas for priority development over the MSDF planning period are:

- Stellenbosch town.
- Klapmuts.

Over the longer term, Muldersvlei/ Koelenhof and Vlottenburg/ Lynedoch along the Baden Powell-Adam Tas-R304 could possibly accommodate more growth and be established as inclusive settlements offering a range of opportunities.

However, much work needs to be done to ensure the appropriate make-up of these settlements (including each providing opportunity for a range of income groups) and integration with the corridor in terms of public transport. They are therefore not prioritised for significant development over the MSDF period. Should significant development be enabled in these areas now, it is likely to be focused on private vehicular use and higher income groups (in gated developments) and will in all probability reduce the potential of initiatives to transform Stellenbosch town and Klapmuts.

Table 2.5: Proposed Settlement Hierarchy

SETTLEMENT	ROLE	DEVELOPMENT AND LAND USE MANAGEMENT FOCUS
PRIMARY SETTLEMENTS		
Stellenbosch Town	• A significant centre comprising extensive education, commercial and government services with a reach both locally and beyond the borders of the municipality, tourism attractions, places of residence, and associated community facilities.	• Broadening of residential opportunity for lower income groups, students, and the lower to middle housing market segments. • Upgrade of informal settlements. • Retention of University functions in town. • Enablement of the Adam Tas Corridor. • Sensitive residential infill and compaction. • Drive to established "balanced" precincts (e.g., Techno Park). • Public transport development, travel demand management, parking controls, and NMT improvements.
Klapmuts	• Focus for economic development (utilizing a favourable location for manufacturing, logistics, and warehousing enterprises) and associated residential opportunity.	• Support for development of RE/Farm 736 as a lever to economic development utilising a favourable location for manufacturing, logistics, and warehousing enterprises. • Balanced housing provision in Klapmuts South, focused on those who can benefit from employment provision. • through unlocking Klapmuts North. • Establishing the Klapmuts town centre. • NMT improvements.
Franschhoek	• Secondary service centre, significant tourist destination, and place of residence.	• Upgrade of informal settlements • NMT improvements.

SETTLEMENT	ROLE	DEVELOPMENT AND LAND USE MANAGEMENT FOCUS
		• Sensitive infill within urban edge providing inclusive housing and extended commercial opportunity (also for small and emerging entrepreneurs). • Retention of historic character.
SECONDARY SETTLEMENTS		
La Motte	• Contained rural settlement	• Diversification of existing activities to curtail the need for movement. • Sensitive location of diversified uses closer to the R45. • Limited further housing development.
Wemmershoek	• Contained rural settlement	• Possible extension of residential opportunity linked to re-use of saw-mill site and local employment opportunity.
Groot Drakenstein	• Contained historic rural settlements	• Accommodation of sensitive private and public sector initiatives offering expanded livelihood (including • tourism) and residential opportunity.
Dwars River Valley	• Contained historic rural settlements	• Accommodation of sensitive private and public sector initiatives offering expanded livelihood (including • tourism) and residential opportunity.
Jonkershoek	• Contained, but dispersed collection of institutional, recreational and residential uses.	• Rationalisation and containment of existing occupation rights.
Muldersvlei	• Contained rural settlement	• Potential future consolidated, inclusive settlement linked to rail/ bus.
Koelenhof	• Contained rural settlement	• Potential future consolidated, inclusive settlement linked to rail/ bus.
Vlottenburg	• Contained rural settlement	• Potential future consolidated, inclusive settlement linked to rail/ bus.
Lynedoch	• Contained village and institutional cluster	• Gradual expansion of unique development model focused on sustainable living and education.
Spier	• Contained tourism and cultural centre	• Containment and limited expansion of existing offering.
Raithby	• Contained historic rural settlement	• Protection of unique historic settlement structure and form.

2.2.4 IMPLICATIONS FOR SECTOR PLANNING AND SPECIFIC DEVELOPMENT THEMES

2.2.4.1 Housing

In broad terms, the MSDF has the following implications for housing planning and delivery:

- ✓ ***Stellenbosch town and Klapmuts*** should be the focus for accommodating significant new growth over the short to medium term. It is in these towns where livelihood opportunities can be best assured and where people can best be accommodated without resulting in significant movement of residents in search of work and other opportunities.
- ✓ The housing focus in other settlements should primarily be to improve conditions for existing citizens, specifically those in informal settlements, backyard structures, and those lacking security of tenure.
- ✓ Over the longer term, it is believed that some settlements along the Baden-Powell-Adam Tas-R304 corridor can support larger populations, particularly the broader Muldersvlei/ Koelenhof and Vlottenburg/ Spier/**Lynedoch** areas.
- ✓ A critical pre-condition for larger inclusive settlements in these areas is the establishment of a quality, frequent public transport service (in time possibly rail-based) serving the corridor and all settlements along it.
- ✓ In all settlements housing development should focus – while considering the unique character and nature of existing areas – on densification, infill opportunity (also rationalizing and improving edge conditions to roads, open spaces, and community facilities), and the reuse of disused precincts, in this way maximizing the use of available land resources, minimizing pressure for the lateral expansion of settlements, enabling efficient service provision, and the viability of undertaking trips by local public transport, cycling and walking.
- ✓ All housing projects should – as far as possible – focus on a range of typologies, enabling access for a range of income groups.
- ✓ All housing projects should consider the availability of social facilities and the daily retail needs (e.g. for purchasing food stuffs) of residents, enabling less dependence on the need to move other than by walking and cycling to satisfy everyday needs.
- ✓ As far as possible, sufficient accommodation should be provided associated with education institutions in Stellenbosch town to enable all those who wish to reside in proximity to their institutions, at a reasonable cost, the opportunity to do so.
- ✓ Farmers should be actively supported to provide Agri-worker housing (following the guidelines contained in "Western Cape Land Use Planning: Rural Guidelines").
- ✓ Gated residential development is not favoured. Public components of development should remain public, enabling integration of neighbourhoods and through movement. Security to private components of developments could be provided through other means than the fencing and access control of large development blocks or areas neighbourhoods.

2.3 STELLENBOSCH INTEGRATED DEVELOPMENT PLAN, 2022 - 2027[1]

Stellenbosch Municipality is located at the edge of the City of Cape Town but still manages to retain its distinct small-town character. This undoubtedly gives Stellenbosch a strong competitive advantage – sharply contrasting with similarly sized towns located 400 km or more from the nearest metropolis.

Aside from being a mere 50 km from Cape Town's central business district (CBD) and being flanked by the N1 and N2 main routes, Stellenbosch is also just 30 km away from the sea (at Somerset West/Strand) and only a few kilometres away from one of the most attractive mountain ranges of the Boland. In addition, Stellenbosch is a mere 28 km from Cape Town International Airport, one of South Africa's top (air) links to the global economy, and not much further away from Cape Town harbour, the shipping portal to both the Atlantic and the Indian Oceans.

This convergence of environmental resources, scenic quality and business opportunities has two mutually reinforcing spin-offs: (1) The largest number of JSE-listed companies based in any small South African town have their headquarters in Stellenbosch and the town is home to a disproportionately high number of corporate CEOs and executives, which in turn means (2) that it can sustain a comparatively high level of economic activity and consumer services for a town of its size. This results in other benefits throughout the value chain and in terms of employment.

[1] *Stellenbosch 5th Generation Integrated Development Plan, 2022 – 2027*

The Stellenbosch Municipality is currently structured into the following 23 wards. The proposed development site falls within ward 21.

2.3.1 HOUSEHOLD CONSIDERATIONS

Stellenbosch's population totals 196 036 persons in 2021, the second most populated municipal area in the Cape Winelands District (CWD). This total is expected to grow to 209 854 by 2025, equating to an average annual growth rate of 1.7% for the period. Stellenbosch has an ageing population. Between 2021 and 2025, the highest population growth is estimated for the aged cohort, with expected growth for the period reaching an average annual rate of 3.6%. This is more than double the growth of the working age cohort. The size of the aged cohort is however relatively small in comparison to the working age category. As such, the dependency ratio is expected to remain mostly unchanged between 2021 and 2025.

Amidst rapid urbanisation across the Western Cape, population density figures will require public sector decision-makers to mitigate environmental, health and service delivery risks. In 2021, the population density of the Cape Winelands District was 44 persons per square kilometre.

The various local municipal areas compare as follows:
- ✓ Witzenburg 14 people/km^2
- ✓ Drakenstein 192 people/km^2
- ✓ **Stellenbosch 236 people/km^2**
- ✓ Breede Valley 51 people/km^2
- ✓ Langeberg 27 people/km^2

2.3.2 HOUSING & HOUSEHOLD SERVICES

With a total of 50 328 households in the Stellenbosch municipal area, 72.7% had access to formal housing, the lowest access level when compared with other municipalities in the Cape Winelands DM; the Cape Winelands DM average was 80.8%. The Stellenbosch LM area also had the highest percentage of people living in informal settlements at 25.2%. In comparison, 17.4% of people across the Cape Winelands DM resided in informal settlements.

The number of households receiving free basic services in the Stellenbosch municipal area has shown an overall increasing trend between 2017 and 2019. The stressed economic conditions continue to exert pressure on household income levels, which in turn is likely to see the number of indigent households and the demand for free basic services increase.

The Provincial Department of Human Settlements (PDoHS) requires that every municipality must have a Housing Pipeline. The Housing Pipeline is premised on a ten-year horizon and serves as the planning and budgeting tool for the implementation of Human Settlements initiatives. Each municipality's Housing Pipeline is an integral component of the Department of Human Settlements' Business Plan.

The objective of the Housing Pipeline is to provide more emphasis on the following housing types or programmes:
- ✓ Social housing (the National Minister of Human Settlements approved Stellenbosch as a restructuring town and restructuring zones in November 2016);
- ✓ Provision of serviced sites;
- ✓ Access to affordable housing (GAP housing);
- ✓ Upgrading of Informal settlements; and
- ✓ Mixed-use housing (formalised homeownership employer housing - especially farmworker housing).

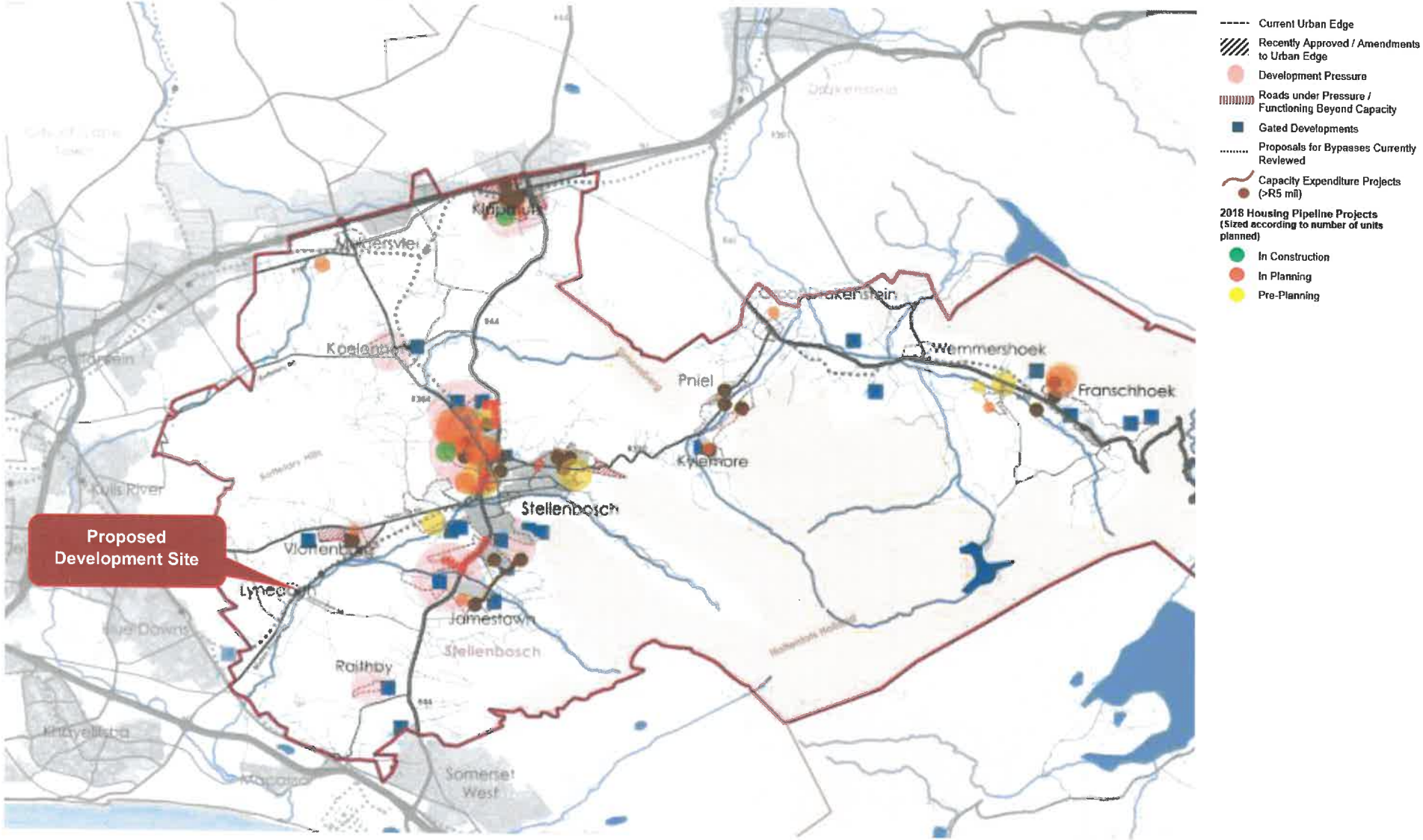
The estimated cost of this programme will be approximately R9.6 billion over 10 years:
- ✓ Upgrading of informal settlements, (La Rochelle, Klapmuts, Langrug and Franschhoek)
- ✓ Access to basic services (ABS)
- ✓ **Jamestown, Farm 527 (phases 2, 3 and 4)**
- ✓ Longlands Development
- ✓ Upgrading of Zone O
- ✓ Ida's Valley (Erf 9445 also known as Oak Tree Village) - A key aspect of this project was to utilise municipal land provided at a reduced cost for formal homeownership to cross-subsidise other housing types
- ✓ Enumeration of people on farms and backyarders
- ✓ Rectification of Cloetesville subsidy houses at The Steps and Orlean Lounge
- ✓ Erf 7001, Cloetesville (known as "Soek-mekaar")
- ✓ Upgrade of the Kayamandi CBD
- ✓ Northern extension.

Table 2.6: Stellenbosch's Built Environment Context – Key Attributes Summarised

Theme	Attributes
Rural Settlement	There is a backlog of over 3 000 housing opportunities in rural areas (based on information from the Draft Rural Plan)
Land Use and Density	• Dwelling densities have increased in Stellenbosch town, Klapmuts and Franschhoek but are still significantly lower than the targeted density set in planning policy and studies of 25 du/ha. • In 2015 the average density in Stellenbosch was 8,17 dwelling units per hectare, with Franschhoek only slightly higher at 10,22 units and Klapmuts falling between these two at 9,94 (densities vary significantly between neighbourhoods within settlements). • In the municipal area, the split in housing typology between 1996 and 2015 is: dwelling houses (74%), fats (17%), other residential buildings (6%), and townhouses (3%).
Municipal Land Ownership	A total of 40.4% (33 544 ha) of the land in Stellenbosch LM is owned by either government or Municipality. The rest of the land, approximately 50 316ha, is privately owned. The Stellenbosch LM owns 4 219.4ha of urban and rural land spread out in fragments across the entire municipal area. The tradability of this land is, by choice, low as the Municipality prefers long-term lease agreements as contractual arrangements with third parties rather than selling outright. Arguably, this is one of the reasons why house prices are so high in Stellenbosch town. The supply side is artificially constrained.
Housing and Shelter	• The percentage of households in formal housing has decreased from 75,1% in 2011 to 65,1%, illustrating the difficulty keeping pace with housing demand of the growing number of lower income households. • The housing demand waiting list in 2019 comprised some 15 780 applicants. • The middle to high income housing demand was projected to be 1 850 units in 2016. • The student accommodation demand was recorded as 4 200 beds in 2016. • Cloetesville, Idas Valley, Kayamandi, and Jamestown; all within a 5km of radius of Central Stellenbosch make up 45% (7 035) of the Stellenbosch LM's total BNG housing need. • Neither Idas Valley, Cloetesville, nor Kayamandi, have extensive land options to accommodate the current demand. • 74% (11 615) of the applicants has been on the waiting list for longer than 10 years, 24% (3 818) of which were on the waiting list for more than 20 years. Cloetesville (84%), and Idas Valley (88%) have the highest proportion of applicants on the waiting list for 10 years or more. • Given the current profile of those on the waiting list for less than 10 years, it is evident that housing demand will be driven by applicants from Klapmuts and Kayamandi. • Those older than 40 years and on the waiting list for more than 10 years make up 8 390 (53%) of all applicants. More than 50% of Kylemore/ Pniel, Jamestown, Idas Valley and Franschhoek's housing demand have applicants that are older than 40 years and have been on the waiting list for more than 10 years. • The rate of housing delivery during the current MTREF period (466 units) and post the current MTREF period (8166) is not meeting demand. The housing backlog will thus increase, as well as the number of informally housed households.
Property Market	• Considering all house-price bands in the urban areas, the mean and median values increased significantly in almost all areas between 2012 and 2016. The value increase of full-title and sectional-title properties combined in the urban areas was 47%, which equals an annual compound growth of 10%. • Between 2008 and 2017, nominal full-title property rentals in Stellenbosch town showed growth of roughly 8,1% per annum while sectional-title property rentals grew by about 10,5% per annum. • Over the same period, building costs (as measured by the CPI) showed growth of roughly 6% p.a. This implies that over the past eight years residential rentals in Stellenbosch were able to grow in real terms.

Source: Stellenbosch SDF, 2019

Map 2.12: Housing and Development Trends



Source: Stellenbosch SDF, 2019

Table 2.7: Housing Backlog in the Stellenbosch LM

HOUSING BACKLOG ALLOCATION TO SETTLEMENTS

(Source: Section 4.4.9: Stellenbosch RAP Phase 1 Public Participation and Phase 2 Status Quo Report, March 2017)

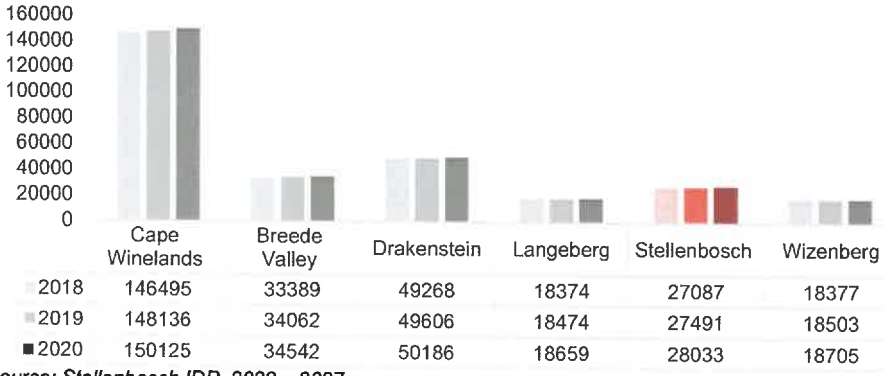
The estimated housing backlog for the Stellenbosch LM – allocated to settlements – are as follows:

Stellenbosch town (Kayamandi, Cloetesville, Idas Valley)	8 495
Franschhoek	3 249
Klapmuts	2 468
Dwars River Valley	1 109
Jamestown	719
Stellenbosch Rural	5 376
Smaller Towns	254
TOTAL	**22 671**

2.3.3 EDUCATION

Learner enrolment in the Stellenbosch municipal area increased by 1.7% from 27 087 in 2018 to 28 033 in 2020. The growth rate in learners is slightly above the Western Cape average of 2.1% across the same period.

Figure 2.1: Learner Enrolment

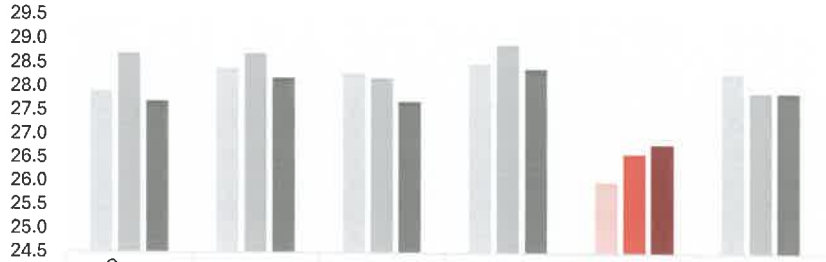


	Cape Winelands	Breede Valley	Drakenstein	Langeberg	Stellenbosch	Wizenberg
2018	146495	33389	49268	18374	27087	18377
2019	148136	34062	49606	18474	27491	18503
2020	150125	34542	50186	18659	28033	18705

Source: Stellenbosch IDP, 2022 – 2027

The learner-teacher ratio in the Stellenbosch municipal area has gradually been on the rise from 26.0 in 2018 to 26.6 in 2019 and 26.8 in 2020. This is still below the Provincial average of 30.3. It is commonly assumed that children receive less personalised attention in larger class environments and that high learner-teacher ratios are detrimental to improved educational outcomes. Although the Stellenbosch municipal area has the highest learner retention rate (73.1%) in the Cape Winelands District, school dropouts remain a grave concern. The learner retention rate is influenced by a wide array of factors, including economic influences such as unemployment, poverty / very low household income, as well as social concerns such as teenage pregnancies. Retention rates should be kept in mind when considering education outcomes / results, as low retention rates are likely to skew outcomes, as drop-outs are automatically excluded from any outcomes / results. Being able to retain learners is essential for overall positive education outcomes.

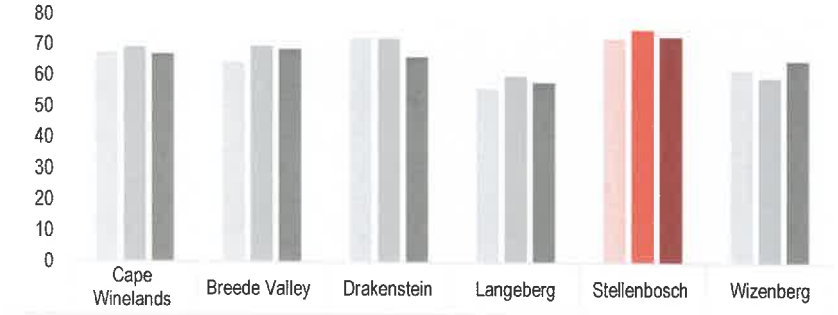
Figure 2.2: Learner-Teacher Ratio 2018-2020



	Cape Winelands	Breede Valley	Drakenstein	Langeberg	Stellenbosch	Wizenberg
2018	27.9	28.4	28.3	28.5	26	28.3
2019	28.7	28.7	28.2	28.9	26.6	27.9
2020	27.7	28.2	27.7	28.4	26.8	27.9

Source: Stellenbosch IDP, 2022 – 2027

Figure 2.3: Learner Retention



	Cape Winelands	Breede Valley	Drakenstein	Langeberg	Stellenbosch	Wizenberg
2018	67.7	64.7	72.6	56.3	72.5	62.5
2019	69.4	69.8	72.4	60.3	75.5	59.8
2020	67.2	68.9	66.4	58.3	73.1	65.4

Source: Stellenbosch IDP, 2022 – 2027

❑ Number of Schools and No-fee Schools

In 2020, the Stellenbosch municipal area had a total of 39 public ordinary schools. The number of schools has remained constant since 2018. The number of no-fee schools has also remained steady at 39 between 2018 and 2020. This translates into a total of 64.1% of schools being registered with the Western Cape Department of Education as no-fee schools.

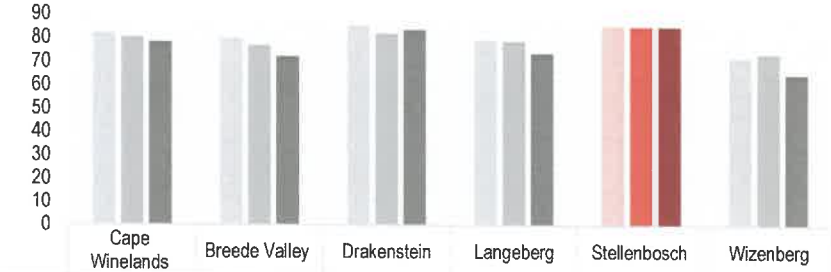
❑ Schools with Libraries / Media Centres

The number of schools with libraries / media centres decreased from 29 in 2018 and 2019 to 22 in 2020. The availability of library facilities within schools contributes towards narrowing the academic attainment gap by allowing students access to information which is in turn directly linked to improved education.

❑ Education Outcomes (Matric Pass Rate)

Education remains one of the key avenues through which the state is involved in the economy. In preparing individuals for future engagements in the labour market, policy decisions and choices in the sphere of education play a critical role in determining the extent to which future economic and poverty reduction plans may be realised. Education outcomes across the entire South Africa and Western Cape in general deteriorated as a result of COVID-19. The matric pass rate for Stellenbosch however increased ever so slightly from 85.0% in 2019 to 85.1% in 2020.

Figure 2.4: Education Outcomes (Matric Pass Rate)



	Cape Winelands	Breede Valley	Drakenstein	Langeberg	Stellenbosch	Wizenberg
2018	82.3	80.2	85.4	79.5	85.5	72.1
2019	80.6	77.1	82.1	79	85.2	73.9
2020	78.4	72.5	83.7	73.8	85.1	65

Source: Stellenbosch IDP, 2022 – 2027

2.3.4 HEALTHCARE

In 2020, the Stellenbosch municipal area had 8 primary healthcare facilities, which comprised of 7 fixed clinics and 1 community day centre; there were also 6 mobile/satellite clinics. In addition to these primary healthcare facilities, there is also a district hospital, 9 ART treatment sites and 13 TB clinics.

Table 2.8: Healthcare Facilities

Area	Community Health Centres	Community Day Centres	Regional Hospitals	District Hospitals	PHC Clinics (Satellite and Mobile)	PHC Clinics (Fixed)
Stellenbosch	0	1	0	1	6	7
Cape Winelands District	0	5	2	4	33	39

Source: Stellenbosch IDP, 2022 – 2027

Table 2.9: Emergency Medical Services

Health Indicator	Stellenbosch	Cape Winelands
EMS Operational	6	38
No of operational ambulances per 10 000 people	3	2

Source: Stellenbosch IDP, 2022 – 2027

❑ Child Health

The immunisation coverage rate for children under the age of one in the municipal area declined slightly from 55.1% in 2019/20 to 52.7% in 2020/21. The overall Cape Winelands DM rate also declined from 63.1 to 60.6% across the same period. The number of malnourished children under five years of age (severe acute malnutrition) per 100 000 people in the municipal area declined notably from 2.6 in 2019/20 to 0.9 in 2020/21. The Western Cape's average, in turn, decreased from 1.6 to 0.9 children per 100 00 people over the same time period. The Cape Winelands District Municipality rate also declined from 3.3 to 1.8%. The neonatal mortality rate (deaths per 1 000 live births before 28 days of life) for the municipal area increased from 5.2 in 2019/20 to 6.3 in 2020/21. The rate was still notably below the Cape Winelands DM average of 10.7. A total of 8.5% of all babies born in facility in the municipal area in 2020/21 weighed less than 2.5kg. This is slightly worse than the 8.2% recorded in 2019/20. This total was the lowest amongst all other local municipalities in the district.

Figure 2.5: Child Health

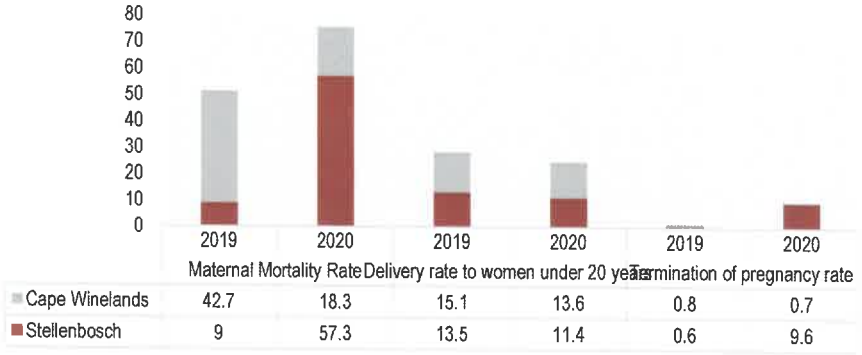


Source: Stellenbosch IDP, 2022 – 2027

❑ Maternal Health

In 2020/21, the Stellenbosch municipal area recorded the lowest number of maternal deaths (57.3%) and teenage pregnancies (11.4%) in the Cape Winelands DM. Although the number of teenage pregnancies decreased between 2019/20 and 2020/21, there was a significant deterioration in the maternal mortality rate (increase) in the municipal area. The termination of pregnancy rate (0.6%) remained unchanged across this period.

Figure 2.6: Maternal Health



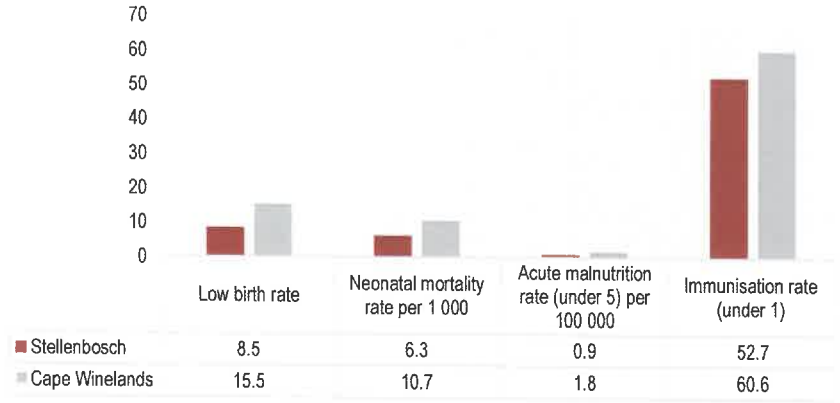
Source: Stellenbosch IDP, 2022 – 2027

❑ Child Health

The immunisation coverage rate for children under the age of one in the municipal area declined slightly from 55.1% in 2019/20 to 52.7% in 2020/21. The overall Cape Winelands DM rate also declined from 63.1 to 60.6% across the same period. The number of malnourished children under five years of age (severe acute malnutrition) per 100 000 people in the municipal area declined notably from 2.6 in 2019/20 to 0.9 in 2020/21. The Western Cape's average, in turn, decreased from 1.6 to 0.9 children per 100 00 people over the same time period. The Cape Winelands District Municipality rate also declined from 3.3 to 1.8%. The neonatal mortality rate (deaths per 1 000 live births before 28 days of life) for the municipal area increased from 5.2 in 2019/20 to 6.3 in 2020/21. The rate was still notably below the Cape Winelands DM average of 10.7. A total of 8.5% of all babies born in facility in the municipal area in 2020/21 weighed less than 2.5kg. This is slightly worse than the 8.2% recorded in

2019/20. This total was the lowest amongst all other local municipalities in the district.

Figure 2.7: Child Health

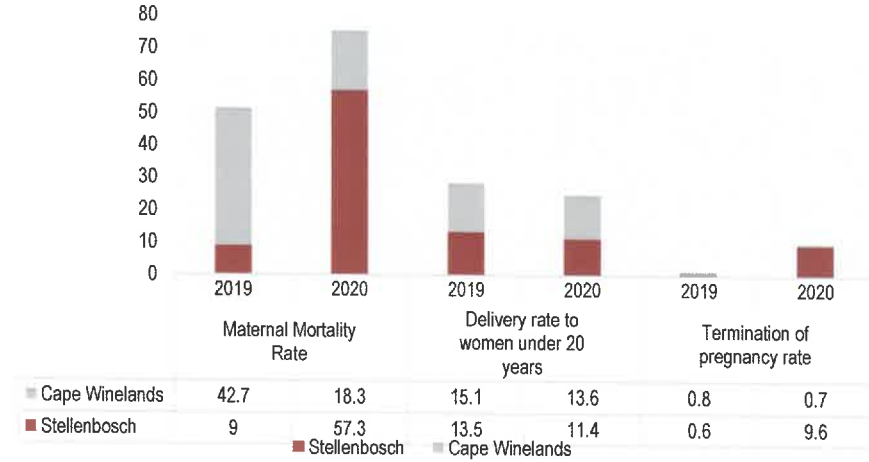


Source: Stellenbosch IDP, 2022 – 2027

❑ Maternal Health

In 2020/21, the Stellenbosch municipal area recorded the lowest number of maternal deaths (57.3%) and teenage pregnancies (11.4%) in the Cape Winelands DM. Although the number of teenage pregnancies decreased between 2019/20 and 2020/21, there was a significant deterioration in the maternal mortality rate (increase) in the municipal area. The termination of pregnancy rate (0.6%) remained unchanged across this period.

Figure 2.8: Maternal Health



Source: Stellenbosch IDP, 2022 – 2027

2.4 LOCAL AREA PERSPECTIVE

2.4.1 BUILDINGS COMPLETED (Stellenbosch Local Municipality)

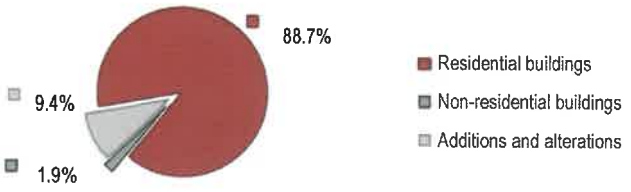
This section provides an overview of growth trends focusing particularly on building activity completed residential and non-residential buildings within Stellenbosch Local Municipality from 2012 to 2022.

Table 2.10: Residential Buildings Summary

Stellenbosch Local Municipality		TOTAL	AVERAGE
Residential Buildings	Dwelling-Houses	2 462 units	224 units
	Flats	1 579 units	144 units
	Townhouses	238 units	22 units
	Other Residential (incl. Tourism Accommodation)	20 units	2 units
	RESIDENTIAL UNITS	4 299 units	430 units/a
Non-Residential Buildings	Office and banking space	45 958m²	4 178m²
	Shopping space	29 939m²	2 722m²
	Industrial and warehouse space	64 353m²	5 850m²
	Churches, sport and recreation clubs	2 967m²	270m²
	Schools, nursery schools, crèches and hospitals	29 833m²	2 712m²
	Other non-residential buildings	11 590m²	1 054m²
	NON-RESIDENTIAL BUILDINGS	184 640m²	16 785m²

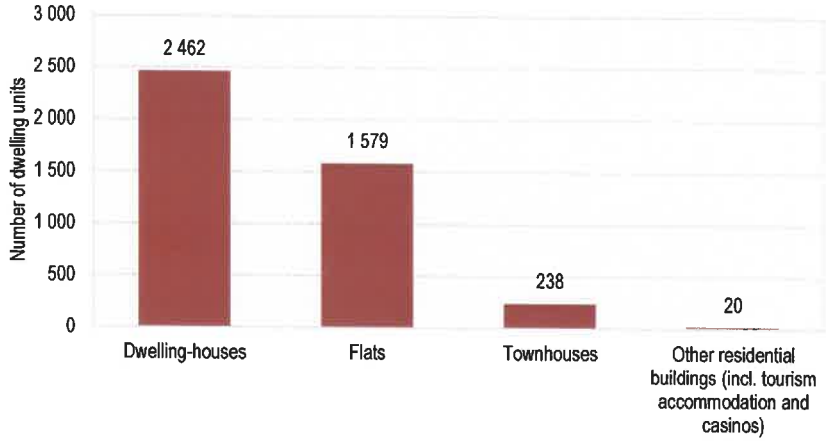
Source: Demacon ex StatsSA

Figure 2.9: Buildings Completed - Summary of Stellenbosch Local Municipality



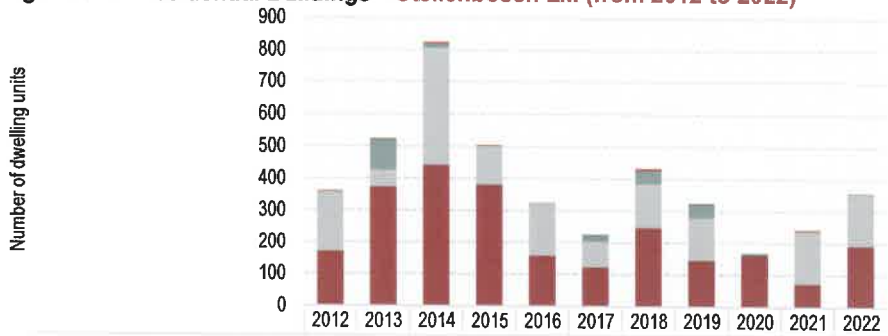
Source: Demacon ex StatsSA

Figure 2.10: Total Residential Buildings Completed (from 2012 to 2022)



Source: Demacon ex StatsSA

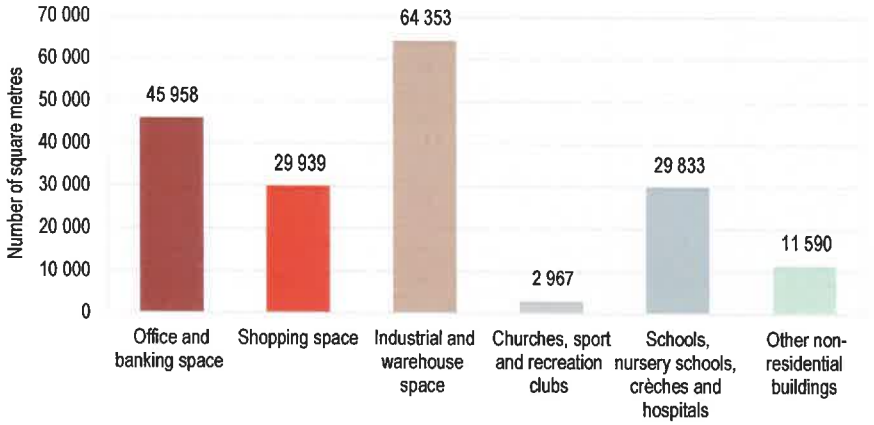
Figure 2.11: Residential Buildings – Stellenbosch LM (from 2012 to 2022)



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Other residential buildings (incl. tourism accommodation and casinos)	2	1	5	2	-	-	5	1	-	3	1
Townhouses	-	99	14	1	-	24	45	47	7	1	-
Flats	189	52	365	122	169	80	137	132	-	167	166
Dwelling-houses	170	373	442	380	157	122	247	145	162	72	192

Source: Demacon ex StatsSA

Figure 2.12: Total Non-Residential Buildings – Stellenbosch LM (from 2012 to 2022)



Source: Demacon ex StatsSA

Table 2.11: Key Findings – *Stellenbosch LM (from 2012 to 2022)*

Buildings Completed	✓ 88.7% of all buildings completed from 2012 to 2022, were residential, 1.9% were non-residential, and 9.4% were additions/alterations. ✓ In terms of **residential buildings** completed from 2012 to 2022: • 57.3% were dwelling houses, • 36.7% flats, • 5.5% townhouses and • 0.5% other residential buildings (incl. tourism accommodation etc). ✓ The majority of **non-residential buildings** completed from 2012 to 2022: • 34.9% were industrial and warehouse space, • 24.9% office and banking space, • 16.2% shopping space and • 16.2% schools, nursery schools, crèches, hospitals ✓ Industrial and warehouse space amounted to ±64 353m², office and banking space 45 958m² and shopping space 29 939m² from 2012 – 2022.

Source: Demacon ex StatsSA

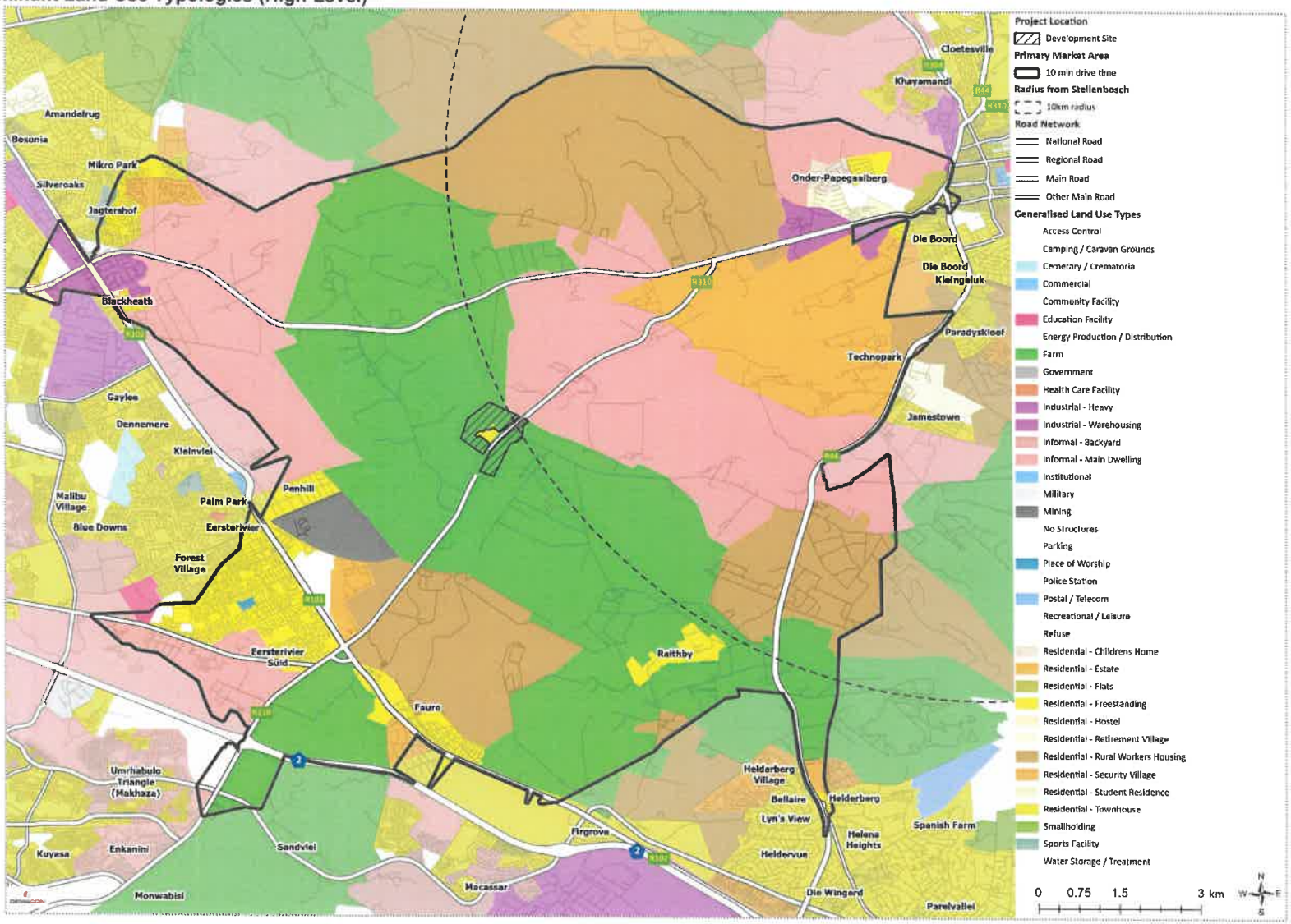
Figure 2.13: Total Non-Residential Buildings per Year– Stellenbosch LM (from 2012 to 2022)



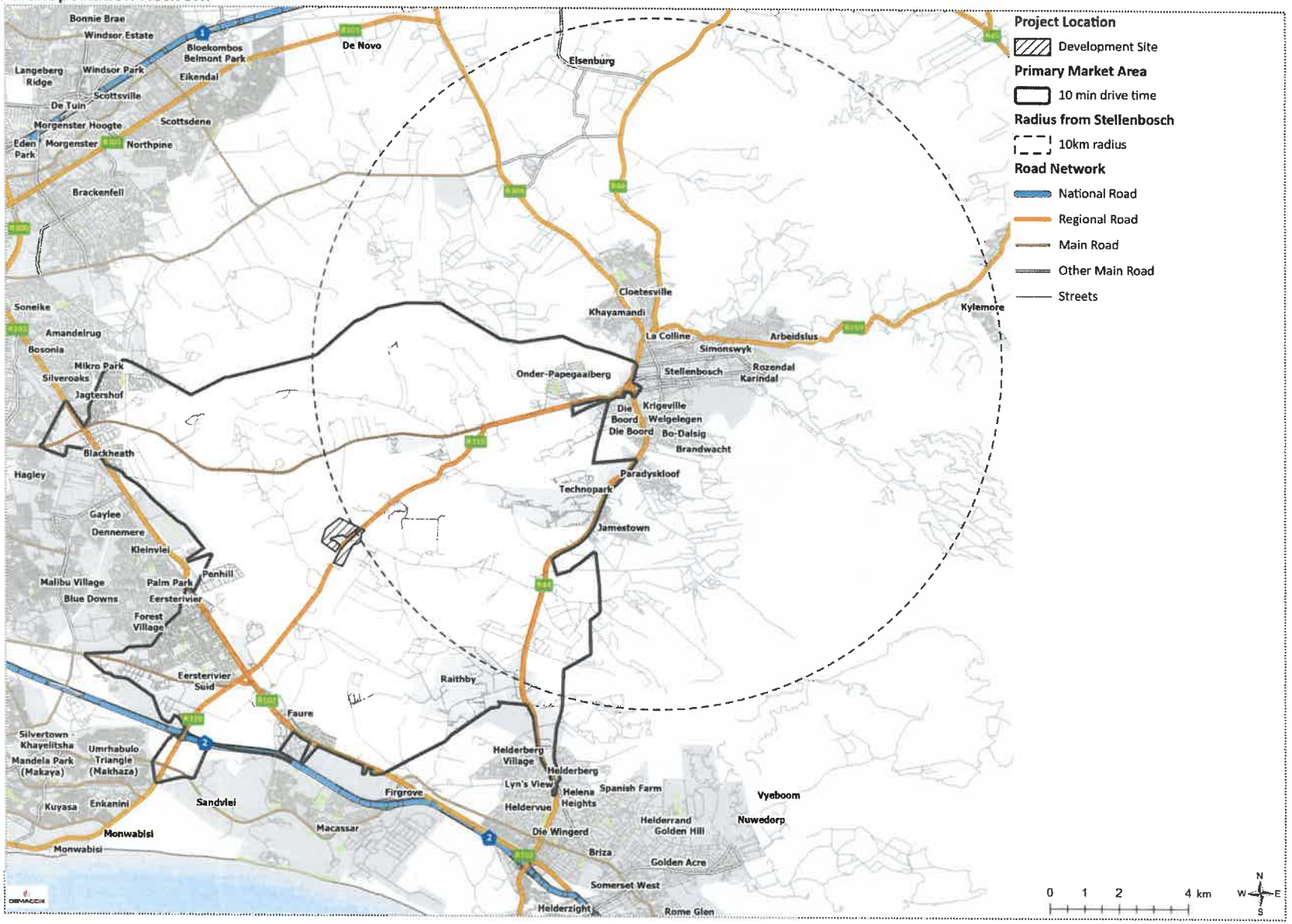
Source: Demacon ex StatsSA

2.4.2 REGIONAL CHARACTERISTICS

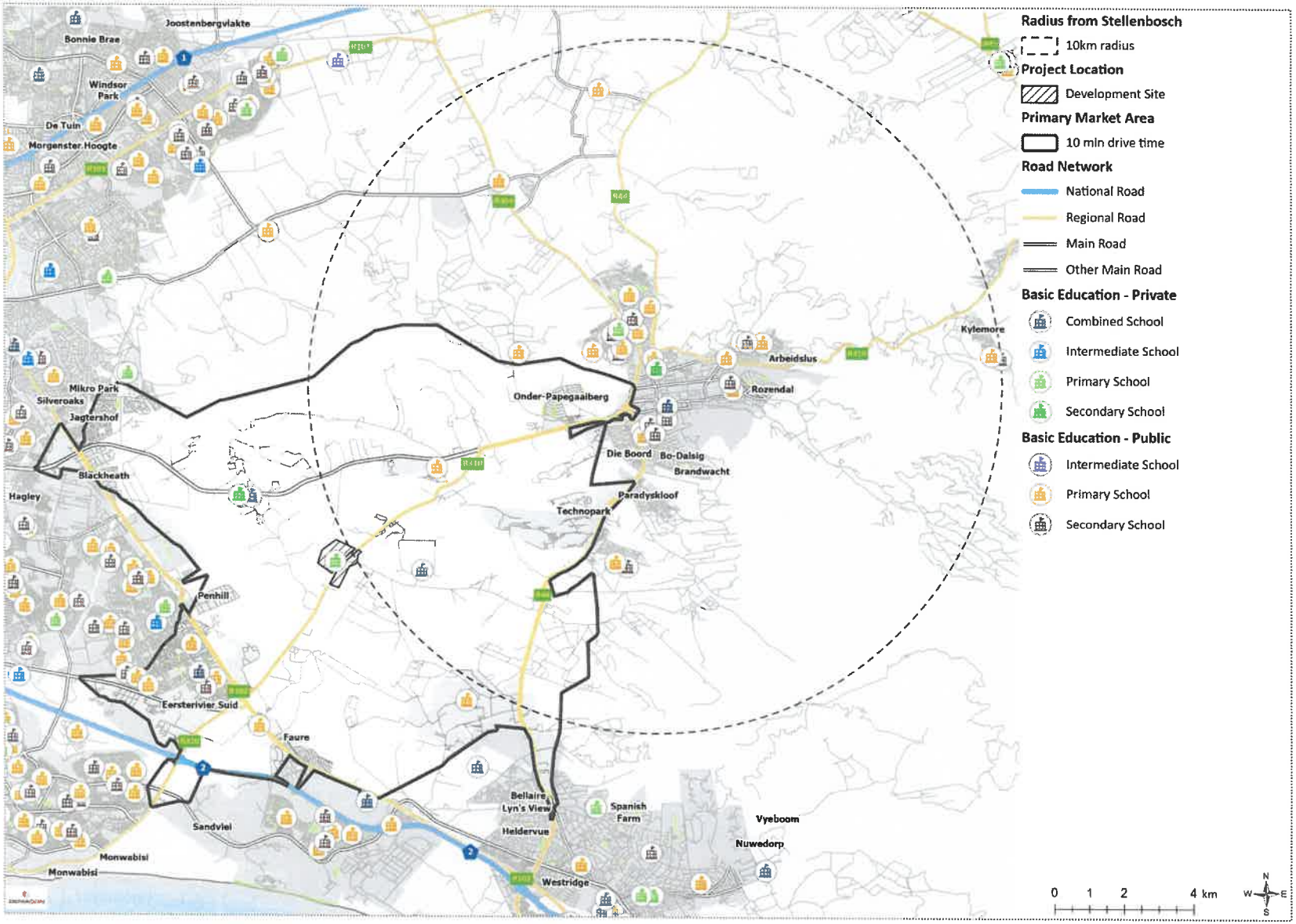
Map 2.13: Dominant Land Use Typologies (High-Level)



Map 2.14: Transportation Network

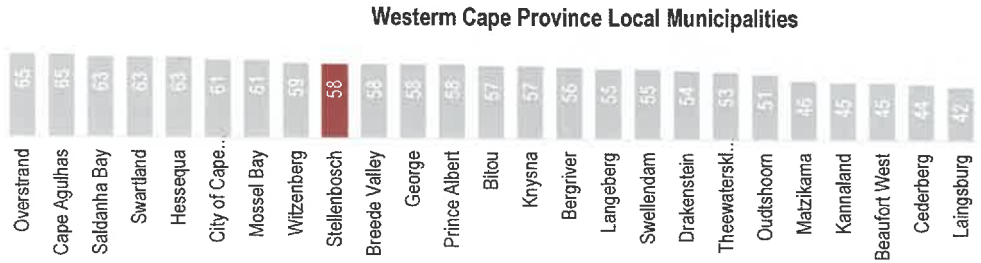


Map 2.15: Basic Educational Facilities



2.5 STATE OF THE MUNICIPALITY INDEX

The Out of Order Index is an index that allocates each of the more than 200 local municipalities and eight Metros a score on a scale from 0-100, where 0 is a failure and 100 is perfectly performing. The data used is sourced from authoritative sources, such as National Treasury's budget data which is used for calculating budget allocations to municipalities, the Auditor-General's reports, and Statistics South Africa. Unlike other approaches, the Index does not only include pure financial metrics, but also measures of unemployment, poverty, and basic service delivery to households. Some factors are within the direct control of the municipality and others are not, but all affect their trajectory as sustainable entities.

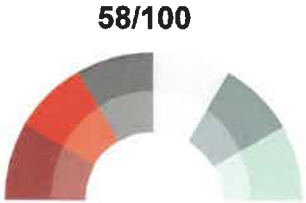


Best Performers





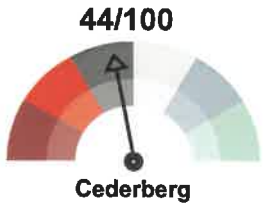


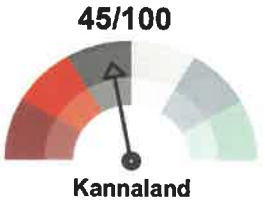


The **Stellenbosch** is ranked 9th out of 25 municipalities in the Western Cape Province.

Worst Performers







FACTORS that contribute towards the Metro Municipality's Out of Order Index Score:

Money not spent properly
R0

Operating budget
R1 718 542 150

Maintenance spending
1%

Number of households
54 199

% of households that are poor
51%

% of households receiving water
100%

% of households receiving electricity
101%

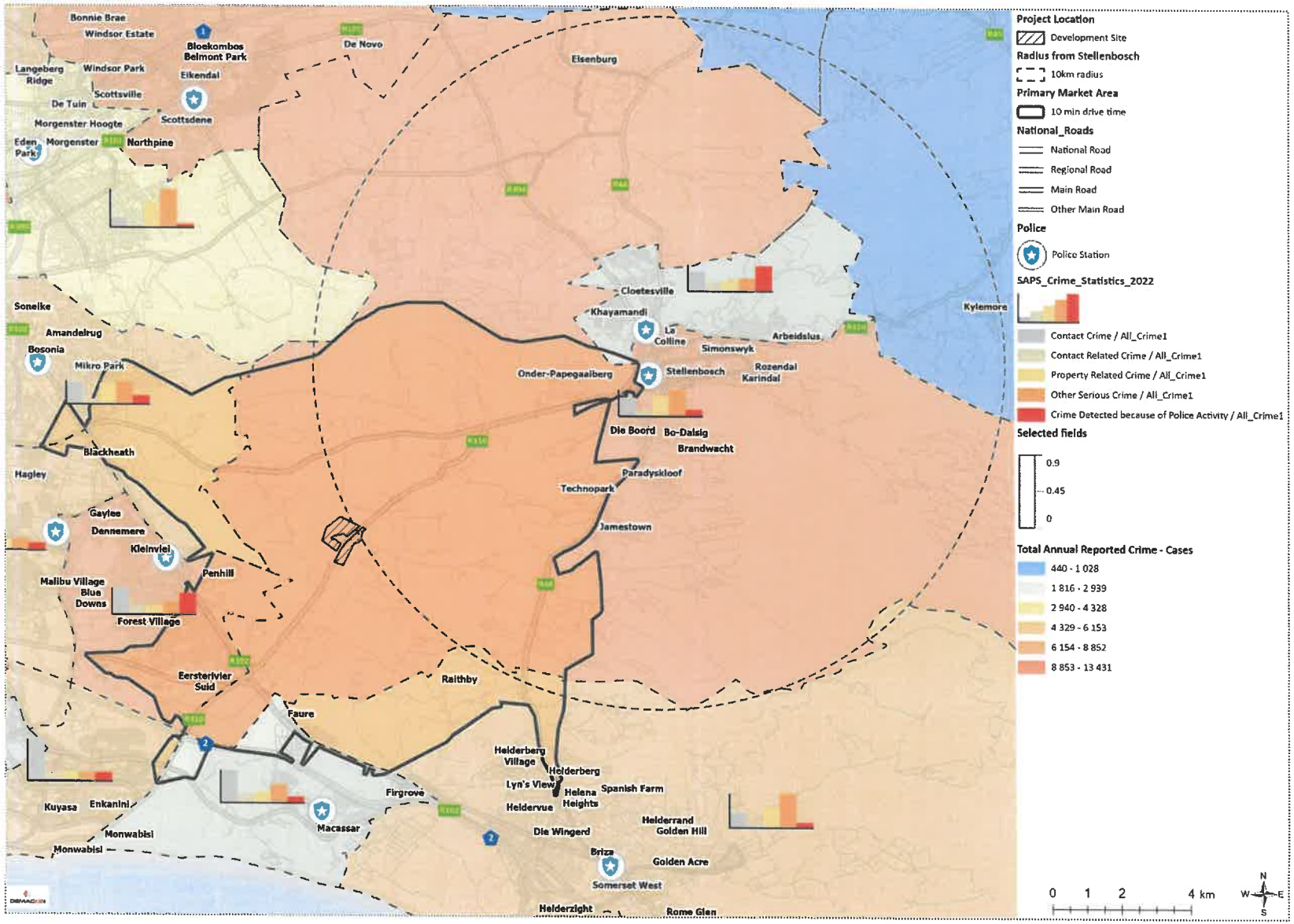
% of households receiving sewerage services
79%

% of households receiving rubbish removal
94%

% of operating budget spent on staff wages
31%

The Auditor General has downgraded the City of Tshwane Municipality to below investment grade by June 2021. The Metro has been operating as a going concern for the past three financial years. This effectively means that the municipality does not have enough revenue to cover their expenditure and that they owe more money than what they have.
Source: DEMACON ex Auditor General South Africa, SAPOA & News24, 2023

Map 2.16: Crime Statistics

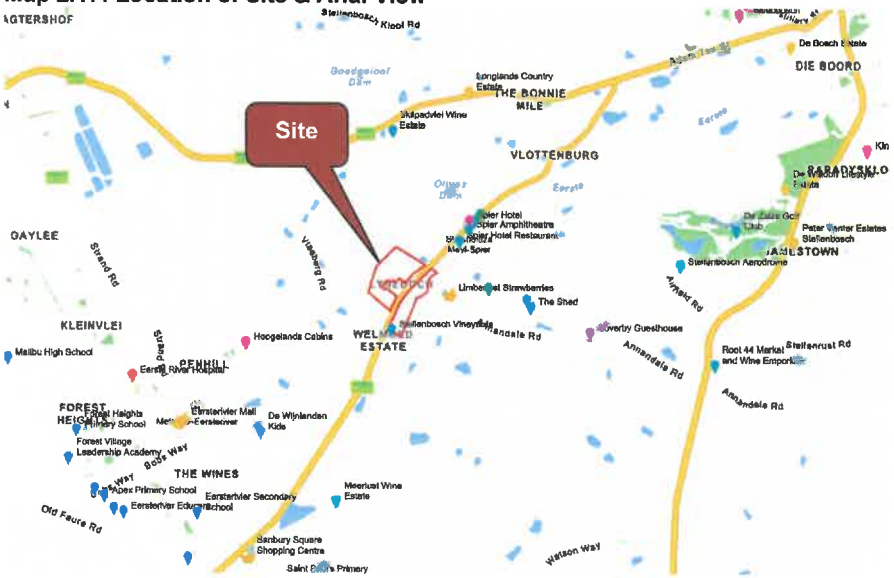


2.6 SITE LOCATION ASSESSMENT

2.6.1 SITE LOCALITY

The proposed development is located in **Lynedoch, Stellenbosch Local Municipality, Western Cape Province**. The sites extend north and south of the R310 road (Baden Powell Drive). The focus of the market study is **Portion 28 to the north of the R310** which measures **±45.48 ha**.

Map 2.17: Location of Site & Arial View



Map 2.18: Development Concept – Portion 28



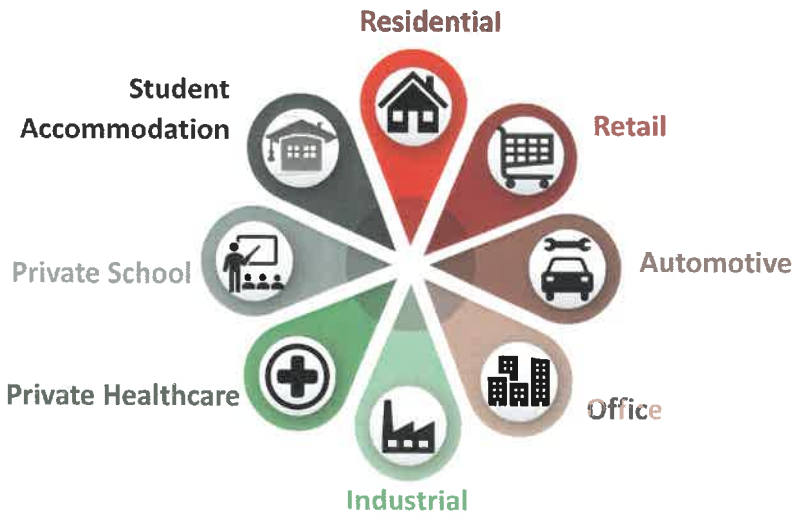
2.6.2 LOCATION ASSESSMENTS

Market potential is influenced not only by consumer income and expenditure, but in particular also by the characteristics of the site/location where future development activities are to take place.

To this effect, DEMACON Site Evaluation Models © are utilised. These DEMACON models are pragmatic and are based on the assignment of values to various location factors.

Firstly, the site is evaluated on a ten-point scale, with ten being the highest. Secondly, weights are attached to these factors, in order of importance (1 to 5, with 5 being the most important).

Location assessments for the project include the following land uses:



❖ RESIDENTIAL ASSESSMENT

Table 2.12: Residential Assessment

Locational Factors	Grade 1 - 10	Weight 1 - 5	Score
Perceived Level of Safety and Security	7	›	35
Area Price Profile	7	›	28
Address Value	8	›	32
SEM Profile	7	›	35
Perceived Quality of Residential Environment	8	›	32
Tempo of Residential Growth	7	›	35
Within direction of Current & Future Growth	8	›	40
Perceived investment value	7	›	28
Access to main roads	8	›	24
Proximity to workplace	7	›	21
Proximity to schools	7	›	28
Proximity to retail facilities	7	›	28
Proximity to social amenities	7	›	21
Proximity to public transport	7	›	21
Availability of Land	8	›	24
Total Score			432
Score Rating			73.2%

Source: Demacon, 2023

** Note: 80%+ indicates an exceptional site rating; a site rating of 70 – 80% is high and indicates that most important fundamentals for a successful residential development is in place; a rating of 60 – 70% indicates some critical factors may be lacking but could be addressed; projects with a sub 60% rating are not recommended for consideration.*

❖ RETAIL & AUTOMOTIVE ASSESSMENT

Table 2.13: Retail & Automotive Assessment

	Grade 1 - 10	Weight 1 - 5	Score
Consumer Volumes	8	›	40
Income / LSM profile	7	›	35
Population Growth	7	›	28
Visibility	8	›	32
Accessibility	8	›	32
Functional & Complimentary Uses	7	›	21
Effective Market Gap	8	›	32
Proximity to Intermodal Facilities, e.g., BRT Route, Rail / Taxi / Bus terminus	7	›	21
Address Value	8	›	32
Availability of land, site configuration, orientation, slope	8	›	32
Future Expansion Potential	7	›	28
Directional Growth of Area	7	›	28
Proximity to Labour	7	›	21
Proximity to Suppliers	7	›	21
Perceived Level of Security	7	›	28
Total			431
Score			74.3%

Source: Demacon, 2023

** Note: 80%+ indicates an exceptional site rating; a site rating of 70 – 80% is high and indicates that most important fundamentals for a successful retail development is in place; a rating of 60 – 70% indicates some critical factors may be lacking but could be addressed; projects with a sub 60% rating are not recommended for consideration.*

❖ OFFICE ASSESSMENT

Table 2.14: Office Assessment

	Grade 1 - 10	Weight 1 - 5	Score
Accessibility	9		27
Visibility	9		45
Address Value - Popular Office Address	5		25
Moderate to Higher LSM Profile	7		28
Proximity to Educated Labour Force	7		28
Established Office Address / Monitored Node	5		25
Functional and Complimentary Uses	8		32
Emerging Commercial Node	8		40
Proximity to Freeways / Major Provincial Routes	9		36
Proximity to Intermodal Facilities, e.g. public transport	7		21
Availability of Land	8		24
Future Expansion Potential	7		21
Perceived Level of Security	7		28
Directional Growth of Area	7		21
Total			401
Score			72.9%

Source: Demacon, 2023

** Note: 80%+ indicates an exceptional site rating; a site rating of 70 – 80% is high and indicates that most important fundamentals for a successful office development is in place; a rating of 60 – 70% indicates some critical factors may be lacking but could possibly be addressed; projects with a sub 60% rating are not recommended for consideration.*

❖ PRIVATE HEALTHCARE ASSESSMENT

Table 2.15: Private Healthcare Assessment

	Grade 1 - 10	Weight 1 - 5	Score
Address Value	7		28
Local Accessibility	8		32
Regional Accessibility	7		28
Visibility	7		21
SEM Profile	6		30
Level of Private Healthcare Insurance	6		30
Moderate to Higher Population Growth	6		18
Absence of Competitive Products / Market Gap	8		32
Proximity to Skilled and Semi-Skilled Labour Force	7		21
Perceived Level of Security	7		28
Located in Direct Line of Growth	7		21
Availability of Land	8		32
Future Expansion Potential	7		21
Total			342
Score			69.8%

Source: Demacon, 2023

** Note: 80%+ indicates an exceptional site rating; a site rating of 70 – 80% is high and indicates that most important fundamentals for a successful private healthcare development is in place; a rating of 60 – 70% indicates some critical factors may be lacking but could possibly be addressed; projects with a sub 60% rating are not recommended for consideration.*

❖ PRIVATE SCHOOL ASSESSMENT

Table 2.16: Private School Assessment

	Grade 1 - 10	Weight 1 - 5	Score
Accessibility	8		32
SEM Profile	7		28
Direct Proximity to Middle to Higher Income Suburbs	7		28
Moderate to Large Segment of Population aged below 18 years	7		35
Moderate to High Population Growth	7		28
Proximity to Captive Market	8		32
Absence of Competitive Products	8		24
Perceived Level of Security	7		28
Address Value	8		32
Proximity to Retail Facilities	7		21
Total			288
Score			73.8%

Source: Demacon, 2023

** Note: 80%+ indicates an exceptional site rating; a site rating of 70 – 80% is high and indicates that most important fundamentals for a successful private school development is in place; a rating*

of 60 – 70% indicates some critical factors may be lacking but could possibly be addressed; projects with a sub 60% rating are not recommended for consideration.

❖ STUDENT ACCOMMODATION ASSESSMENT

Table 2.17: Student Accommodation Assessment

	Grade 1 - 10	Weight 1 - 5	Score
Proximity to target campus	7	5	35
Target campus student growth prospects	8	4	32
Student accommodation supply gap	8	4	32
Perceived level of safety and security	7	3	21
SEM Profile	7	5	35
Perceived quality of residential environment	7	4	28
Access to main roads	8	3	24
Proximity to social amenities	6	3	18
Proximity to retail and related amenities	7	4	28
Proximity to public transport	7	3	21
Availability of land	8	3	24
Total			**298**
Score			**72.7%**

Source: Demacon, 2023
** Note: 80%+ indicates an exceptional site rating; a site rating of 70 – 80% is high and indicates that most important fundamentals for a successful student accommodation development is in place; a rating of 60 – 70% indicates some critical factors may be lacking but could possibly be addressed; projects with a sub 60% rating are not recommended for consideration.*

2.7 SYNTHESIS

The following provides a summary of the preceding analysis.

Strategic Analysis

- ✓ The site is situated within Lynedoch, Stellenbosch Local Municipality, which forms politically, part of the Cape Winelands District Municipality, Western Cape Province.
- ✓ Stellenbosch Local Municipality is bounded to the east and south by the Drakenstein, Wemmershoek and Limietberg mountain ranges.
- ✓ The **main settlements** in SM are the historic towns of Stellenbosch and Franschhoek, and Klapmuts. There are also a number of **smaller villages**, including Jamestown (contiguous with Stellenbosch town), Pniel, Johannesdal, Lanquedoc, Lynedoch, and Raithby. New nodes are emerging around agricultural service centres, for example, Koelenhof and Vlottenburg.
- ✓ Lynedoch is classified as a **secondary settlement** with the role to gradual expand focusing on **sustainable living and education.**
- ✓ The **current housing demand** waiting list comprise some 15 780 applicants (Western Cape Housing Demand Database extract for Stellenbosch, May 2018).
  - The student accommodation demand was recorded as 4 200 beds in 2016 (Urban Econ's Stellenbosch Market Assessment, 2016).
- ✓ In terms of the Stellenbosch's Built Environment Context, a **housing backlog** in the rural settlements have a backlog of over **3 000 housing opportunities** in rural areas (based on information from the Draft Rural Plan).
- ✓ Lynedoch is identified as:
  - A growth node
  - Opportunities for a new high density MU infill development.
  - Future opportunities for new high-density MU – when transit implemented.
- ✓ In terms of the **consolidated concept**, Lynedoch is:
  - A primary development axis / transport corridor
  - A transit node,
  - Highly accessible location within the urban edge
- ✓ Several **settlement plans / new developments** for the municipality:
  - Raithby
  - Vlottenburg
  - Kylemore
  - Phiel
  - Koelenhof
  - Muldersvlei
  - Klapmuts
  - Groot Drakenstein
  - Wemmershoek
  - Franschhoek
  - Several **settlement plans / new developments** for the municipality:

- ✓ In terms of residential planning, the MSDF stipulated that over the longer term, it is believed that some settlements along the **Baden-Powell-Adam Tas-R304** corridor can support larger populations, particularly the broader Muldersvlei/ Koelenhof and Vlottenburg/ Spier/**Lynedoch** areas.

Buildings Completed

Key Findings – *Stellenbosch Local Municipality Building Statistics (from 2012 to 2022)*

- ✓ 88.7% of all buildings completed from 2012 to 2022, were residential, 1.9% were non-residential, and 9.4% were additions/alterations.
- ✓ In terms of **residential buildings** completed from 2012 to 2022:
  - 57.3% were dwelling houses,
  - 36.7% flats,
  - 5.5% townhouses and
  - 0.5% other residential buildings (incl. tourism accommodation etc).
- ✓ The majority of **non-residential buildings** completed from 2012 to 2022:
  - 34.9% were industrial and warehouse space,
  - 24.9% office and banking space,
  - 16.2% shopping space and
  - 16.2% schools, nursery schools, crèches, hospitals
- ✓ Industrial and warehouse space amounted to ±64 353m², office and banking space 45 958m² and shopping space 29 939m² from 2012 – 2022.

Source: Demacon ex StatsSA

Summary of Buildings Completed - *Stellenbosch Local Municipality*



Table 2.18: Residential Buildings Summary

Stellenbosch Local Municipality			TOTAL	AVERAGE
Residential Buildings		Dwelling-Houses	2 462 units	224 units
		Flats	1 579 units	144 units
		Townhouses	238 units	22 units
		Other Residential (incl. Tourism Accommodation)	20 units	2 units
	RESIDENTIAL UNITS		4 299 units	430 units/a
Non-Residential Buildings		Office and banking space	45 958m²	4 178m²
		Shopping space	29 939m²	2 722m²
		Industrial and warehouse space	64 353m²	5 850m²
		Churches, sport and recreation clubs	2 967m²	270m²
		Schools, nursery schools, crèches and hospitals	29 833m²	2 712m²
		Other non-residential buildings	11 590m²	1 054m²
	NON-RESIDENTIAL BUILDINGS		184 640m²	16 785m²

Source: Demacon ex StatsSA

Site Assessments

The preceding analysis shows the outcome of the location analysis for the proposed development. The data shows that the site ratings are high and indicate that most important fundamentals for a successful development are in place.

Table 2.19: Summary of site assessments:

Residential	73.2%
Retail	74.3%
Office	72.9%
Private Healthcare	69.8%
Private School	73.8%
Student Accommodation	72.7%

The location scores rated high due to the following:

- Address Value
- Access to main roads (adjacent to the R566 Road)
- Accessibility
- Visibility
- Availability of Land
- Future Expansion Potential

ECONOMIC PROFILE & DRIVERS

3

CHAPTER

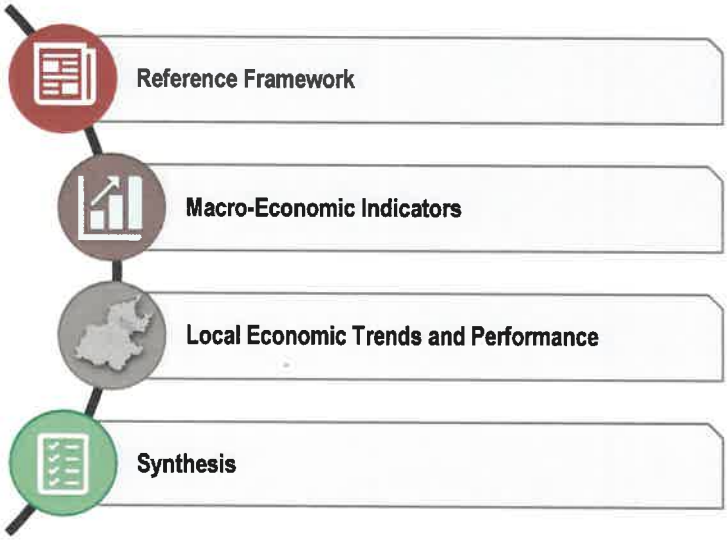
3. ECONOMIC PROFILE & DRIVERS

3.1 INTRODUCTION

An intricate, though well-defined relationship exists between the economy and urban real estate markets. The performance of specific economic sectors serves as proxy for the performance of these real estate markets.

The purpose of this chapter is to outline the salient features of the market area economy (reference is made to the **Cape Winelands District** and **Stellenbosch Local Municipality** in terms of selected time series economic indicators, most notably the economic profile and growth trends within the local economy.

As such, this chapter provides insight into the composition and stability of the sub-region economy and hence, provides a more comprehensive assessment of medium- to long-term investment prospects than the conventional demographic analysis.



3.2 REFERENCE FRAMEWORK

The causal relationship between economic sector performance and property market performance is illustrated in Diagram 3.1

Diagram 3.1: Causal Relationship between Economic Performance and Property Sectors

CAUSAL RELATIONSHIP BETWEEN ECONOMIC PERFORMANCE & PROPERTY SECTORS

MACRO ECONOMIC VARIABLE	SECTORAL PERFORMANCE	PROPERTY MARKET PERFORMANCE
PRODUCTION INFLATION INTEREST RATES EXCHANGE RATES	Trade	Retail and Wholesale
	Business and Financial Services	Offices
	Transport	Warehousing and Distribution
	Manufacturing	Industrial
Personal Consumption Expenditure (Final Demand)	Other	Other

© 2023 H du Toit, MSc, PhD

The economic indicators of an area form the basis for current demand for commercial product offering and serve as drivers for future growth in demand.

3.3 MACRO-ECONOMIC INDICATORS

The following provides an overview of the current macro-economic trends and factors influencing national and local economic growth prospects, consumer demand growth and property market demand. The following data suggests that the macro-economic outlook for the South Africa economy is expected to improve over the course of 2023.

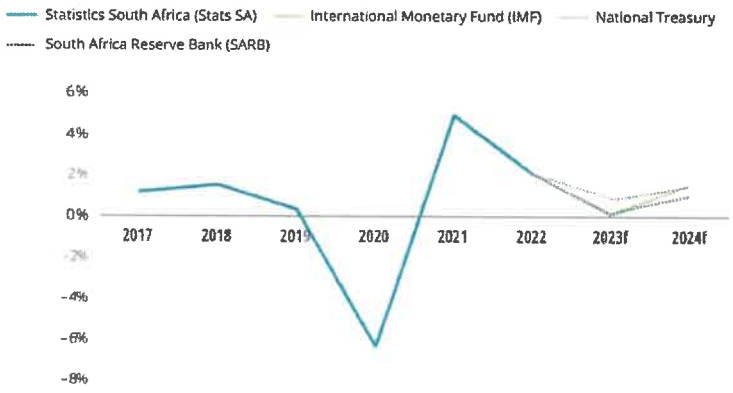
3.3.1 ECONOMIC OUTLOOK FOR SOUTH AFRICA (JANUARY 2023)

GDP GROWTH EXPECTATIONS

- ✓ A growth scenario of flat to no growth is a real possibility for 2023 according to Deloitte.
- ✓ The country could already be in a technical recession in 2023: Q1 (two consecutive negative quarters of growth)
- ✓ National Treasury forecast for 2023 is 0.9%.
- ✓ South African Reserve Bank forecast for 2023 was 0.3% in January, revised downward to 0.2% end of March.
- ✓ The International Monetary Fund forecast for 2023 was 1.2% in January, revised downwards to 0.1% end of March.
- ✓ Given lower net exports (logistical bottlenecks), easing of commodity prices, higher power-related imports the current account deficit is projected to Increase to -1.8% of GDP in 2023 and -2.0% of GDP in 2024.

Low to no real GDP growth in 2023 is on the cards

South Africa GDP growth (%, constant prices), 2017–2024f



Note: f denotes forecast.
Sources: StatsSA; IMF; National Treasury; SARB.

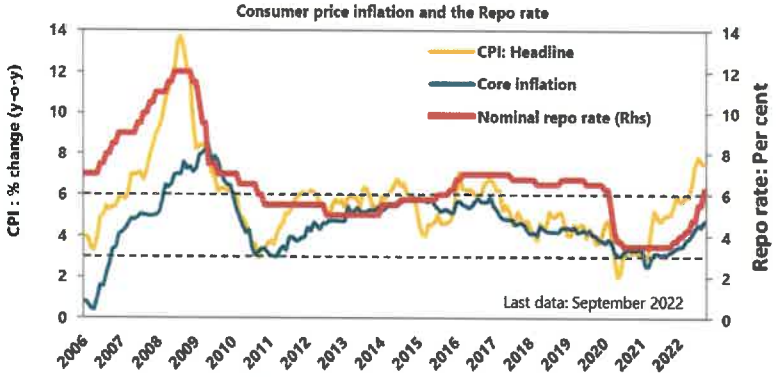
Deloitte Insights | deloitte.com/insights

SUBDUED GROWTH IN HOUSEHOLD CONSUMPTION EXPENDITURE

- ✓ SA consumers are under financial strain.
- ✓ End of February 2023, the Deloitte South African Consumer Tracker highlighted that 41% of consumers feel that their financial position has worsened over the past year and that they are concerned about their financial circumstances.
- ✓ Consumers are making greater trade-offs (buying lower-cost items and store brands) and are being for frugal (buying only essentials).
- ✓ FNB/ BER Consumer Confidence Index declined to -23 points in 2023: Q1 (down from -8 points in 2022: Q4).
- ✓ Third lowest CCI since 1994, with likely repercussions on lower durable goods sales this year.
- ✓ Consumers have already/ thinking of investing in backup renewable power solutions (given the recent tax rebate for the fiscal year of 2024).

SA RESERVE BANK

- ✓ The Monetary Policy Committee raised the repo rate by 75 basis points on 22 September 2022, followed by another hike of 75 basis points on 24 November 2022 and another 25 basis points on 26 January 2023, bringing the repo rate to 7.25%.
- ✓ It Is expected that the repo rate will be further increased by between 25 and 50 basis points on the 25th of May meeting, 2023



Source: IDC, compiled using Stats SA and SARB data

Repo Rate

7.25%

Prime Lending Rate

10.75%

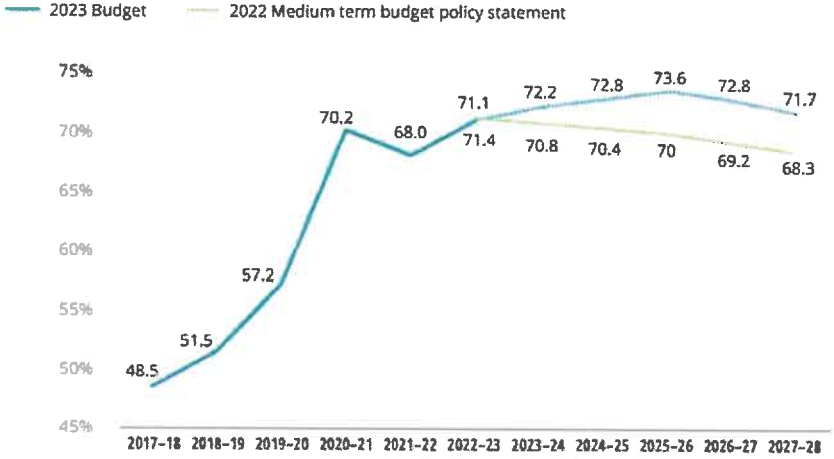
Source: IDC, 2022 & 2023
OECD, 2023
Investec, 2022 & 2023

PUBLIC FINANCES

- ✓ Consolidated budget deficit forecast expected to decrease to 4.2% of GDP in 2022 to 2023, 4.0% in 2023-2024 and 3.2% in 2025-2026.
- ✓ Despite an average annual increase of 4.5% in consolidated expenditure over the next three years, a primary budget surplus is still expected for 2023 to 2024.
- ✓ Government's decision to provide debt relief to Eskom (taking on more than 50% of Eskom's debt over three years) will result in a deterioration of the debt-to-GDP ratio.
- ✓ This will result in an increase in debt-service costs, while crowding out other expenditure.

Government's debt relief to Eskom will result in debt-to-GDP ratio stabilizing only in 2025–2026

Gross debt-to-GDP (% of GDP), 2017–2027f



Note: f denotes forecast
Source: National Treasury.

Deloitte Insights | deloitte.com/insights

252

GREY LISTING OF SOUTH AFRICA

- ✓ Grey listing of South Africa by the FATF in February 2023.
- ✓ While not expected to have permanent effects on the growth outlook, it could imply potential risks such as reputational damage, increased transaction costs for businesses and negative impact on foreign flows, posing additional burdens on the national economy.
- ✓ Significant progress has already made in addressing some of the concerns of the FATF.

ADRESSING POWER OUTAGES

- ✓ A National Energy Crisis Committee has been established and is taking on debt from Eskom to free up resources at the utility.
- ✓ The National Energy Crisis Committee (Necom) intends to recover and add 8 800 megawatts (MW) of generating capacity this year in an effort to reduce the intensity of load shedding.
- ✓ There are eight interventions in 2023:
  - Bring Kusile units 1, 2 and 3 back online, plus achieve commercial operation for Unit 5 (2 880MW).
  - Additional imports from neighbours (up to another 1 325MW).
  - An emergency generation programme and a standard offer from Eskom to buy excess capacity from commercial/industrial customers (1 000MW).
  - Utility-scale private embedded generation projects (up to 1 600MW).
  - Using feed-in tariffs to unlock supply from commercial and household rooftop solar (850MW).
  - Ramp up demand-side and energy efficiency programmes to cut demand (250MW).
  - Complete first phase of Eskom's battery energy storage system (200MW); and
  - Contract surplus supply from existing renewable producers (70MW).

- ✓ <u>Private Sector:</u>
  - Government has also continued driving reforms and introduced rooftop solar incentive programs for households and businesses. The latter includes a one-year tax relief.
  - To eliminate loadshedding, about 18 000MW of renewable energy and storage are needed.
  - The private sector is making progress to bridge the country's 6 000 MW baseload energy gap.
  - Once 5 000 MW of renewables had been installed loadshedding can be cut by

LOGISTICS CRISIS

- ✓ Plans are co-ordinated under Operation Vulindela to include:
  - upgrading of rail and ports infrastructure
  - increasing the number of goods transported by rail
  - enabling private sector investment.
- ✓ This will be supported by R903 billion of investment in infrastructure over the next three years.

"One of these reforms is to enable third party access to the freight rail network by private rail operators, while the network itself remains in the ownership of the state," the President said.

He noted the progress that has been made to establish a separate Infrastructure Manager within Transnet Freight Rail by October this year as a crucial step towards creating a level playing field for public and private operators.

The President said that strong collaboration with the private sector, organised labour and other social partners is vital to improving logistics performance.

He referred to the strong willingness shown by members of the Minerals Council and others to invest in rolling stock and other equipment, to contribute skills and resources and to pursue opportunities for collaboration.

These collaborative efforts are essential to formulating workable solutions that will form part of a collective national effort to fix the country's transport system.

"Despite the crisis facing Transnet we must acknowledge the important progress that has been made in reversing the damage that was inflicted during state capture and recognise that there are many dedicated and hard-working people in the company that are committed to restoring Transnet to its potential.

"Transnet must quickly embark on a clear path to take us out of this crisis and ensure that the operation of our railways and ports contributes to the growth of our economy," said President Ramaphosa.

BUSINESS CONFIDENCE INDEX

- ✓ The business confidence index (BCI) slipped to 36 in the first quarter of 2023. The index has not been in positive trajectory for the larger part of the past decade.
- ✓ Power outages and deteriorating household income impacted confidence in the manufacturing and retail sectors hard. While sentiment among wholesalers and new vehicle dealers improved slightly according to the BER.

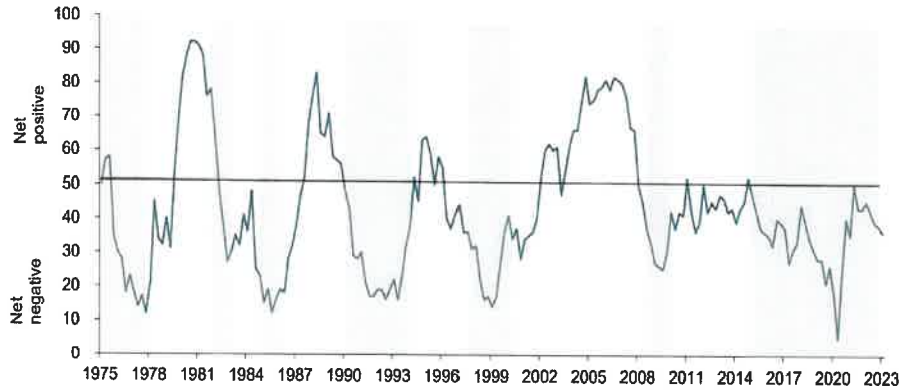
Confidence Improvement:

- ✓ Wholesaler confidence increased with three points.
- ✓ New vehicle dealer confidence up with three points.

Confidence Decrease driven by:

- ✓ Manufacturing declined by nine points in the first quarter (largely due to intense load sheading and dilapidated and poorly managed logistic infrastructure).
- ✓ Retail declined by eight points (largely due to loadshedding, reduced trading hours, increased operating costs due to diesel generators, high consumer price inflation, increased pressure on household disposable income.
- ✓ Building confidence declined by three points (a silver lining relates to the installation of backup power).

Figure 1: RMB/BER Business Confidence Index



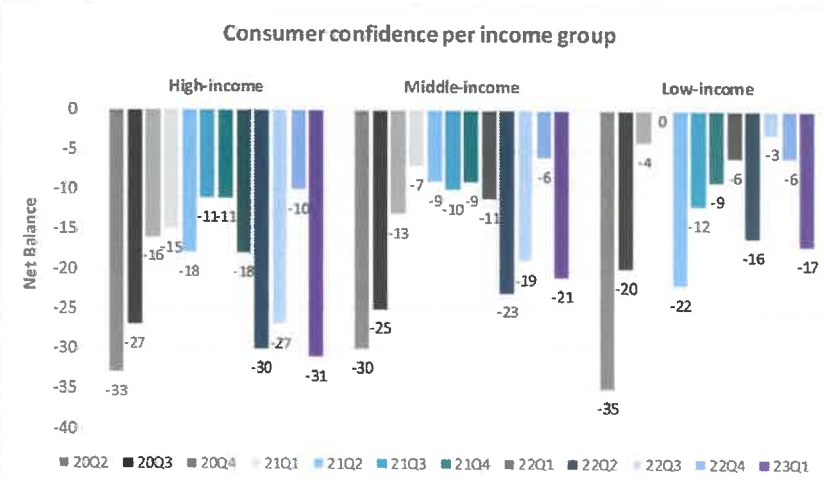
Source: BER & Trade Economics, 2023

CONSUMER CONFIDENCE INDEX

- ✓ The consumer confidence index (CCI), sponsored by the First National Bank (FNB) and compiled by the Bureau for Economic Research (BER), decreased to -23 Index Points during the first quarter of 2023.

Confidence Decrease driven by:

- ✓ All three sub-indices of the CCI declined during 2023: Q1.
- ✓ The economic outlook declined.
- ✓ Time to buy durable goods declined.
- ✓ Households do not expect their household finances to improve over the next year.
- ✓ Confidence levels of high-income consumers declined to -31 index points.
- ✓ Confidence levels of middle-income consumers declined to -21 index points.
- ✓ Confidence levels of low-income consumers declined to -17 index points.



Source: FNB, BER & tide Economics, 2023

CREDIT RATINGS

South Africa Economic Credit Ratings

	Rating	Outlook
S & P	BB-	Positive
Moody's	Ba2	Stable
Fitch	BB-	Stable

Dates:
S & P – May 2022
Moody's – April 2022
Fitch – December 2021

Eskom Credit Ratings

	Rating	Outlook
S & P	B	Stable
Moody's	Caa1	Positive
Fitch	CCC+	Stable

Dates:
S & P – September 2022
Moody's – November 2022
Fitch – November 2022

South Africa Bank Credit Ratings

	SA national Scale Rating	Global Scale Rating
ABSA Bank Ltd	AA/ A-1+	-
Capitec Bank Ltd	AA/ A-1+	BB-B
First Rand Bank Ltd	AA/ A-1+	BB-B
Investec Bank Ltd	AA/ A-1+	BB-B
Nedbank Ltd	AA/ A-1+	BB-B

Dates:
S & P – May 2022

How does this 'marking system' work?

- *The rating system varies between the three rating agencies.*
- *The highest-rated investment grade securities are AAA or Aaa (triple A).*
- *An investment grade rating lies within the range of Aaa to Baa3 (Moody's) or AAA to BBB- (S&P). The lowest possible investment grade rating is BBB- (S&P) and Baa3 (Moody's).*
- *Credit ratings for bonds below these designations ('BB', 'B', 'CCC', etc.) are considered low credit quality, also known as high yield or junk bonds.*

POTENTIAL IMPLICATIONS 2023

- ✓ Deteriorating domestic economic climate will affect the performance of many SA businesses, particularly in the manufacturing sector, certain mining industries and service sectors.
- ✓ Sentiment of consumers, businesses, and investors at low levels, spending on goods and services, production activity and capital deployment on investment projects are likely to remain relatively subdued.
- ✓ Businesses that rely on the investment cycle for their production activities may experience challenges considering the subdued rates of growth in fixed investment spending from the private sectors, as well as the financial difficulties experienced by several key state-owned companies.
- ✓ South Africa's long-awaited economic reforms may yet gain momentum, but the age-old problems of political uncertainty, corruption and a failing power system pose significant risks.
- ✓ As per political speak, the suite of reforms is focused on energy security, infrastructure development, food security, job creation and the green transition and is designed to create a "sustainable, resilient and inclusive economy".
- ✓ As for practical reality and the real world, what may be required of the State, more than anything, is simply a return to "doing the basics right".

3.3.2 SOUTH AFRICA PROPERTY MARKET OUTLOOK

The MSCI South Africa Index is designed to measure the performance of the large and mid-cap segments of the South African market. With 37 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in South Africa.

CUMULATIVE INDEX PERFORMANCE – NET RETURNS (USD) (APR 2008 – APR 2023)



ANNUAL PERFORMANCE (%)

Year	MSCI South Africa	MSCI Emerging Markets	MSCI ACWI IMI
2022	-3.88	-20.09	-18.40
2021	3.58	-2.54	18.22
2020	-3.96	18.31	16.25
2019	10.04	18.42	26.35
2018	-24.76	-14.57	-10.08
2017	36.12	37.28	23.95
2016	17.91	11.19	8.36
2015	-25.45	-14.92	-2.19
2014	5.21	-2.19	3.84
2013	-6.21	-2.60	23.55
2012	18.69	18.22	16.38
2011	-14.36	-18.42	-7.89
2010	34.21	18.88	14.35
2009	57.82	78.51	36.41

INDEX PERFORMANCE – NET RETURNS (%) (APR 28, 2023)

					ANNUALIZED			
	1 Mo	3 Mo	1 Yr	YTD	3 Yr	5 Yr	10 Yr	Since Dec 29, 2000
MSCI South Africa	0.90	-4.18	-8.12	0.31	12.50	-3.45	0.33	7.59
MSCI Emerging Markets	-1.13	-4.74	-6.51	2.78	4.33	-1.05	1.80	7.47
MSCI ACWI IMI	1.27	0.88	1.55	8.31	12.15	6.65	7.80	6.02

FUNDAMENTALS (APR 28, 2023)

	Div Yld (%)	P/E	P/E Fwd	P/BV
MSCI South Africa	4.12	10.61	9.04	1.73
MSCI Emerging Markets	3.33	12.41	11.82	1.60
MSCI ACWI IMI	2.24	18.37	15.68	2.46

3.3.2.1 RESIDENTIAL MARKET INDICATORS

Price Growth	• House price growth in South Africa declined in February 2023, with buying activity declining, and properties sitting on the market for longer. • The FNB House Price Index's annual growth declined in February, averaging 2.3% year-on-year (YoY), down from 2.7% in January. • The average time on the market also stretched to 75 days, which was last seen in Q3 2020.
House Price Inflation Trends	• National year-on-year house price inflation is at 2.31%, having decreased consistently since early 2021. • Annual property inflation remained steady in KwaZulu-Natal and the Northwest, increased in Limpopo and Mpumalanga, and decreased in the Eastern Cape, Free State, Gauteng, the Northern and Western Cape. • Annual property inflation in the Low Value segment was once again much higher than that in other segments - inflation for properties in the Low Value segment was 10.3%, compared to 3.2% for properties in the Mid Value segment.
Price Brackets	• In Q4 2022, the R500k-R750k was the best performing, however, in Q1 2023, the R250k-R500k bracket saw the most robust activity, with its rating increasing from 6.4 to 8.0. • The <R250k bracket saw the second-best rating – increasing to 6.6 from 5.6 the last quarter. • FNB said that the higher activity in the lower-priced segments shows a downscaling trend amid increasing higher financial pressures as homeowners look for cheaper alternatives.
Market Volumes	• Market volumes continue to soften, albeit still above pre-pandemic levels. • Similarly, internal mortgage applications are significantly ahead of the pre-pandemic 2019 levels.
Mortgage Trends	• Mortgage extension remains relatively robust, with the latest data showing growth of 6.9% y/y in October, much quicker than the post-Global Financial Crisis (GFC) average of 3.8%.
Rental Market	• In 2022, the rental market continued to recover from the low rental growth rates recorded in most of 2020 and 2021 as a result of the global pandemic. • However, ongoing recovery and rising rental growth rates can't be guaranteed as we move into 2023, as higher interest rates, persistently high levels of inflation and a struggling economy all affect tenants' ability to pay higher rents. • Higher interest rates make it less affordable for tenants to buy properties, which increases the demand for (and prices of) rental properties. • Nationally, the average rent increased by 3.4% from Q4 2021 to Q4 2022. This was an average increase of R268 to R8 175 over the year.

Factors Supporting Market Growth	• There are four key factors that have supported market resilience:
	  ○ The pandemic-induced changes in consumer preferences
	  ○ Structurally improved affordability following a decade-long real house price correction.
	  ○ Credit availability
	  ○ A higher household formation rate.

Outlook	• The South African residential property market in 2023 is expected to be a buyer's market, as house price inflation is likely to be below inflation. According to Lightstone, local and global challenges will shape HPI in the country, but the stagnant economy will have the biggest impact. • Paul-Roux De Kock, the Chief Analytics Officer at Lightstone, stated that the company's three scenarios predict HPI in South Africa to be between 0.9% (low) to 2.3% (mid) or 3.7% (high). This prediction is in line with the South African Reserve Bank's (SARB) recent increase in interest rates by 25 basis points, as well as its revised GDP growth forecast of just 0.3% for 2023. • The mid-value market segment is expected to be the most resilient in all scenarios, as it is anticipated to benefit from the more active informal economy and activity from buyers out of the higher value segments looking to downscale. The low HPI scenario could lead to an accelerated decline in HPI, while the high HPI scenario may see HPI bounce back in the second quarter and end 2023 with strong upward momentum going into 2024. • All in all, the property market in South Africa is expected to face challenges in 2023, as the country's economy remains stagnant and the challenges with electricity and water continue. This means that house prices are likely to grow less than inflation, making it a buyer's market.

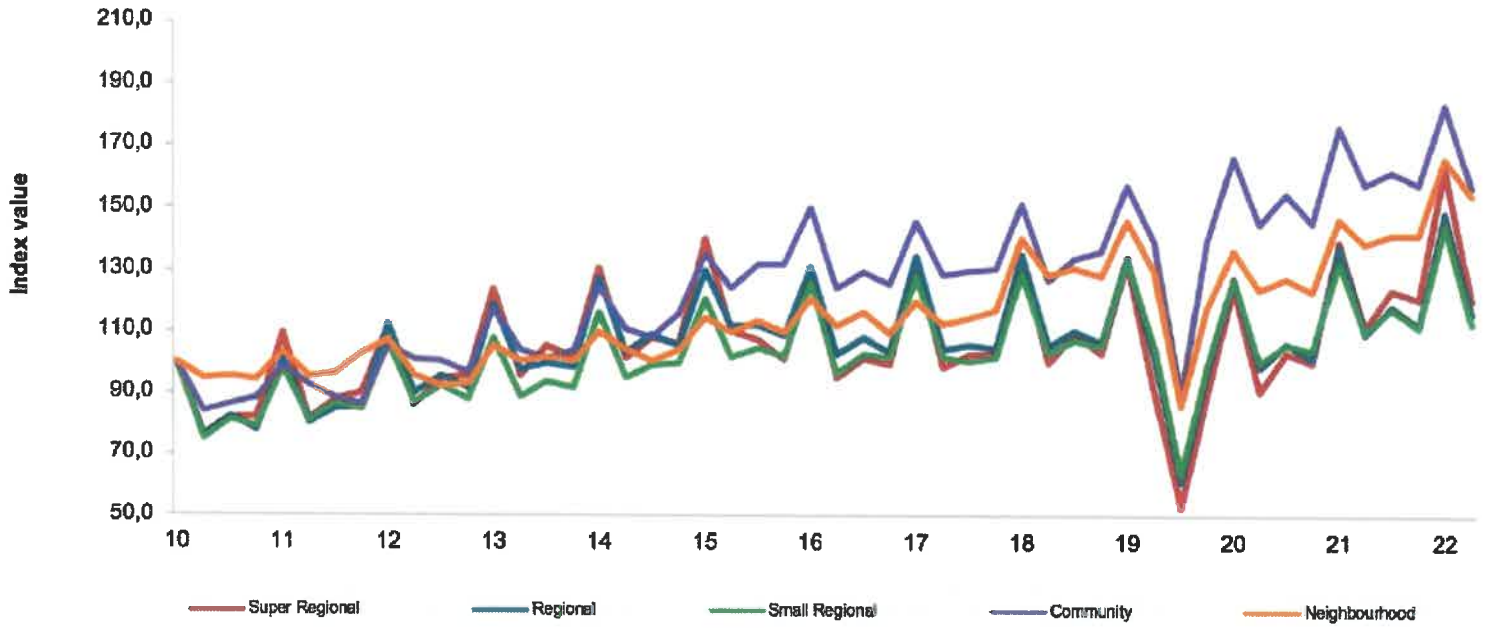
Sources: Residential Property Price Index, Mar 2023; Payprop Rental index, Feb 2023; Lightstone, Mar 2023

3.3.2.2 RETAIL MARKET INDICATORS

	**Commercial Market Outlook (Business Tech, May 2023)**	• The commercial property market is still expected to grow in 2023 – but at a far slower rate than in 2022, as rising interest rates have started to feed into the wider economy. • This is according to FNB Property Strategist John Loos, who noted that sales activity for commercial properties had declined this year after peaking in 2022. • In the latest FNB Commercial Property Broker Survey for the first quarter of 2023, all 3 major property classes (Office, Retail and Industrial) saw broker perceptions of slightly lower sales activity compared to the prior quarter, and in two of the three classes (Office and Retail) lower than the 1st quarter of a year ago. • Adding pressure to the market, the value of commercial mortgage loans granted has recorded significant declines, with the fourth quarter of 2022 showing a year-on-year decline of 5.67%, Loos said. • FNB expects that 2023 will see a weaker reading than the two years prior in terms of all property total returns. • According to Loos, the commercial property sector is likely to show the following markets: • All property growth is forecast to return to negative territory in 2023 after a small positive +0.8% growth rate in 2022. • The overall vacancy rate is forecast to rise mildly this year, following two prior years of small declines – thus remaining elevated. • These will likely cause net operating income growth to slow from its 6.6% rate recorded in 2022. • FNB's determinations into the commercial property space are based on Loos' belief that interest rates have likely peaked after 425 basis points worth of increases since late-2021 and will move sideways through the rest of 2023. • Loos said that despite the interest rate cycle probably ending, the full impact of recent rate hikes is still feeding through to the economy, and slower growth is expected in 2023 – with a weaker property market performance expected.
	**Market Comeback**	• SA's property brokers have signalled declining vacancy rates in the office, industrial and retail markets, according to FNB's Q1 Property Broker Survey. • In 2023, the retail property sector is anticipated to continue its recovery, with a retail vacancy rate of 5.8% and a reported success rate for renewals of 82.7%. • Looking ahead, SA Property Index predicts that most trends to emerge in 2023 will follow on from the market shifts that have begun in the post-pandemic environment of 2022, with continued recovery across all sectors as the priority.
	**Retail Trade Sales (StatsSA, March 2023)**	• Measured in real terms (constant 2019 prices), retail trade sales decreased by 1,6% year-on-year in March 2023. The largest negative contributors to this decrease were: general dealers (-1,9% and contributing -0,9 of a percentage point); and retailers in food, beverages, and tobacco in specialised stores (-6,6% and contributing -0,6 of a percentage point). • The positive contributor was retailers in textiles, clothing, footwear, and leather goods (6,3% and contributing 1,0 percentage point). • Seasonally adjusted retail trade sales decreased by 0,7% in March 2023 compared with February 2023. This followed month-on-month changes of -0,3% in February 2023 and 1,4% in January 2023. • Retail trade sales decreased by 1,0% in the first quarter of 2023 compared with the first quarter of 2022. The largest negative contributors to this decrease were retailers in hardware, paint, and glass (-5,7% and contributing -0,5 of a percentage point); general dealers (-1,0% and contributing -0,4 of a percentage point); and retailers in food, beverages and tobacco in specialised stores (-4,8% and contributing -0,4 of a percentage point). • The positive contributor was retailers in textiles, clothing, footwear, and leather goods (4,7% and contributing 0,8 of a percentage point). • Seasonally adjusted retail trade sales increased by 0,8% in the first quarter of 2023 compared with the fourth quarter of 2022. The main contributor to this increase was retailers in textiles, clothing, footwear, and leather goods (4,4% and contributing 0,8 of a percentage point).
	**Wholesale Retail Sales**	Sales at constant 2019 prices: results for March 2023 • Measured in real terms (constant 2019 prices), wholesale trade sales decreased by 1,4% in March 2023 compared with March 2022. • Seasonally adjusted wholesale trade sales decreased by 0,6% in March 2023 compared with February 2023. This followed month-on-month changes of 2,1% in February 2023 and 1,2% in January 2023.

	(StatsSA March 2023)	• In the first quarter of 2023, seasonally adjusted wholesale trade sales increased by 0,1% compared with the fourth quarter of 2022. Sales at current prices: results for March 2023 • Measured in nominal terms (current prices), wholesale trade sales increased by 8,3% in March 2023 compared with March 2022. The main contributors were dealers in: o machinery, equipment, and supplies (35,9% and contributing 4,3 percentage points). o agricultural raw materials and livestock (26,3% and contributing 1,6 percentage points). o food, beverages, and tobacco (7,0% and contributing 1,1 percentage points); and o 'other' goods (12,8% and contributing 1,0 percentage point). • Wholesale trade sales increased by 10,7% in the first quarter of 2023 compared with the first quarter of 2022. The main contributors were dealers in: o machinery, equipment, and supplies (23,3% and contributing 3,1 percentage points). o agricultural raw materials and livestock (34,1% and contributing 2,0 percentage points). o solid, liquid, and gaseous fuels and related products (7,4% and contributing 1,9 percentage points); and 'other' goods (19,1% and contributing 1,4 percentage points).
	Consumer Price Index	• Annual consumer price inflation was 7,1% in March 2023, up from 7,0% in February 2023. • The consumer price index increased by 1,0% in March 2023. • The main contributors to the 7,1% annual inflation rate were food and non-alcoholic beverages; housing and utilities; transport; and miscellaneous goods and services. • Food and non-alcoholic beverages increased by 14,0% year-on-year and contributed 2,4 percentage points to the total CPI annual rate of 7,1%. • Housing and utilities increased by 4,0% year-on-year and contributed 1,0 percentage point. • Transport increased by 8,9% year-on-year and contributed 1,3 percentage points. • Miscellaneous goods and services increased by 5,9% year-on-year and contributed 0,9 of a percentage point. • In March the annual inflation rate for goods was 9,4%, down from 9,5% in February; and for services it was 4,5% down from 4,6% in February
	ESG Focus (SA Property Insider)	• Tenants are increasingly opting for buildings that align to their ESG (Environmental, Social and Governance) requirements and this is set to continue in 2023. "They are looking to buildings that have been built to ensure a positive impact on both the environment and the communities in which they are located," he says. • "In recent years we have seen an increase in tenants prioritising the 'E' in ESG by requiring landlords to implement green building standards such as solar energy, carbon reduction measures, LED lighting, recycling, and recycling wastewater," says Jack. "This is a positive trend that we expect to be increasingly in the spotlight in the coming years," he concludes.

MSCI South Africa Quarterly Retail Trading Density Index (Unfrozen) – Results for the quarter to March 2023



Source: MSCI

MSCI Retail Trading Density Index

	Index Sep 2021 Dec 2010 = 100	Index Sep 2022 Dec 2010 = 100	Trading density Quarterly average R/m²/month	Trading density Annual average R/m2/month	Trading density growth % y/y
Super Regional	111.6	120.6	3 473.4	3 808.8	16.2%
Regional	109.7	116.3	2 773.6	2 957.7	8.8%
Small Regional	110.4	113.0	2 579.1	2 783.5	7.4%
Community	158.0	157.4	3 987.1	4 191.8	4.3%
Neighbourhood	138.7	154.7	4 086.5	3 990.3	12.9%

Trading density by tenant category, average for quarter

	Apparel R/m²/ month	Department Stores R/m²/ month	Food R/m²/ month	Food Service R/m²/ month	Home Décor R/m²/ month
Super Regional	3 086.0	2 862.1	3 564.8	4 363.9	1 972.5
Regional	2 193.2	2 296.5	3 024.0	3 923.6	1 622.3
Small Regional	1 832.2	2 209.3	3 157.1	3 428.5	1 585.0
Community	1 921.3	5 071.1	4 897.2	4 261.0	1 545.3
Neighbourhood	1 760.7	3 516.8	5 905.4	3 816.8	1 809.4
Category Includes	Menswear, womenswear, children's wear, unisex wear, lingerie, swimwear & shoes	Electronics/Appliances, Food/apparel/home	Grocery, Supermarkets, food speciality, bottle stores	Restaurant, Bar, Fast Food, Coffee Shop, Ice-Cream, Frozen Yoghurt, Drive Thru	Homeware, Interior, Furniture, Art Gallery, Frames, Antiques, Carpets

Source: Demacon ex. MSCI, 2023

3.3.2.3 OFFICE MARKET INDICATORS

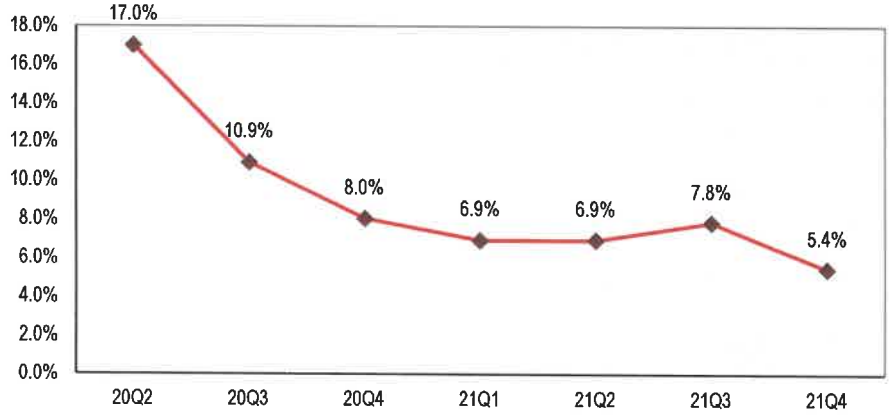
Price Growth	• Remains challenging due to oversupply, although fundamentals are looking better for 2023. • The office market remains challenging due to its significant oversupply. However, Rode data shows that vacancy rates have moved lower from higher levels, while nominal. • The first quarter national nominal rental rate was still 3% below 2019 levels (pre-pandemic). In real terms, rentals are still in negative territory after deducting the BER's rough 6% estimate of building cost inflation. The positive is that the cooling of building cost inflation will generally result in a smaller decline in real rentals than that seen in 2022.
Vacancy Rates	• Vacancy rates combined for Grades A+, A and B have stablished at ±14% (2022: Q4). • Higher than the long-term average of 9% as per SAPOA data.
Market Boosters	• Office market has been boosted by the return of workers to offices – albeit in many instances in a hybrid way. • Limited new construction of new office blocks • Rise in the conversion of older office space where practically feasible.
Market Rental Growth	Nominal Terms: • Nationally, weighted gross market rentals for decentralized grade-A space rose by 3,2% in nominal terms in the first quarter of 2023 compared to the first quarter of 2022. • This shows that rentals have bottomed out after falling by 5,2% in 2021 and by 1,2% in 2020. • But to give perspective, the first-quarter national nominal rental rate was still 3% below 2019 levels (that is, before the Covid pandemic). Real Terms: • In real terms, rentals are still in negative territory after deducting the BER's 6% estimate of building-cost inflation. • The positive is that the cooling of building-cost inflation will result in a smaller decline in real rentals than that seen in 2022.
Regional Performance (Rode 2023:Q1)	• Regionally, Cape Town has been the clear top performer over the past few quarters. • During Q1 2023, grade-A nominal rentals increased by 13% in Cape Town decentralised compared to Q1 2022. • Decentralised rentals rose by 2.3% in Johannesburg and by 1.7% in Pretoria. • Durban took a turn for the worse, with decentralised rentals down 2.3%. • It is important to understand that these increases are year-on-year, meaning that the Q1 2023 level is compared to the low level of Q1 2022.

		• In real terms, only Cape Town managed to record above inflation rental growth compared to a year ago. The Mother City's rentals now also exceed the average 2019 level.

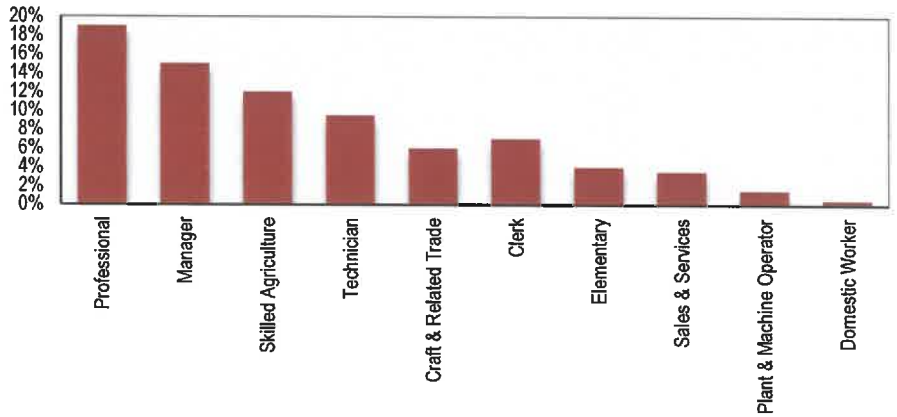
	Outlook	• Key to the long-term demand in the sector:
		  ○ Sustainability of work-from-home
		  ○ Health of the local economy.
		• Flexible or hybrid working and more collaboration areas, implying less demand for space compared to before the pandemic and two to three days a week at an office is a popular policy.
		  ○ Smaller Users – serviced offices in well located properties with flexible floorplates.
		  ○ Larger Users – seeking to right size and reassess their workplace utilisation, resulting in high quality, green-rated premises.
		• This, together with weak economic fundamentals and low business confidence, makes a return to normal vacancies over the next few years unlikely.

	Return to Office	• Data indicates that more and more workers progressively returned to the office as from the beginning of 2022. • A factor that may impact the return of office workers over the short term is the record-high fuel prices. • One would expect even more workers to slowly return to office or a shared space over the short to medium term. • Some workers will continue to work from home on a long-term basis, compared to before the pandemic, which may impact office floor space demand. • The impact of the work-from-home or work-from-anywhere trend over the long term is probably overstated as working completely from home will not be sustainable for many companies, especially large corporates. • Hot-desking and open-plan offices have existed for decades and with hybrid policies (work from home part of the week and the rest at the office) these could again grow in popularity. • Several large corporates, such as FirstRand and Momentum, indicated that they will reduce their office space requirements over the medium term. • Several companies are tied to leases and as a result are burdened with excess office space, which has led to subletting. • The probability is high that companies will increase productive space usage and reduce real office space occupancy when leases come up for renewal. • In sum, working from home is not a one-size fits-all solution. The best solution for employers could be to adopt flexible policy. • Holding all other factors constant, it is expected that the net result will be that of a relative contraction in required office space, which will realise over the next few years as lease renewals come under scrutiny.

Percentage of SA labour force working from home



Percentage of SA workers working from home by occupation, 2021



3.3.2.4 INDUSTRIAL MARKET INDICATORS

Growth Drivers	• The industrial market is still the outperformer in 2022. • The manufacturing sector underpins the demand for industrial space for manufacturing production purposes. • The retail sector underpins the demand for warehouse space and manufacturing. • Modern racking systems that make stacking heights of more than 12 metres possible, thus requiring a new generation of warehouses. • Strongly growing online retail sales. Online retail sales made up 2.8% of total retail sales in 2020, doubling from 1.4% in 2018.
Industrial Vacancy – Buildings	• Modern racking systems that make stacking heights of more than 12 metres possible, thus requiring a new generation of warehouses. • Strongly growing online retail sales. Online retail sales made up 2.8% of total retail sales in 2020, doubling from 1.4% in 2018, according to the Worldwide Worx's Online Retail in South Africa 2021 study.
Nominal Rentals – Buildings	• Nationally nominal rentals for space of 500m² rising by 5.3%. • Rental growth remained stable at ±5.7% (2022:Q4).

Regional Performance – Building	Market Rentals:
	• Nominal rentals for prime industrial units (500 m²):
	  o Cape Town and East Rand – 5.0% year-on-year growth
	  o Central Witwatersrand – 6.3% year-on-year growth
	  o Durban – 3.1% year-on-year growth.
	• Real rental growth in this sector remains marginal overall.
	• Net rentals for high-spec logistics properties are currently in vicinity of R70 to R80/m².
	• Until recently developers have been absorbing building cost inflation, which has limited rental growth in the sector.
	Vacancy Rates:
	• Cape Town vacancy rate of 3.8%, the lowest since 2020:Q1.
	• Durban vacancy rate of 4.0%.
	• Remain the highest in the West Rand, PE and Bloemfontein (5% to 10%).

Stand Values	• Nationally, the nominal value of serviced and level stands increased by 6.1% in 2022:Q4 compared to a year earlier. • For the full 2022, stand values grew by 4.9%, a strong improvement from the roughly 1% growth in 2021. • Stand values remain in negative territory in real terms after adjustment for the sharp increase in building construction inflation. • The faster growth in stand values is in line with the upward move in rentals. • Industrial stand values tend to track industrial rental trends. • Poor market-rental growth translates into very weak stand-value growth, and strong market rental growth results in very strong stand value growth.
Booster	• Fundamentals are strong in Durban due to the 2021 lootings and 2022 floods. • Johannesburg is seen to be capturing demand that would usually be directed towards Durban and Umhlanga, due to increased levels of safety and security after the riots and the lack of available suitable stock after the floods.
Outlook	• Older industrial premises are being revamped into business parks and made suitable for smaller users. • Currently there is a lack of stock available in the 20 000 to 30 000m² sub-market. • Occupier-driven development stock generally exceeds 30 000m² and not available for leasing. • Speculative development is usually between 8 000 and 15 000m².

Source: RODE, JLL, SAPOA

3.4 LOCAL ECONOMIC TRENDS AND PERFORMANCE

As per the introduction of the Chapter, the following section is focused on the salient features that define and characterise the local and regional economies. The section seeks to geographically define local and regional economies, analyse the size and composition of the local economy compared to regional economies, outline growth trends and changes, the size and participation of the labour force, and the composition of the labour force as an indicator to current and future skills demand.

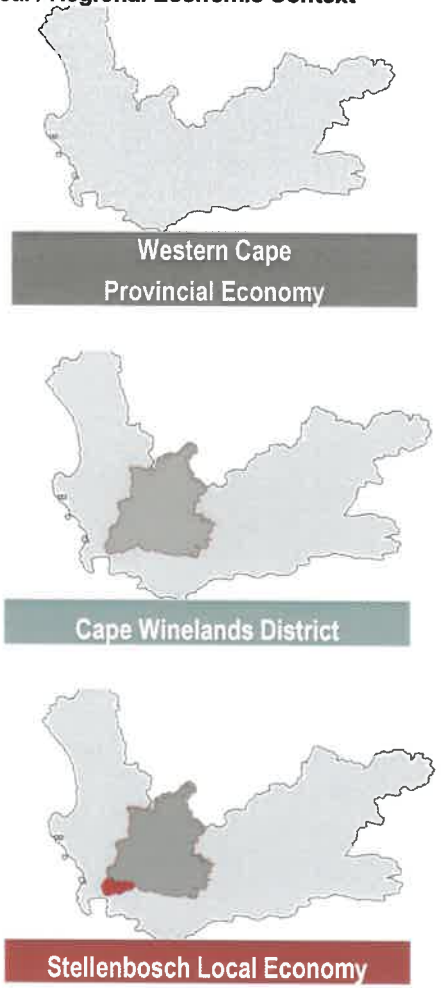
3.4.1 GEOGRAPHICALLY DEFINING THE LOCAL AND REGIONAL ECONOMY

The geographic context of a local or regional economy is an important characteristic that should be defined. The importance of defining the geographic extent of local or regional economies relate to:

- ✓ Clearly defining the geographic area which is incorporated as part of a local/regional economy.
- ✓ Understanding the extent of economic functions that contribute to a local/regional economy's and
- ✓ Clearly understanding the spatial context and inter-relations between a local/regional economy and its surrounding areas and

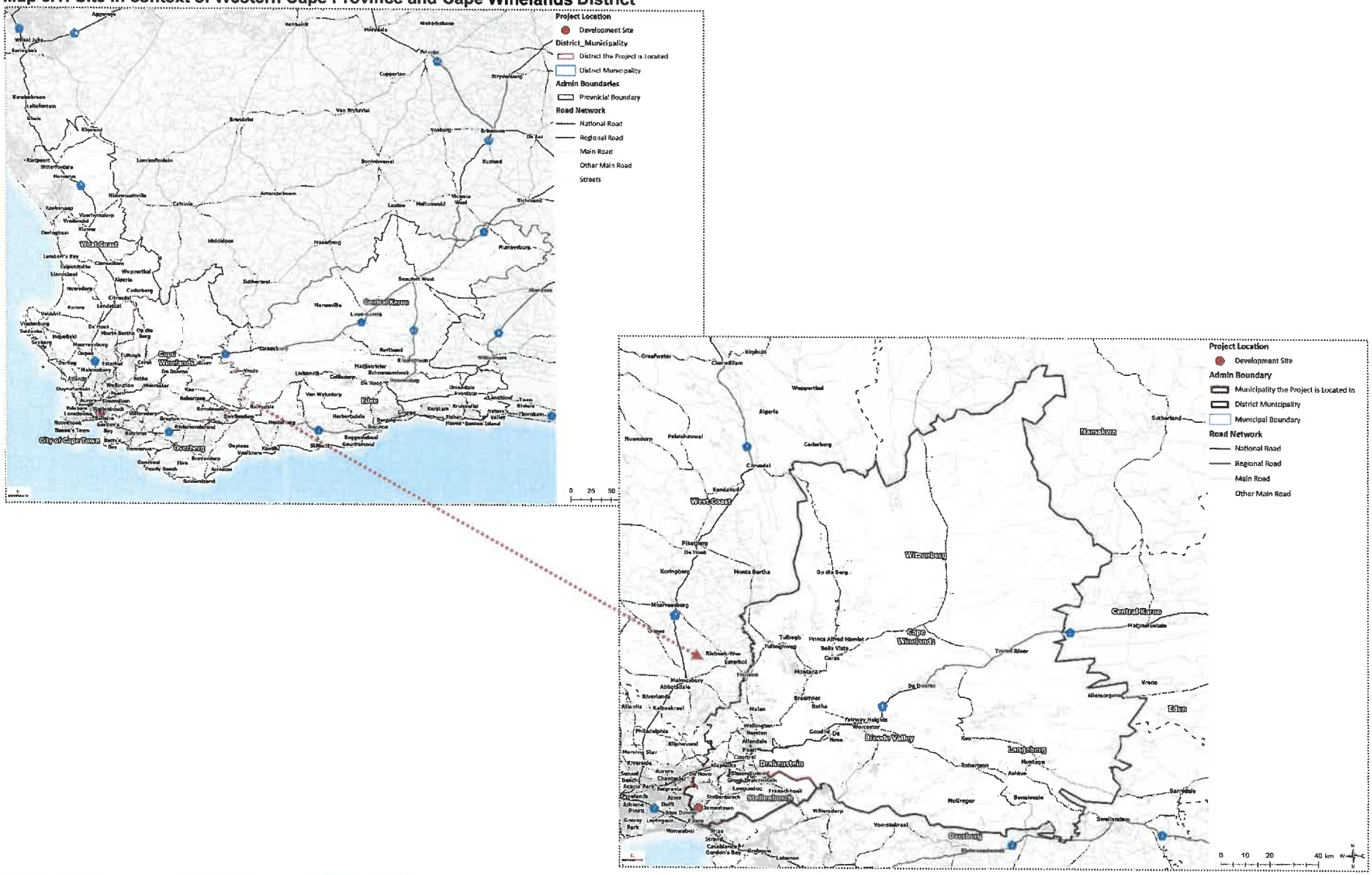
Defining the geographic context of a local or regional economy thus enables targeted analysis and a clear understanding of how a local or regional economy could impact/influence the proposed project.

Diagram 3.2: Local / Regional Economic Context

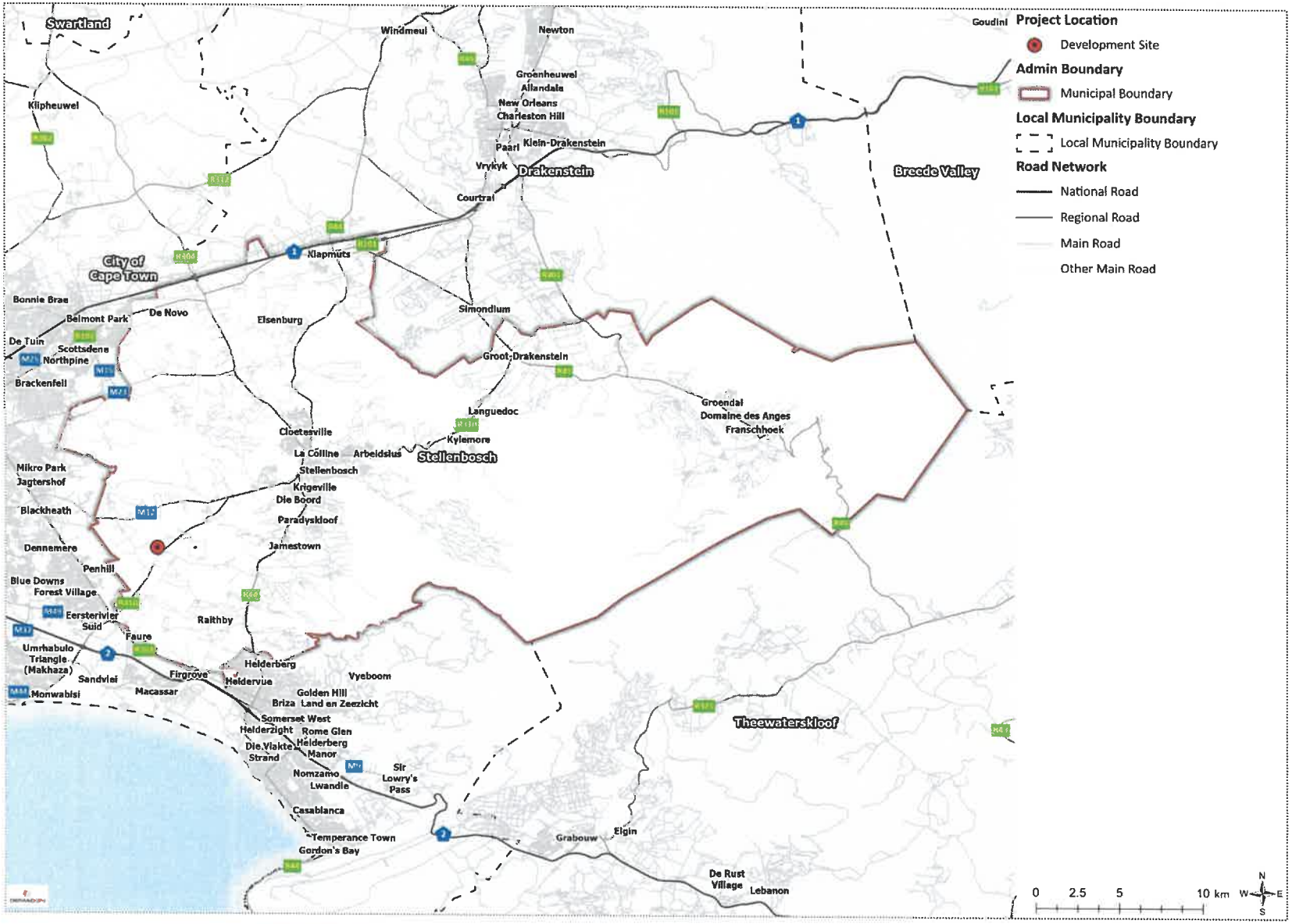


From a provincial economic perspective, the proposed project is located in **Cape Winelands District** within **Stellenbosch Local Economy** and will be analysed in the section below:

Map 3.1: Site in context of Western Cape Province and Cape Winelands District



Map 3.2: Site in the context of Stellenbosch Local Economy



3.4.2 ECONOMY SIZE AND STRUCTURE - STELLENBOSCH LOCAL ECONOMY

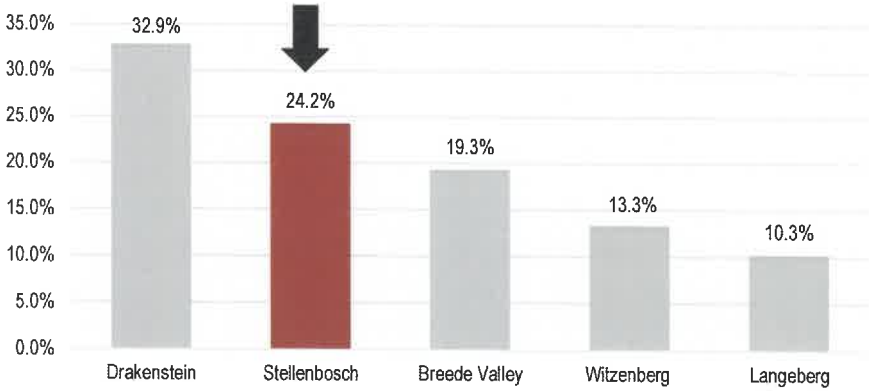
ECONOMY SIZE (*Current*)

Stellenbosch Local Economy	**Cape Winelands** District Economy	**Western Cape Province** Provincial Economy
R13 billion	R95 billion	R848 billion

ECONOMY CONTRIBUTION (*Current*)

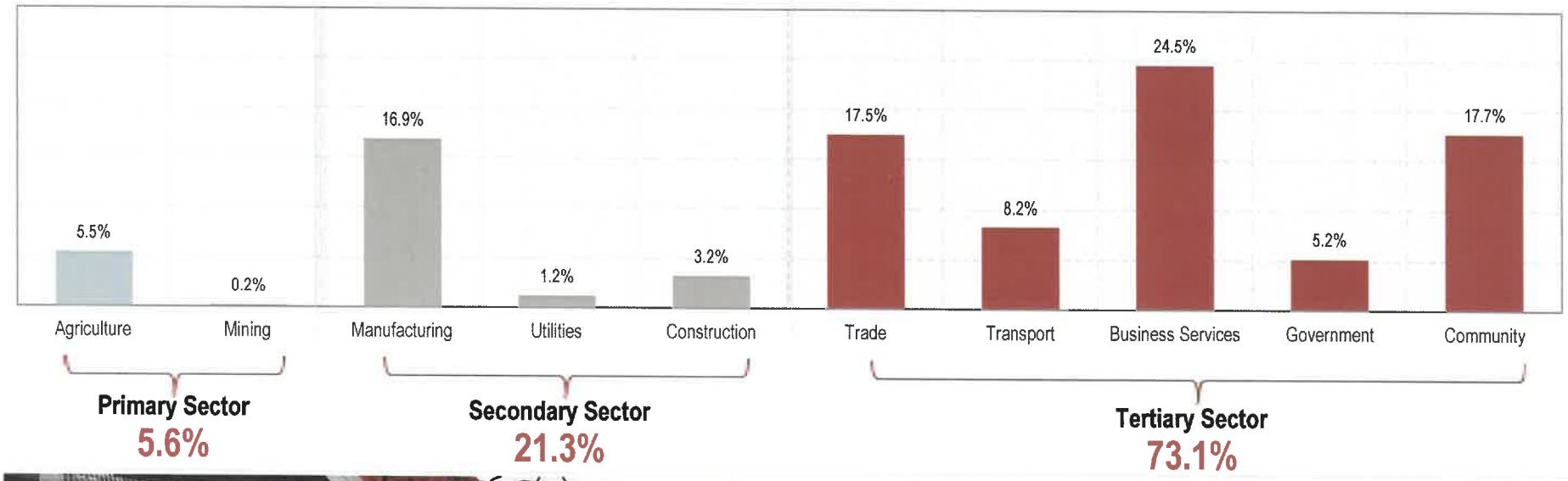
Stellenbosch Local Economy contribution to Cape Winelands District Economy	**Stellenbosch Local Economy** contribution to the Western Cape Province	**Stellenbosch Local Economy Local Economy** to the National Economy
13.6%	1.5%	0.2%

SPATIAL CONTRIBUTION TO CAPE WINELANDS DISTRICT ECONOMY (Current)

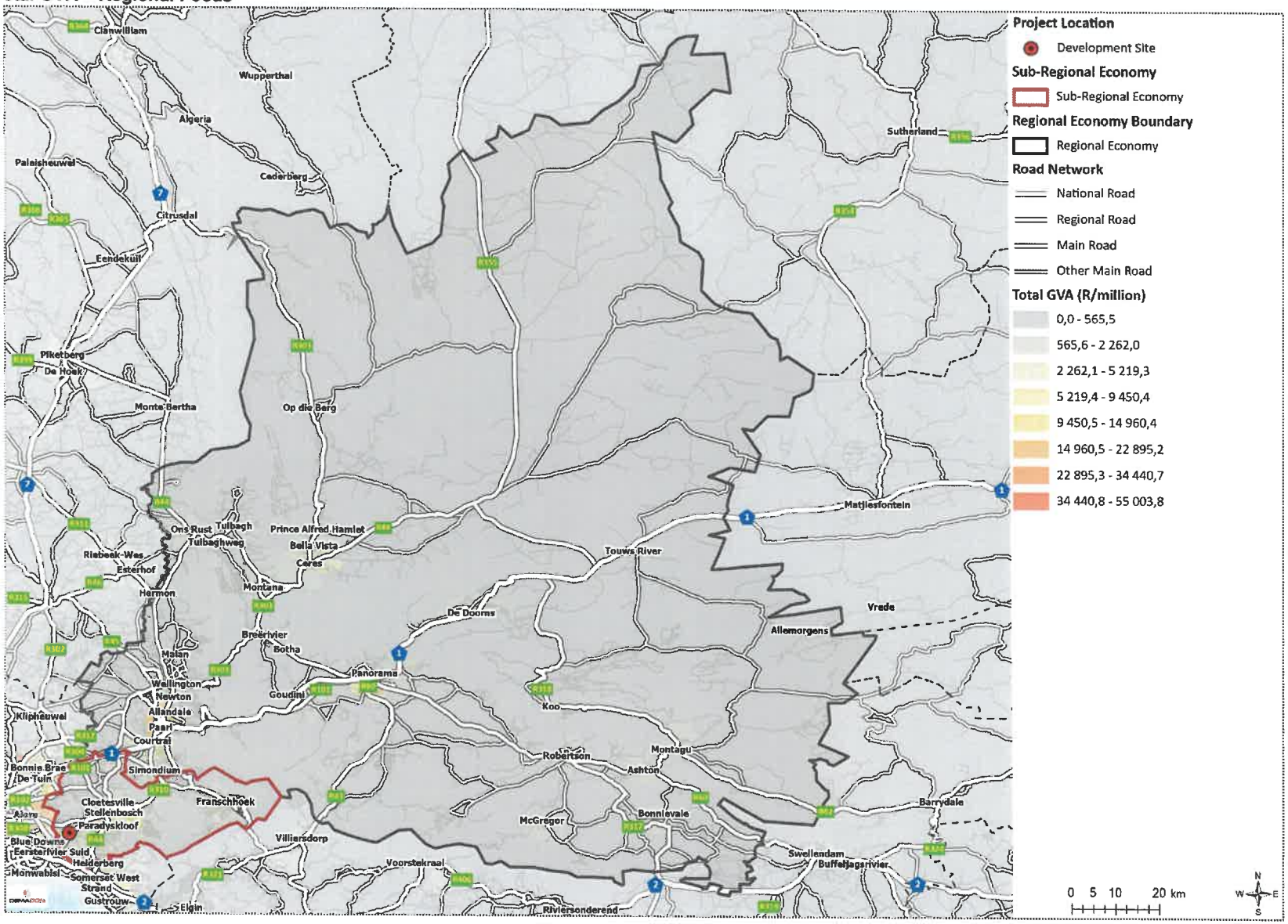


The local economy is the fourth largest contributor to the total economy of the **Cape Winelands District.** The local economy is characterized by **tertiary economy** activities with a strong **business services** component.

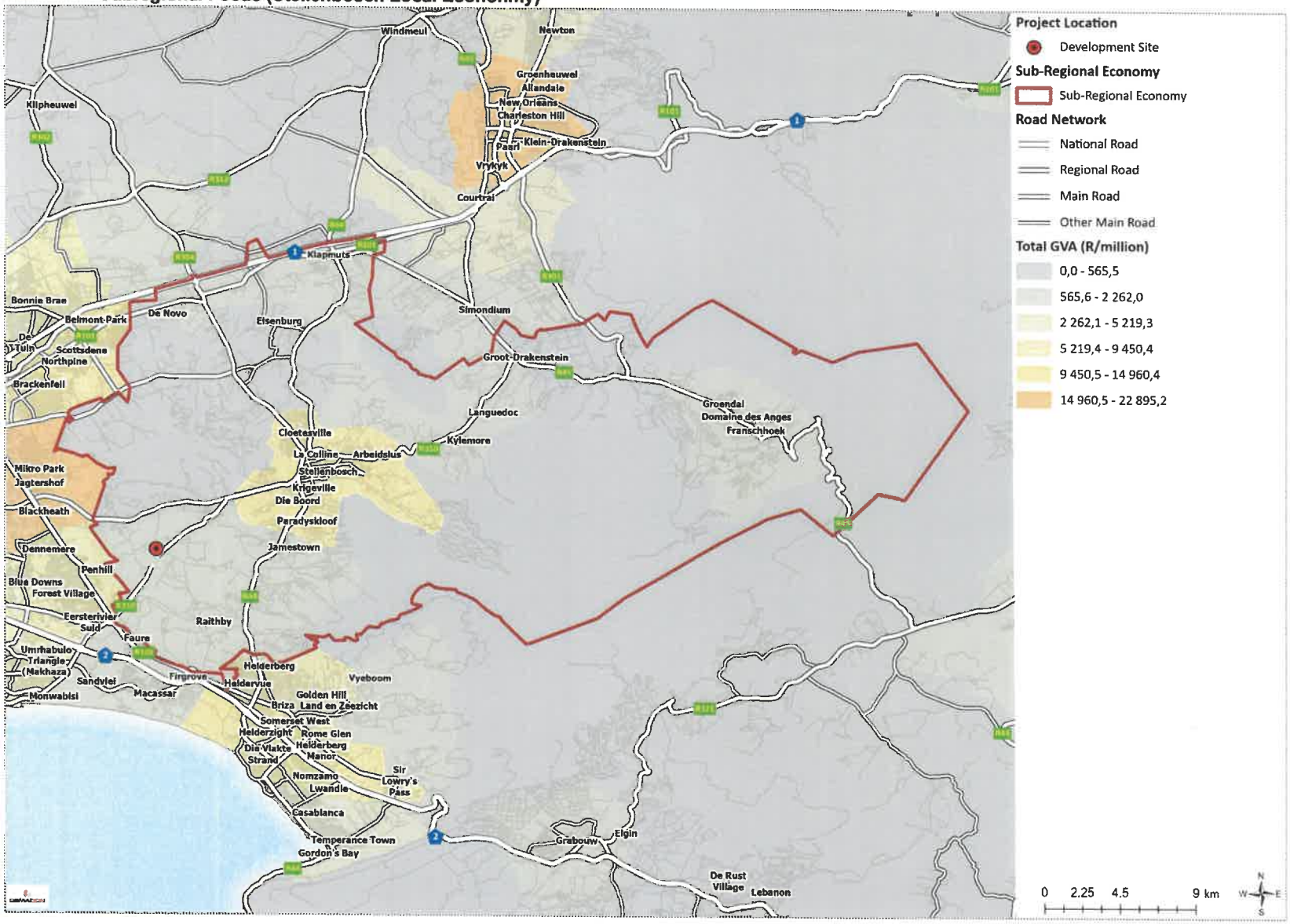
ECONOMY STRUCTURE (*Current*)



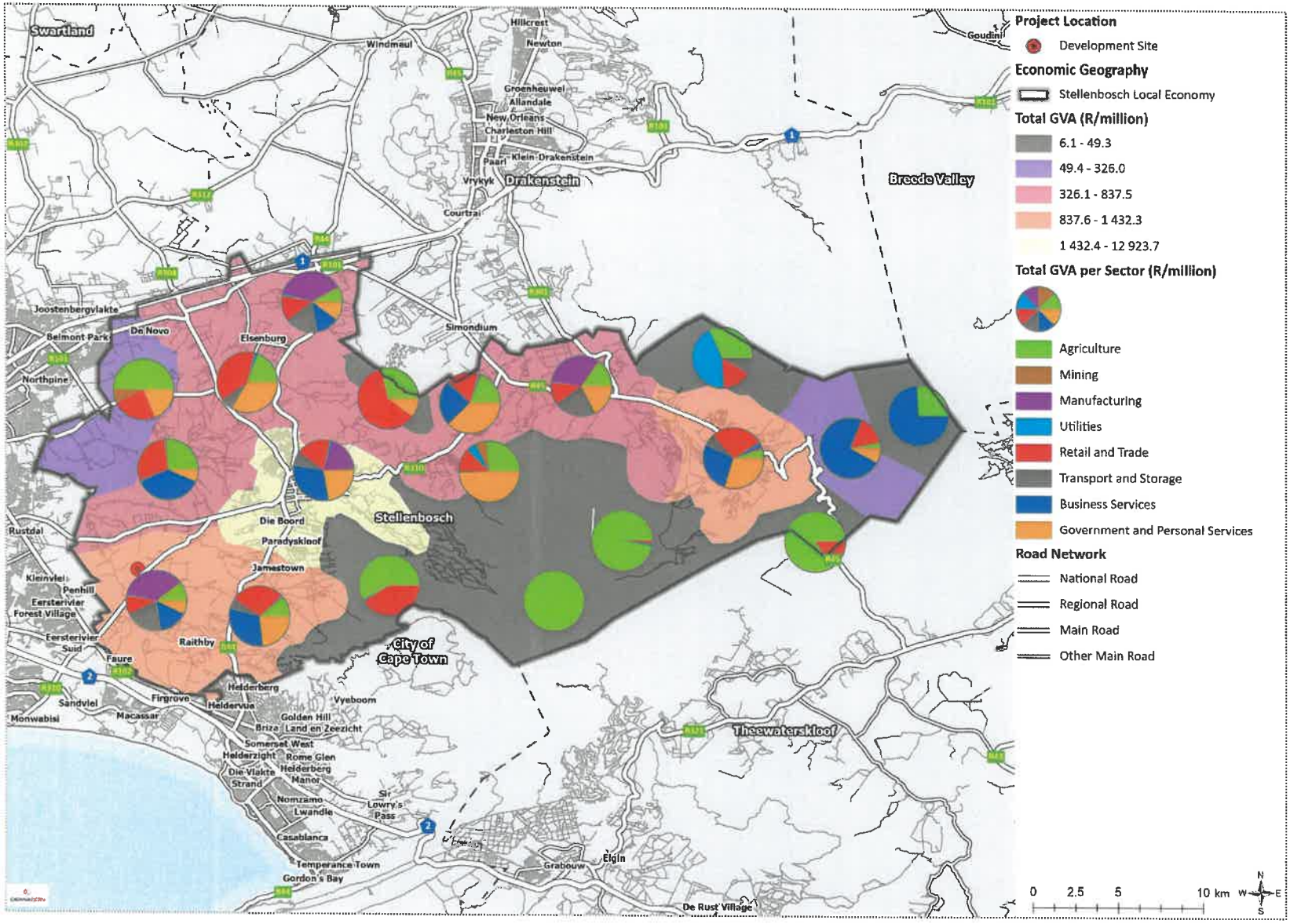
Map 3.3: Total GVA – Regional Focus



Map 3.4: Total GVA – Subregional Focus (Stellenbosch Local Econonmy)



Map 3.5: GVA Distribution



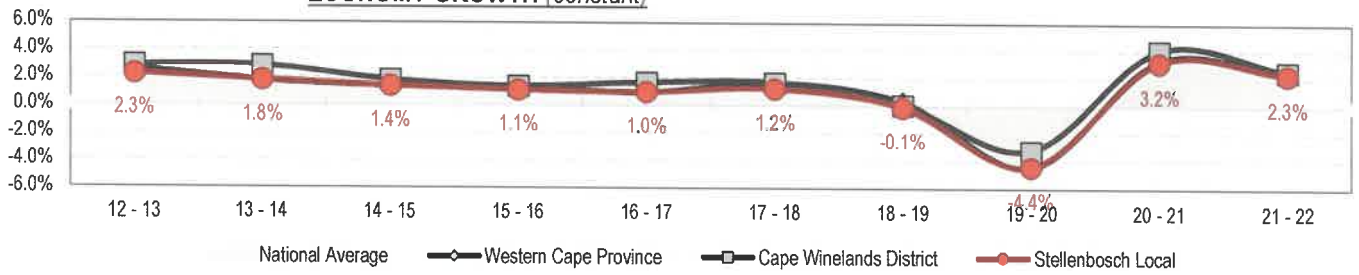
3.4.3 ECONOMIC GROWTH AND HOUSEHOLD CONSUMPTION AND EXPENDITURE - STELLENBOSCH LOCAL ECONOMY

Average Annual Economic Growth

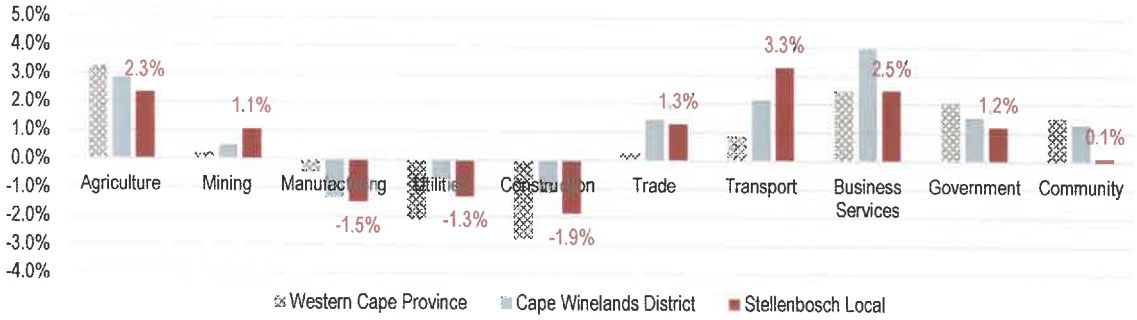
Cape Winelands District
1.0% 5-year growth
1.6% 10-year growth

Stellenbosch Local Economy
0.4% 5-year growth
1.0% 10-year growth

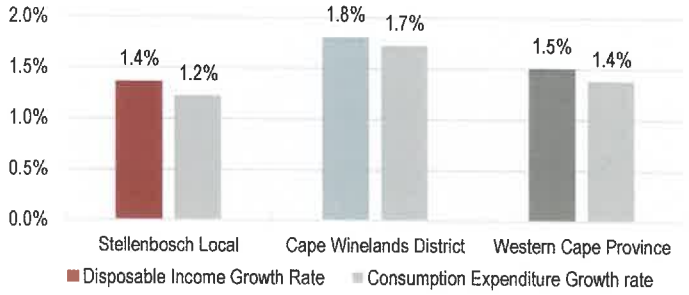
ECONOMY GROWTH *(constant)*



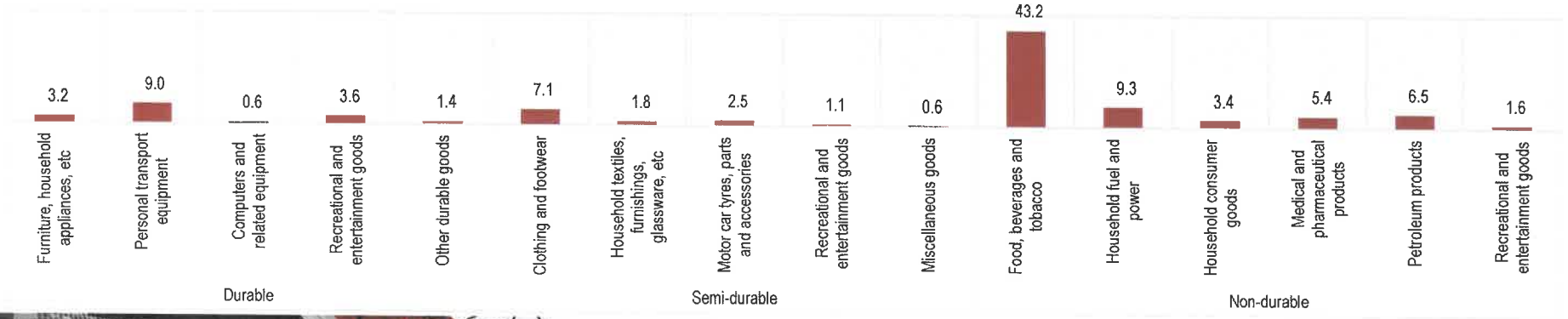
AVERAGE ANNUAL GROWTH PER ECONOMIC SECTOR



DISPOSABLE INCOME & CONSUMPTION EXPENDITURE



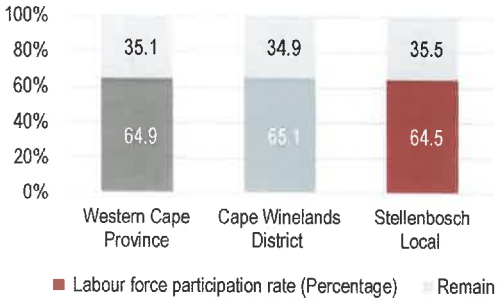
HOUSEHOLD EXPENDITURE PER CONSUMPTION ITEM



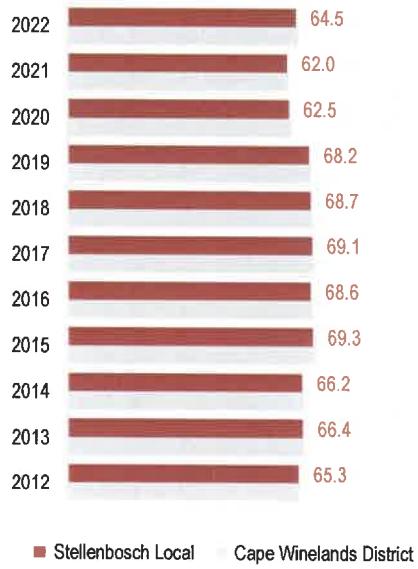
3.4.4 LABOUR FORCE PARTICIPATION – STELLENBOSCH LOCAL ECONOMY

LABOUR FORCE PARTICIPATION

64.5% of the potential labour force participate in the local economy



Compared to the national average, the local economy maintains, on average, slightly **lower** labour force participation rate compared to the district.



STRUCTURE OF EMPLOYMENT



71.9% Formal employment (2022)

28.1% Informal employment (2022)

Total formal jobs in Stellenbosch Local Economy since 2012: **56 966**
Formal Jobs Gained 10yr: **10 092**
Formal jobs per annum: **1 009**
Unemployment rate: **19.3%**

21 669 informal jobs exist in the local economy in 2021

The **Informal economy** increased with **3 045 jobs** since 2011 at an average rate of **305 jobs** per year

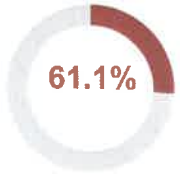
STRUCTURE OF EMPLOYMENT (2022)



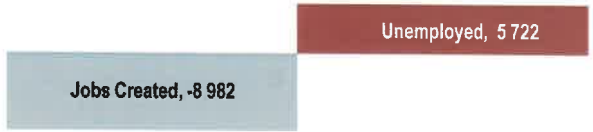
	Skilled	Semi-Skilled	Low-Skilled
Jobs (2022)	14 308	23 967	18 691
Gain Since 2022	2 784	6 468	840
Average Gain	278	647	84

DEMAND FOR EMPLOYMENT

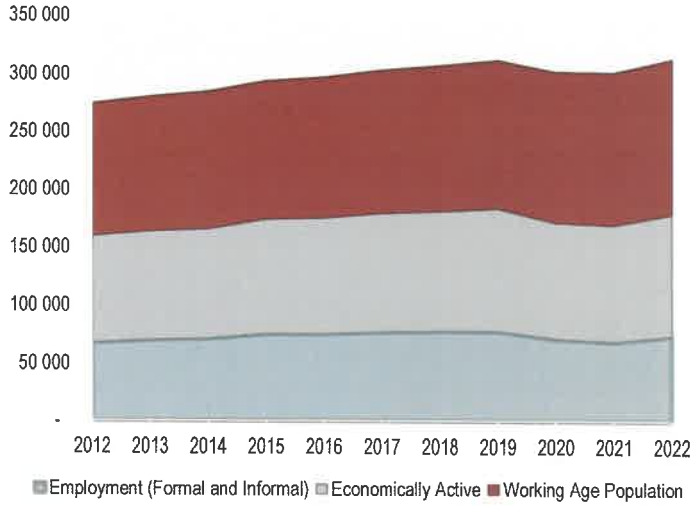
14 704 people became **economically active** since 2012



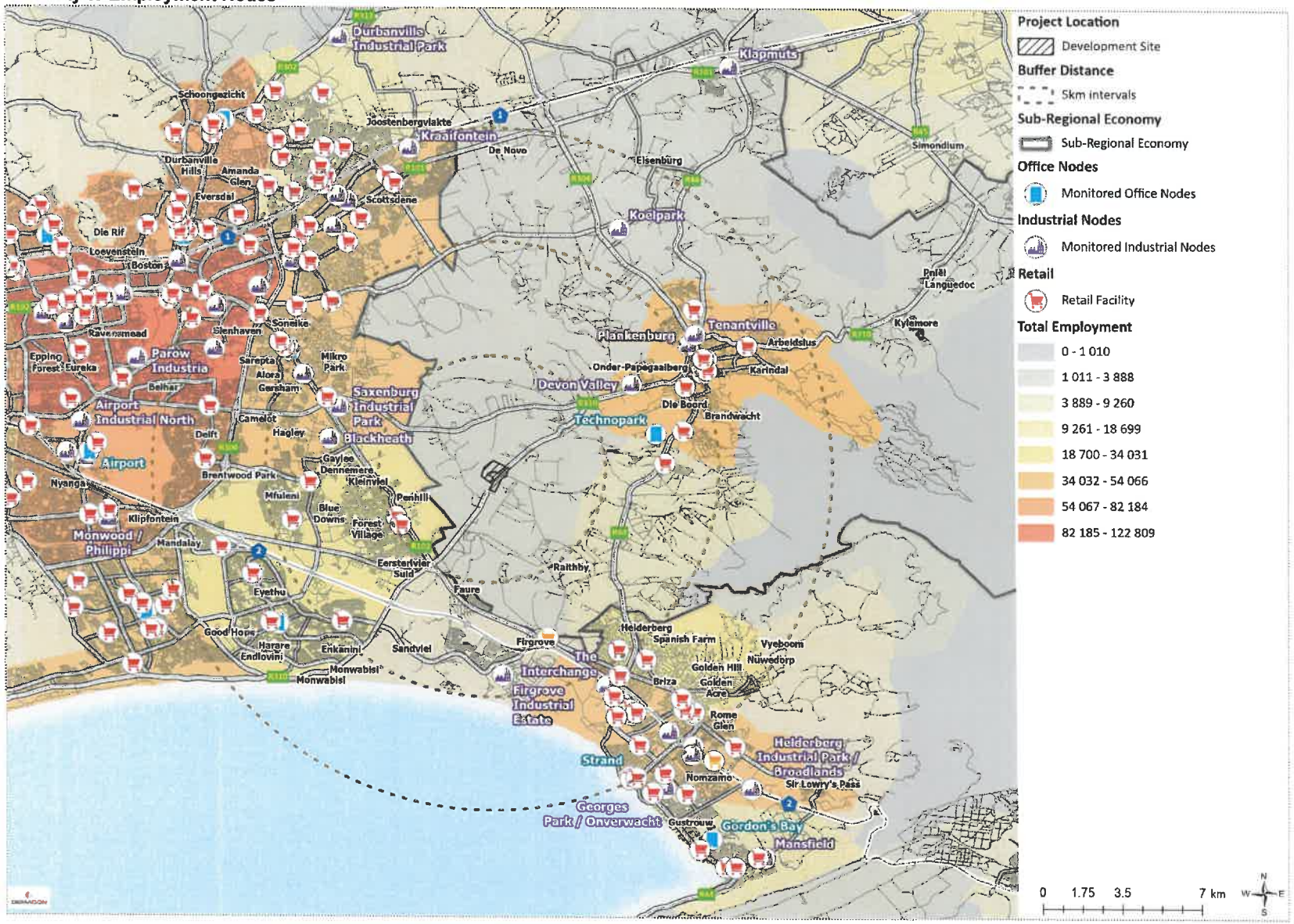
Found **employment** since 2012



Employment Demand Profile



Map 3.6: Proximity to Employment Nodes



3.5 SYNTHESIS

ECONOMY SIZE AND DISTRIBUTION

- ✓ The size of the local economy in relation to other economic geographies provides an indication of the relative importance of a local economy in the context of the broader economic environment within which it functions.
- ✓ **Stellenbosch Local Economy** proportionally contributes:
  - 0.2% to the national economy.
  - 1.5% to the total economy of Western Cape Province and
  - 13.5% to Cape Winelands District.
- ✓ The local economy is the **second largest** contributor (24.2%) to the total economy of the Cape Winelands District.
- ✓ The local economy is characterized by **tertiary economy activities** with a strong **business services** (24.5%) component followed by the community services sector contribution of 17.7%.

ECONOMIC PROFILE

- ✓ To highlight the economic growth trends of Stellenbosch Local Economy, reference is made to the growth and associated trends of sub-sectors that make-up the economy. The reference focus on the proportional contribution made by each economic sub-sector to the total **Stellenbosch Local Economy.**
- ✓ The historical trends for the local economy as well as contributions made by each economic sub-sector to the total economy of the local economy shows that in 2022, the **tertiary economic sector** proportionally contributed **73.1%** to the total local economy.
- ✓ The **secondary sector** proportionally contributes **21.3%** to Stellenbosch Local Economy.
- ✓ The **primary sector** contributes **5.6%** to the local economy,
- ✓ Proportionally, the **business services sector** (30.7%) is the single largest contributor to the local economy, followed by the **community sector** (17.7%) and the manufacturing sector (16.9%).

ECONOMIC GROWTH

- ✓ **Stellenbosch Local Economy** achieved the following annual growth rates:
  - Over the short to medium term cycle, 2017 to 2022, the local economy experienced a growth rate of **0.4%.**
  - An average annual growth rate of **1.0%** during a long-term cycle between 2012 to 2022.
- ✓ **Cape Winelands District** achieved the following annual growth rates:
  - Over the short to medium term cycle, 2017 to 2022, the local economy experienced a growth rate of **1.0%.**
  - An average annual growth rate of **1.6%** during a long-term cycle between 2012 to 2022.
- ✓ Economic growth in the local and regional economy reflects a similar cyclical trend that correlates with growth trends experienced in the SA domestic economy over the same period of time.

GROWTH IN FINAL CONSUMPTION EXPENDITURE & DISPOSABLE INCOME

- ✓ A positive correlation exists between *final consumption expenditure* and *disposable income*, which in turn reveals similar up-and downturns to the business cycle as a whole.
- ✓ The average annual growth rate for disposable income for the period 2012 to 2022 for **Stellenbosch Local Economy** is 1.4%, while over the short to medium term (2017 to 2022) the average annual growth rate was 1.4%.
- ✓ The average annual growth rate of final consumption expenditure in the local economy for the period 2012 to 2022 is 1.2%.

HOUSEHOLD EXPENDITURE PER CATEGORY

- ✓ The trade sector is largely driven by expenditure on goods and services (retail sales) by a wide variety of consumer elements such as households, businesses, government departments and exports. Retail sales can be classified in accordance with different types of goods and services.
- ✓ Goods, in this instance, can be considered in terms of durable, semi-durable and non-durable goods. *Durable goods* refer to items such as furniture, personal transport equipment and entertainment goods, while semi-durable goods refer to clothing, footwear, and household textiles.

- ✓ *Non-durable goods* refer to food, medicine, and petroleum products. These goods are consumed and used on a daily basis.
- ✓ A general urban South African trend indicates that the decrease in expenditure directed towards non-durable groceries is declining year-on-year with a rise in consumption expenditure on semi durables including clothes and footwear.
- ✓ These trends can be ascribed to the high rate of inflation on non-durables (especially meat) and unabated clothing and footwear deflation.
- ✓ ***Food / beverages sector*** is the largest section of household expenditure categories, with a proportional contribution of 43.2% in 2022, followed by household fuel and power (9.3%).
- ✓ The smallest sectors are miscellaneous goods and computers and related equipment sectors, which contributed 0.6%.



EMPLOYMENT AND LABOUR PARTICIPATION

- ✓ The average labour force participation rate for **Stellenbosch Local Economy** amounts to 64.5%, which is slightly lower than the average of the Cape Winelands District of 65.1%.
- ✓ In 2012, there were 46 407 formal jobs, which increased by 8 982 jobs . A total of ±55 389 formal jobs have been created since 2012, translating into 898 jobs per annum.
- ✓ Formal jobs (2022) can be divided into the following categories:
  - Skilled: 14 308
  - Semi-skilled: 23 967
  - Low-skilled: 18 691
- ✓ The *economically active segment* since 2012 amounts to 14 704 with approximately 8 982 jobs created.
- ✓ 61.1% *found employment* within the local economy in 2022.
- ✓ The *unemployment rate* of the local economy amounts to approximately 19.3%.

SOCIO-ECONOMIC PROFILE

4

CHAPTER

4. SOCIO ECONOMIC PROFILE

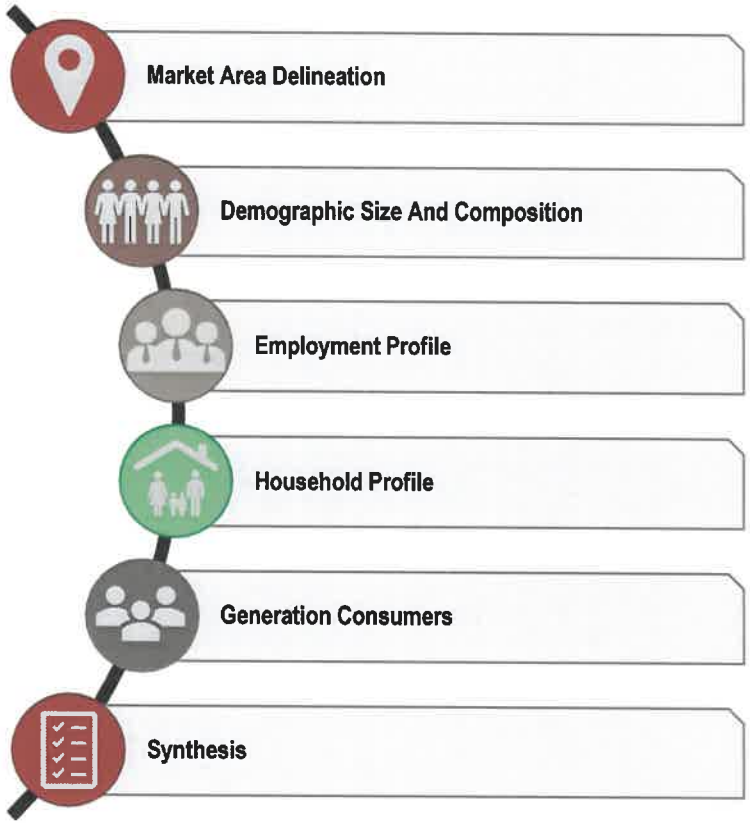
4.1 INTRODUCTION

The demand for economic/non-economic activities is, in part, based on demand generated by the demographic component of a specific market area or catchment. The current demographic composition in a market area coupled with past trends and future potential growth, impact on the current and future demand for economic activities.

The purpose of this chapter is to provide analysis of the demographic component of the resident market area that can be considered alongside Chapter 3 to complete a demographic and economic perspective of interactions between population and their local economic conditions.

The chapter sets out a delineated market area and reviews information about the population that reside in the market area, focusing on demographic and socio-economic characteristics of the resident market population influencing the proposed development location.

The consumer market profile is outlined in terms of the following headings:



277

4.2 MARKET AREA DELINEATION

To gain insight into the socio-economic character of potential market participants to the proposed development, a market area is delineated. A market area assists with determining the main socio-economic market characteristics affecting the proposed development.

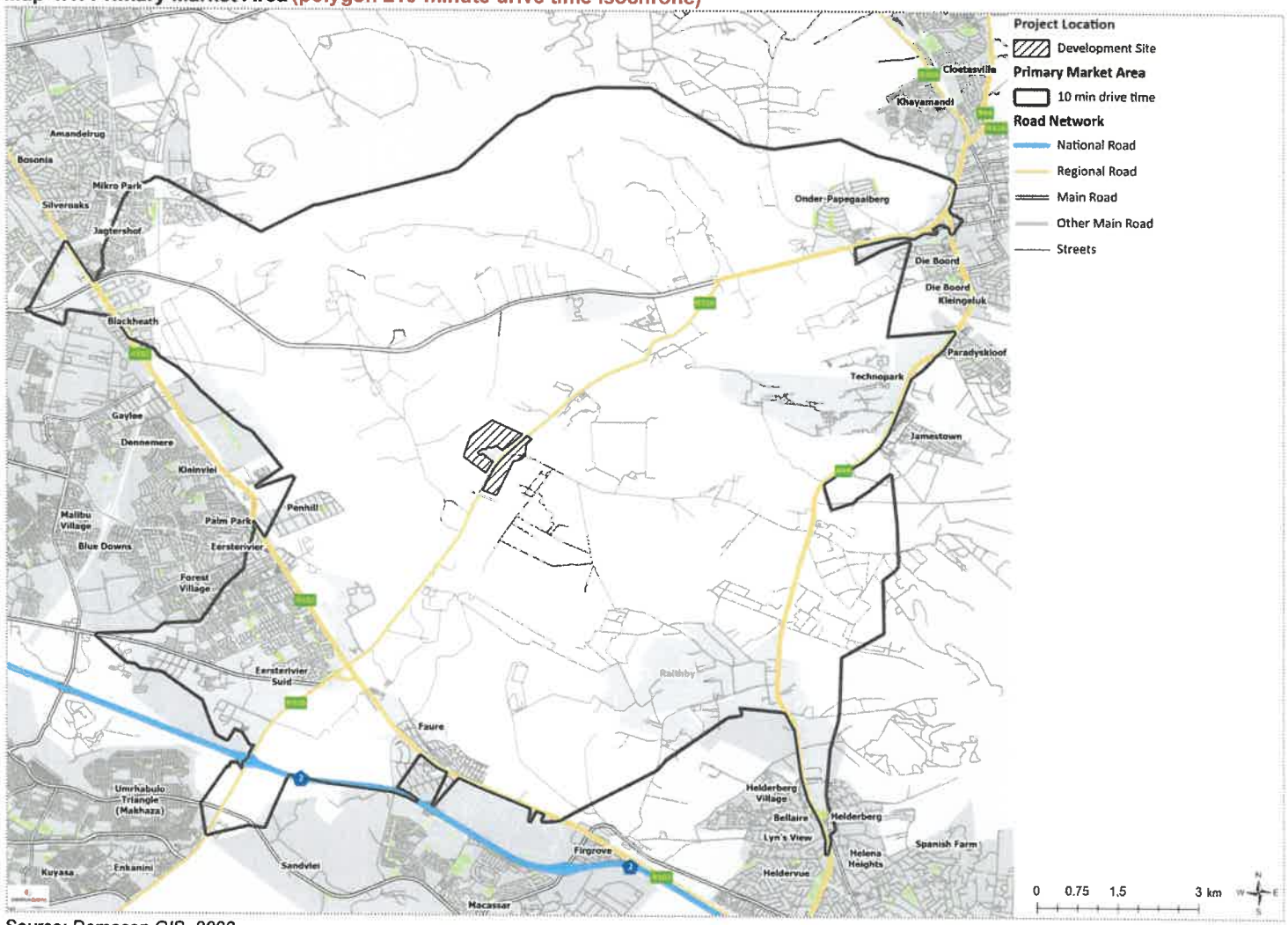
The primary market area for the project is based on a polygon **(±10-minute drive time isochrone).**

This chapter provides the key socio-economic indicators of the primary market, informed by general SACSC criteria, as well as the following:

- Consumer market behaviour and expenditure trends
- Regional and sub-regional levels of accessibility
- Geographic barriers
- General consumer mobility patterns and drive times.

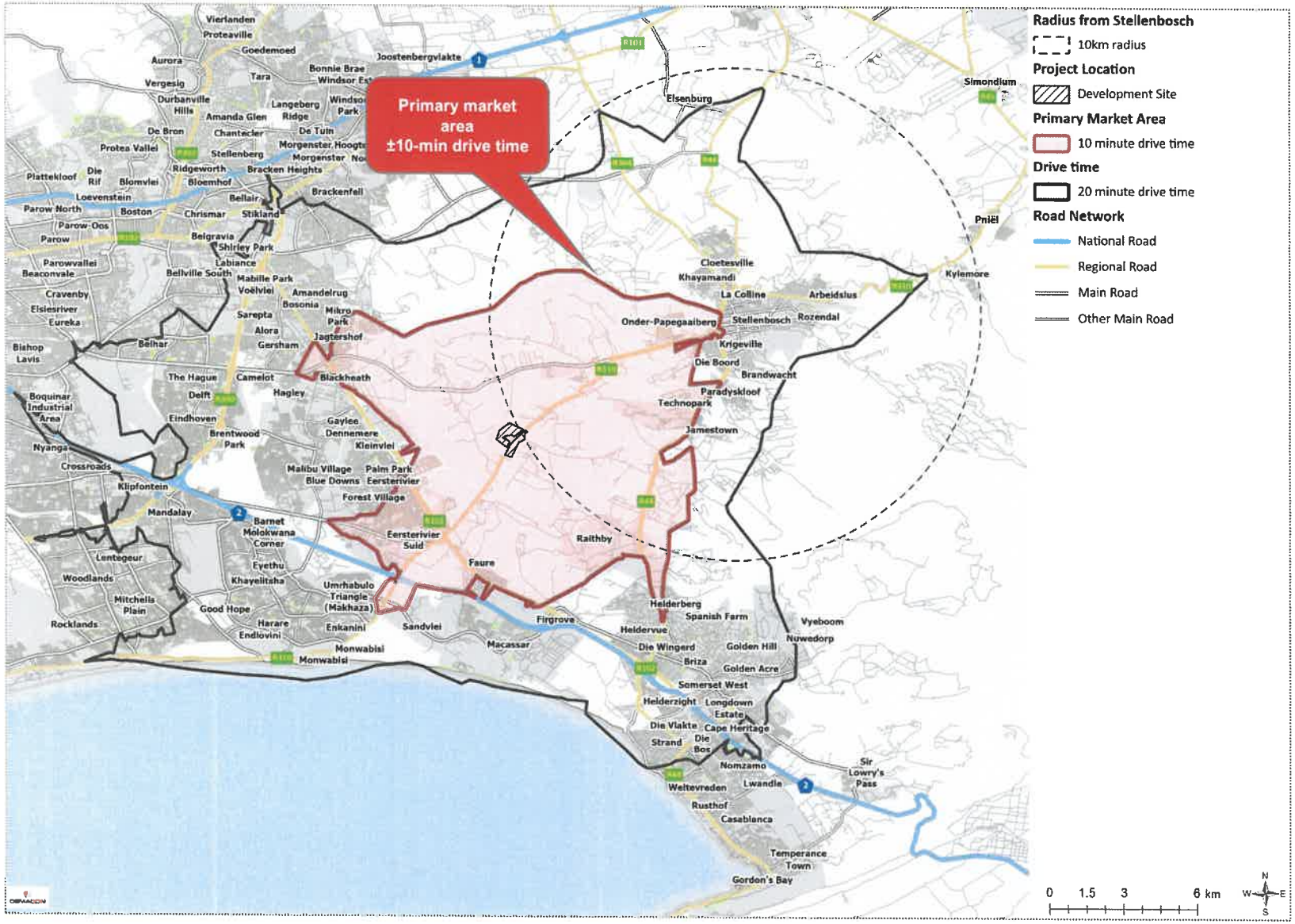
The following section provides an analysis of the demographic profile of the primary market area of the proposed development. The demographic profile considers the primary market area and the demographic component that is resident to the market area.

Map 4.1: Primary Market Area (polygon ±10-minute drive time isochrone)



Source: Demacon GIS, 2023

Map 4.2: Drive Time



4.3 DEMOGRAPHIC PROFILE (PRIMARY MARKET AREA)

The following section provides an analysis of the demographic profile of the **primary market area** of the proposed development. The demographic profile considers the primary market area and the demographic component that is resident to the market area.

4.3.1 DEMOGRAPHIC SIZE AND COMPOSITION

POPULATION SIZE

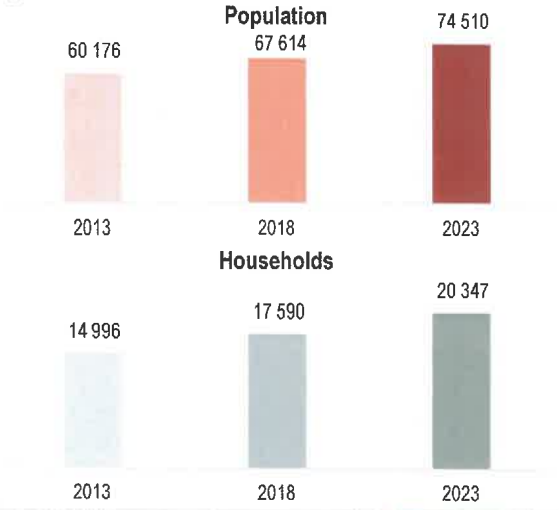
74 510 PEOPLE IN THE **PRIMARY** TRADE AREA

Population Average Annual **Growth Rate** **2.24%**

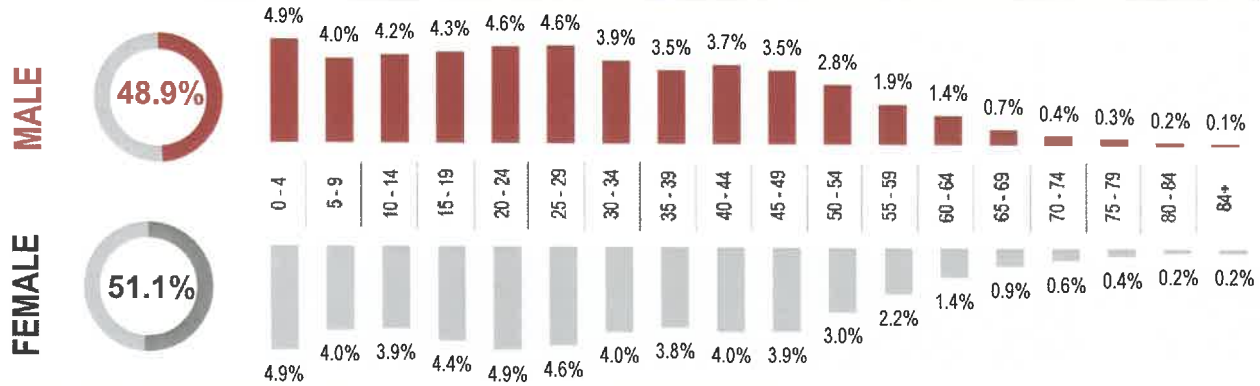
20 347 HOUSEHOLDS

Household Average Annual **Growth Rate** **3.06%**

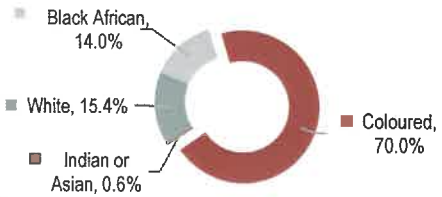
POPULATION & HH GROWTH



AGE AND GENDER PROFILE



RACIAL PROFILE



EDUCATION PROFILE

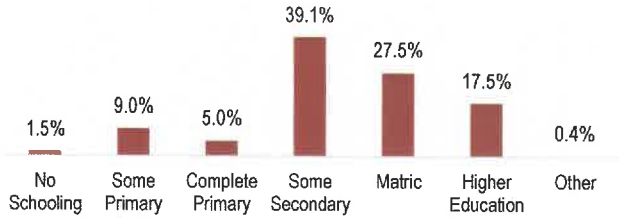
Educational Institution Attended by persons Enrolled at an Institution and Aged 20 years and Older

57.8% attend a **UNIVERSITY**

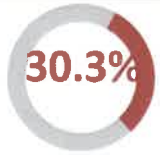
11.0% attend a **FET COLLEGE**

10.5% attend an **OTHER COLLEGE**

Highest Level of Education Obtained - Working Age Population (15 to 64)



MIGRATION PROFILE

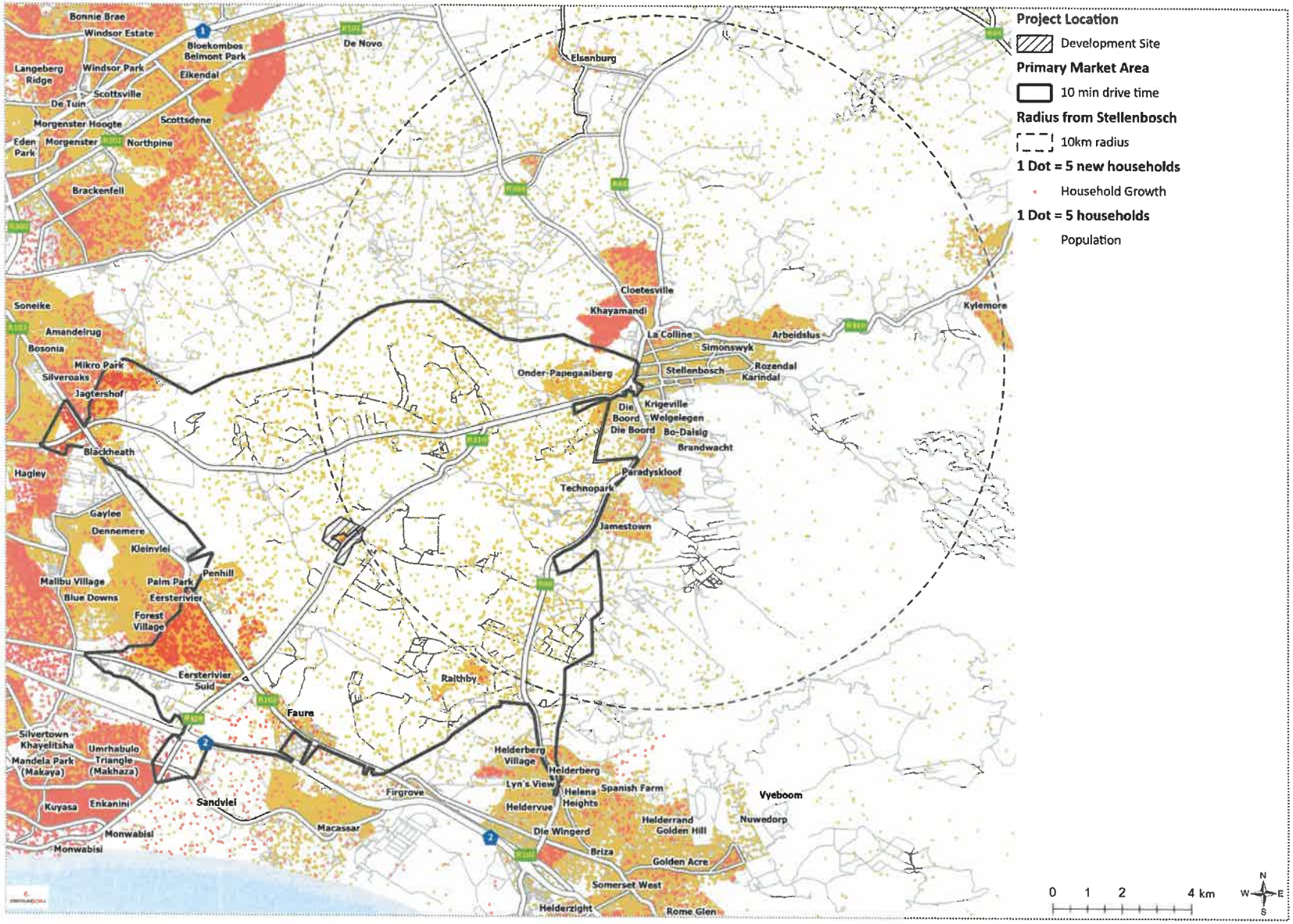


of the population migrated to the market area since 2001

28.8% (of the 30.3%) of migrants are **South African**

1.55% (of the 30.3%) of migrants are from **other countries**

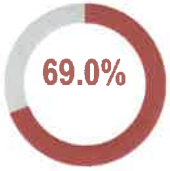
Map 4.3: Household Distribution & Growth

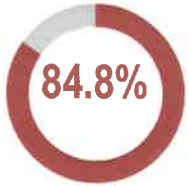


4.3.2 EMPLOYMENT & OCCUPATIONAL PROFILE

EMPLOYMENT PROFILE

ECONOMICALLY ACTIVE POPULATION





EMPLOYED ECONOMICALLY ACTIVE

OCCUPATION PROFILE

Skilled Occupations
27.9%



Clerks
15.4%

Semi-Skilled Occupations
47.9%

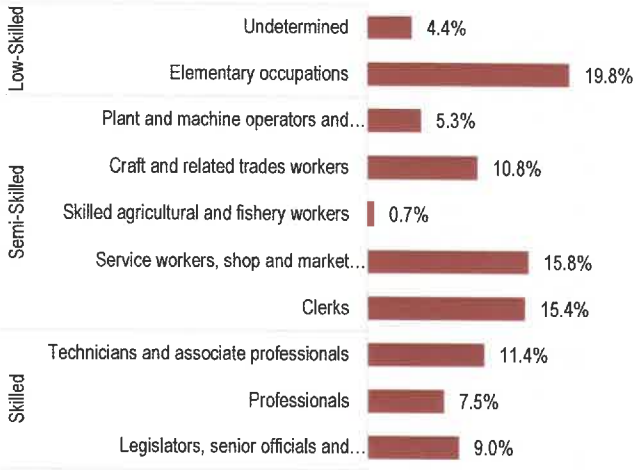


Service workers, shop & market sales workers
15.8%

Low-Skilled Occupations
19.8%



Elementary occupations
19.8%



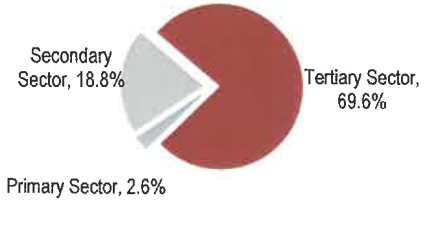
EMPLOYMENT PER INDUSTRY



2.6% Primary Sector

18.8% Secondary Sector

69.6% Tertiary Sector

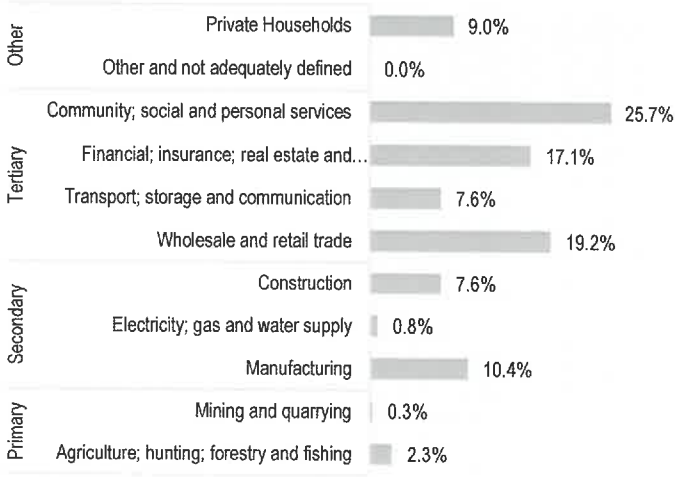


BIGGEST EMPLOYING ECONOMIC SECTORS IN THE MARKET AREA

Community; social and personal services
25.7%

Wholesale and retail trade
19.2%

Financial; insurance; real estate and business services
17.1%



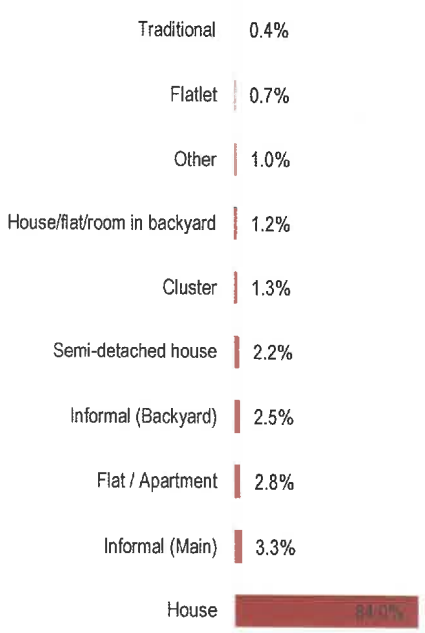
4.3.3 HOUSEHOLD PROFILE

DWELLING TYPOLOGY

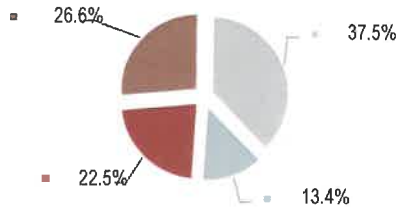
Majority of Households Reside in a **Formal Dwelling** **93.8%**

5.8% of households reside in an **informal dwelling**

0.4% of households reside in a **traditional dwelling**



TENURE STATUS



22.5% of households **own** and have **paid** for the property where they reside

37.5% of households **own** but have not **finished paying** for the property where they reside

26.6% of households **rent** the property where they reside

13.4% of households **occupy** the property where they reside **rent-free**

HOUSEHOLD INCOME PROFILE

Average annual household income for all SEM Groups (2023)

R271 759

Average annual household income for SEM 2+ Groups (2023)

R429 189



Average monthly household income for all SEM Groups (2023)

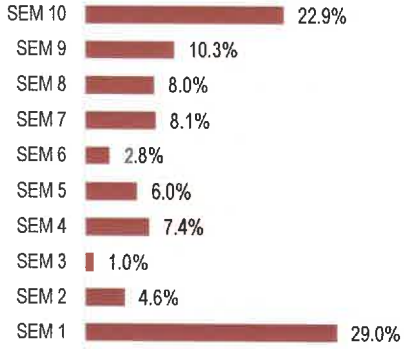
R22 647

Average monthly household income for SEM 2+ Groups (2023)

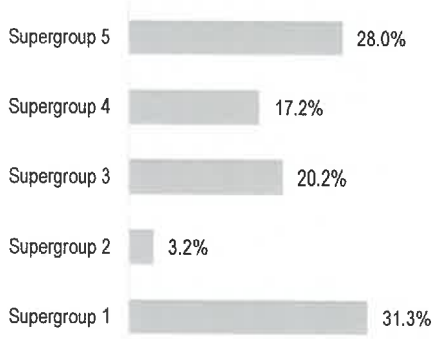
R35 766

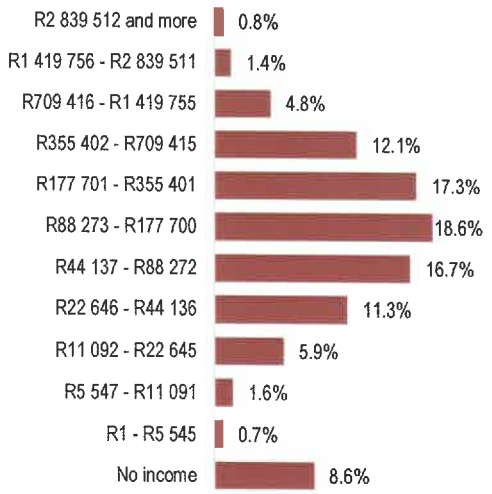
SEM PROFILE DISTRIBUTION

SEM Distribution



SEM Supergroup Distribution





4.3.4 LSM TO SEM

The discontinuation of the All Media Products Survey (by the South African Advertising Research Foundation (SAARF), on which the Living Standard Measure (LSM) classifications were based, gave way to a new measurement system called The Socio-Economic Measure model (SEM). The newly released SEM model is a more accurate reflection of South African society in terms of how people live and is not dependent solely on durables, as the historical LSMs have been. The new SEM offers marketers a statistical and technical solution that depicts how our citizens are living, not only what they have in their homes.

LSM VS SEM

LATEST VARIABLES:

- Hot running water
- Fridge/freezer
- Flush toilet in house/on plot
- VCR in household
- Vacuum cleaner/floor polisher
- Have a washing machine
- Have a computer at home
- Have an electric stove
- Have TV set(s)
- Have a tumble dryer
- Have a Telkom telephone
- Hi-Fi or music centre
- Built-in kitchen sink
- Home security service
- Have a deep freeze
- Water in home/on stand
- Have M-Net and/or DSTV
- Have a dishwasher
- Metropolitan dweller
- Have a sewing machine
- DVD player
- House/cluster/townhouse
- 1/more motor vehicles
- No domestic worker
- No cell phone in household
- 1 cell phone in household
- None or only one radio
- Living in a non-urban area

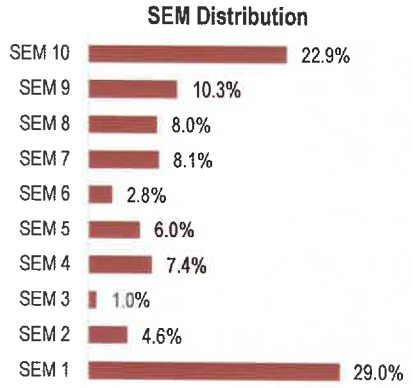
FINAL VARIABLES:

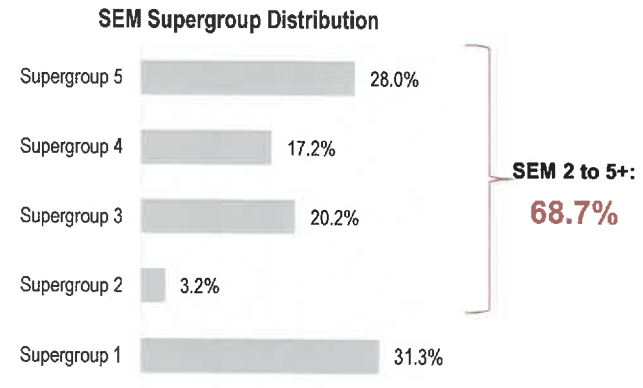
- Post office nearby
- Police office nearby
- Built-in kitchen sink
- Home security service
- Motor car
- Deep freezer which is free standing
- Microwave oven
- Floor polisher or vacuum cleaner
- Washing machine
- Floor material
- Water source
- Type of toilet
- Roof material
- Number of sleeping rooms

- Focus on structural items
- Low reliance on durables
- No reliance on technology items
- Short and easy to use

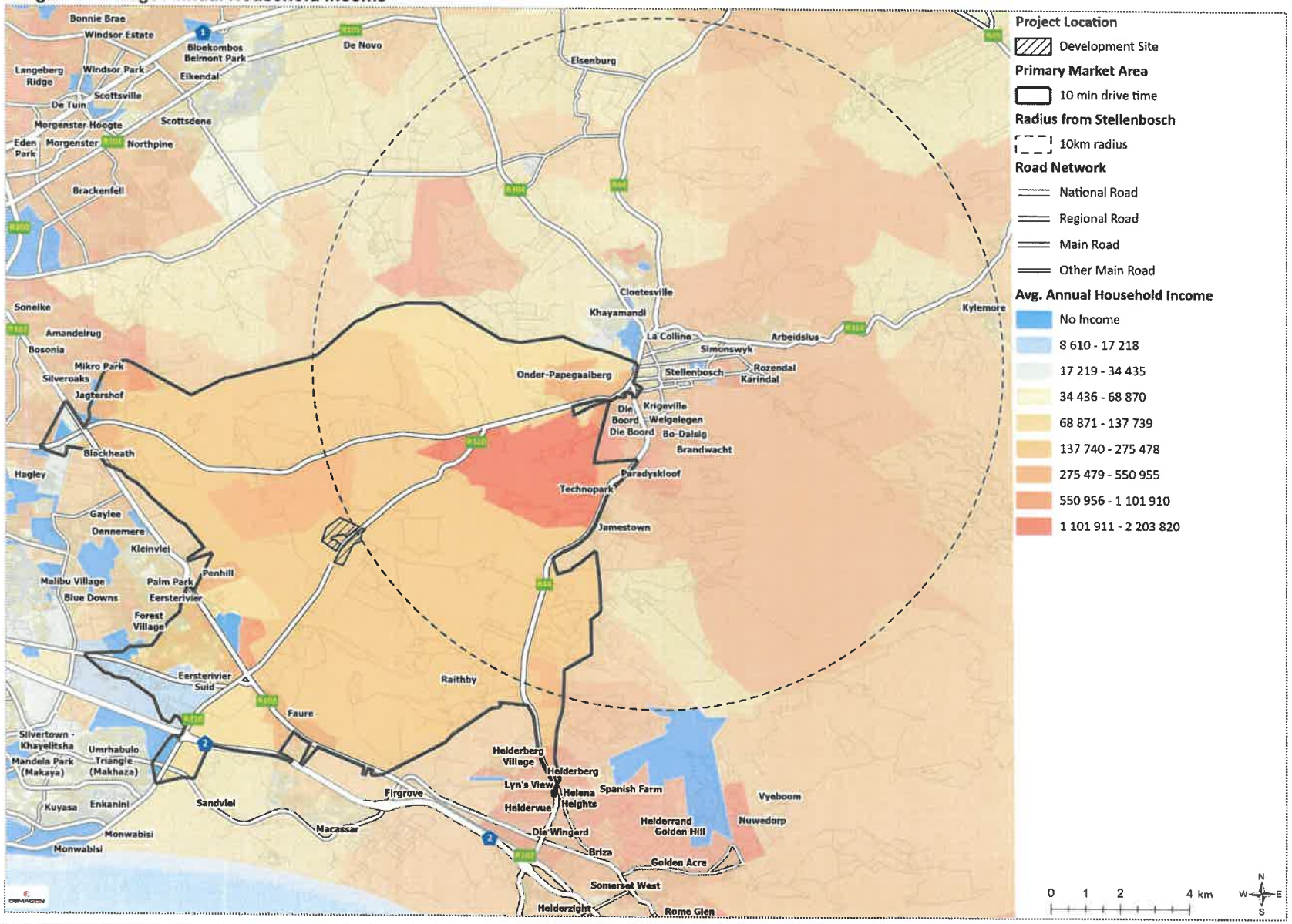
LIMITATIONS OF LSM:

- LSM is not related to any specific brand or category
- LSM cannot accurately determine spending power
- Consumers have changed, LSM hasn't

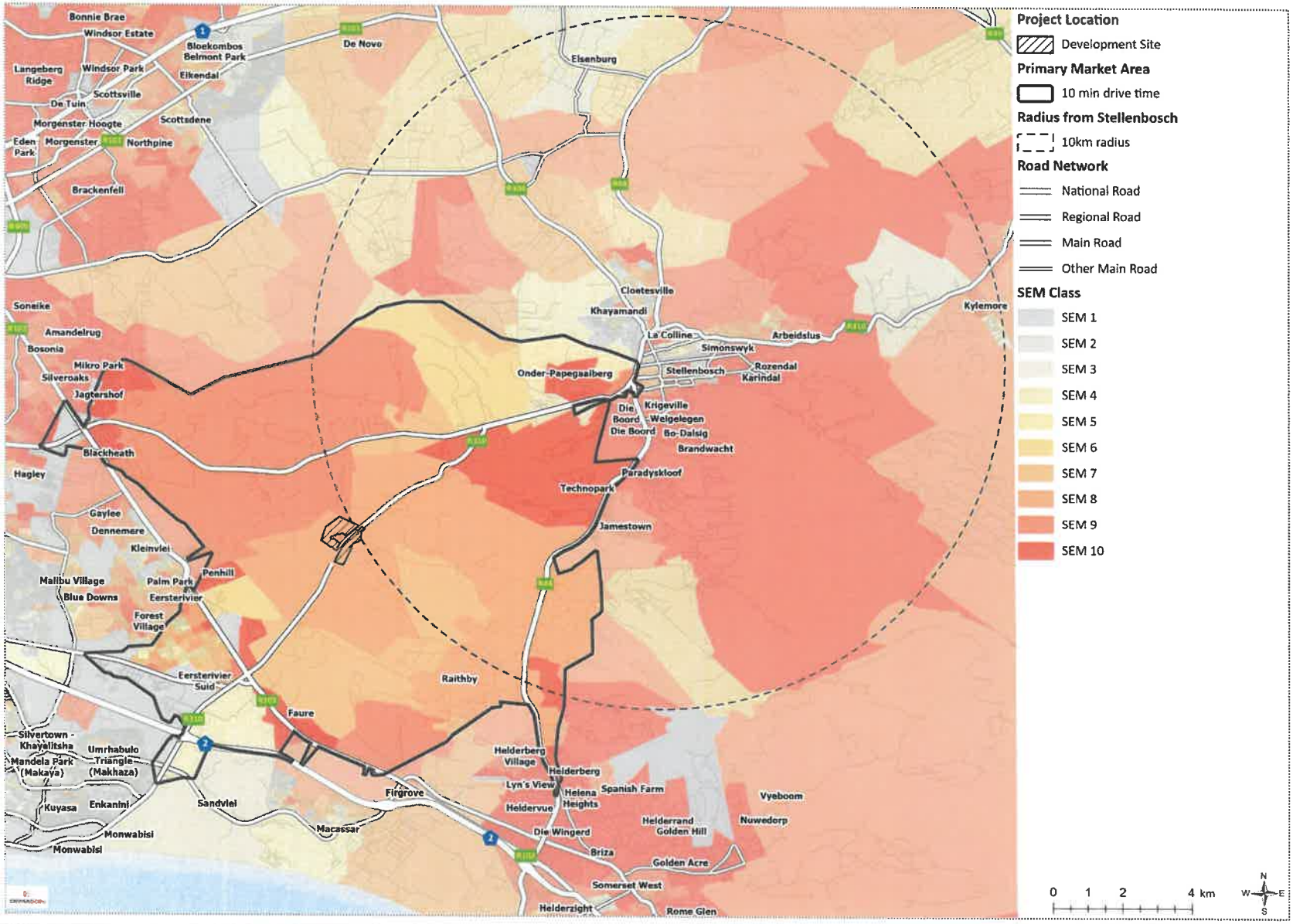




Map 4.4: Weighted Average Annual Household Income



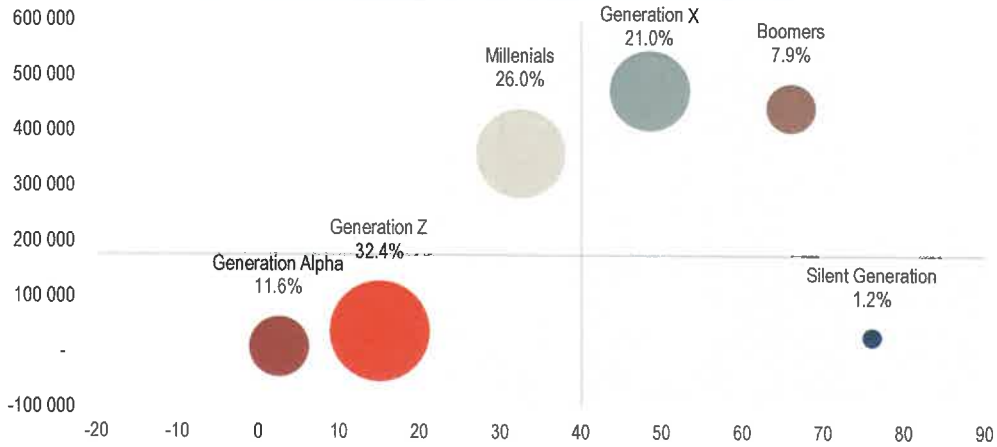
Map 4.5: SEM Profile



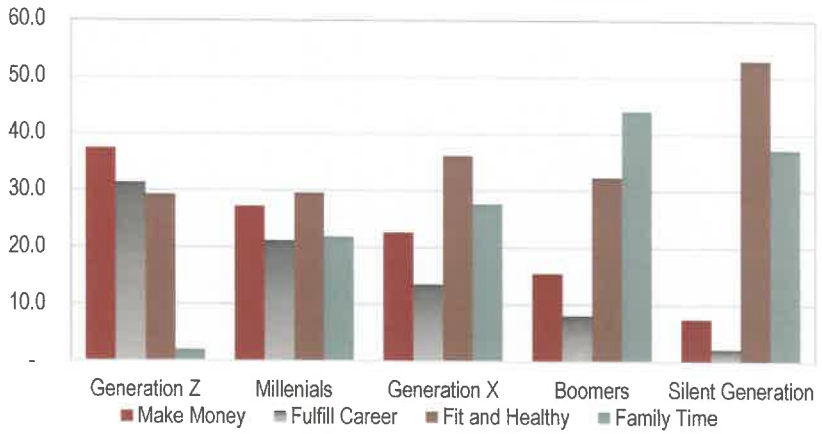
4.3.5 GENERATION CONSUMERS

Changes have been taking place within shopping centres, largely due to changes in their market segment's life styles. Increased emphasis is being placed on the creation of spaces and atmospheres within malls where people feel comfortable and are encouraged to linger longer. Focus is turned towards the experience and convenience of centres, offering consumers the opportunity to relax and interact with friends and family.

CONSUMER MARKET SEGMENTS



MAIN ASPIRATIONS OF CONSUMER SEGMENTS



GENERATIONAL CHARACTERISTICS

	ALPHA GENERATION	GENERATION Z	MILLENNIALS	GENERATION X	BABY BOOMERS	SILENT GENERATION
Current Age	0-5 years	6-24 years	25-40 years	41-56 years	57-75 years	76+ years
Percentage of Target Market	11.6%	32.4%	26.0%	21.0%	7.9%	1.2%
Characteristics	• Raised in homes with smart speakers & devices. • Technology is built into everyday items.	• Flexible work environments • Clear directions & transparency • Seek personal growth in reaching performance goals.	• Seek meaningful work. • Want to grow and use creative skills. • Technology savvy • Grow professionally.	• Laid back • Low-key & independent • Entrepreneurial spirit • Value-friendly, flexible workplaces & productivity over hours spent at work.	• Hardworking • Ambitious • Seek luxury status symbols in their personal lives.	• Traditional values • Financial prudence • Interpersonal respect • Determination • Resilience • Work ethic

GENERATIONAL CHARACTERISTICS						
	 ALPHA GENERATION	 GENERATION Z	 MILLENNIALS	 GENERATION X	 BABY BOOMERS	 SILENT GENERATION
	• Many attend schools virtually – gravitating towards online schooling	• Value offline relationships and person-to-person interaction • Prioritise authenticity, truth & connectivity in their relationships & expect it from society	• Skills training, mentorship & feedback are necessary to stay at the company. • Self-confident • Not afraid to challenge the status quo/ management	• Seeks out efficiency & innovation. • Value autonomy to make own choices. • Create relationships with mentors. • Effectively manage work-life balance	• Take risks to pursue goals. • Dedicated to their jobs. • Attribute self-worth to their occupations • Finding work-life balance is challenging	• Analogue sensibilities • Loyal • Financially conservative
Social Media Channel of Choice	• Instagram, TikTok	• TikTok, Snap Chat, YouTube	• Instagram, Facebook, Pinterest	• Facebook, LinkedIn	• Facebook	
Most responsive to	• Video, Influencers	• Video, Influencers	• Reviews, Blogs	• Word-of-mouth, E-mail, Marketing	• Traditional Advertising	• Traditional Advertising
Device of Choice	• Smartphones/ tablets & voice-demand devices	• Smartphones	• Multi-Device	• Desktop and Laptop	• Prefer in-person interactions	• Prefer in-person interactions
Shaping Events	• A global pandemic, social justice movement, Brexit	• Smartphones, social media, seeing the financial struggles of parents	• The Great Recession, Technological Explosion of the Internet, social media	• End of the Cold War, with the Rise of personal computing, feeling lost between the two huge generations	• Post-WWII, Cold War, Hippie Movement	• World War II
Finances	• Digital natives will expect fully integrated, personalised consumer experiences. It is expected that they will be one of the most educated and wealthy generations.	• Like GenX (their parents) in financial attitudes but wanting to avoid debt after seeing Millennials" struggles	• Massive student debts delay major life purchases.	• Carrying the highest debt load while still raising children and saving for retirement	• Managing retirement with life expectancies on the rise	• Retired & financially vulnerable. • Lack of financial stability • Think of finances in terms of the rest of their lives
Shopping Characteristics	• Value- & service-driven consumers • Prefer one-day delivery, lightning-fast payments, value-added loyalty schemes & content creation.	• Have never known life without the internet. • Distrusting of branding and advertising • Prefers testimonials/ influencer content • Prefers to see real people in real situations.	• The largest group in the workforce • Does not like traditional ads • Prefers user-generated content, social selling, and word-of-mouth	• Prefers honest and clear product and marketing messages. • Require clear paths to purchase. • Most likely to conduct online research at home and shop in purchase	• Holds customer service above all other factors. • Most likely to abandon purchase based on customer service interaction.	• Attracted loyalty and rewards programmes and places that offer discounts to pensioners. • Focused on value for money and product quality.

GENERATIONAL CHARACTERISTICS						
	 ALPHA GENERATION	 GENERATION Z	 MILLENNIALS	 GENERATION X	 BABY BOOMERS	 SILENT GENERATION
	• Wants to use technology to make a difference. • Prefers brands that have a positive impact on the world • Environment & Sustainability largest looming issues • Interest in products from sustainable sources that weren't made from or packaged in plastic • Desire to be engaged with on issues that matter to them	• Prefers brands that contribute to social & economic causes • Most likely to pre-shop on smartphones • Does not like Facebook/ Twitter • Dislikes ads that make life look perfect	• Suspicious of being sold or lied to by brands. • Prefers companies that support a cause • Very price conscious/ seeks the best value • Motivated by brand engagement, especially through social media	• Most influenced by email marketing. • Prefers unique, high-quality products. • Customer service is the most important driver of loyalty. • Incentivised by discounts/ freebies/ coupons. • Does not care for brand engagement	• Unlike testing new products • Maintain brand loyalty. • Unlike using friend/ family referrals in decision making • Prefer in-store shopping • Prefers loyalty programmes that are straightforward. • Prefers simplicity and easy-to-understand content. • Will use social media as an entry point into brand or product research	• Prioritises products that are reliable, fairly priced & budget friendly. • Purchases necessities & only small luxuries • Prefers brand names. • Prefers to shop in-store. • Prefers products that are practical and solve a problem that they have
Tourism Preferences and Travel Trends	• Starting to influence their families' travel choices	• Influences their families' travel choices. • Most likely to rely on metasearch engines when planning a travel • Rely on travel agents, blogs & social sites • When booking, they prefer search engines • Prefer hotels, but also like to stay at relatives' or friends' house • Budget is a key factor while travelling & they tend to spend more on flights and shopping	• Take more trips than other generations. • No longer mostly relying on Online Travel Agencies during travel planning even if it's still the favourite platform to book • Least likely generation to stay in alternative accommodations – prefers hotels • Oriented towards once-in-a-lifetime experiences & beaten-path locations	• When planning a trip, they mostly rely on Online Travel Agencies but also show interest towards travel review sites. • Prefer Online Travel Agencies when booking. • Shows more interest towards resorts & alternative accommodations • Their travel choices are family-oriented • Choosing the destination on social media, they prefer watching videos	• More aware of the destination where they're going, but still want help & support during the booking process. • My main travel motivation is relaxation & sightseeing • Can afford to take the longest holidays • During the planning of a trip, they mostly rely on Online Travel Agencies' portals & search engines	• Health factors significantly into their travel plans • Demonstrates loyalty to travel agents

GENERATIONAL CHARACTERISTICS						
	 ALPHA GENERATION	 GENERATION Z	 MILLENNIALS	 GENERATION X	 BABY BOOMERS	 SILENT GENERATION
		• When choosing a destination, they consider the number of pictures they will be able to share on social media and the uniqueness of the experience • Social media are very important to Gen Zs, & they get inspired by pictures posted by friends and are attracted by appealing ads & pictures • Most are inclined to use smartphones in more stages of their holiday, now competing with desktop devices.	• Also interested in relaxing all day in spas and resorts • Gets inspired on social media - prefers watching pictures and videos posted by friends • More likely to get inspired by blogs and by hashtags • Desktop is the preferred device, but there is a growing use of smartphones and tablets in every stage of the holiday	posted by experts to get inspired, while they do not pay too much attention to blogs and articles • More inclined to use tablets before and during their holiday, even if the desktop is still their favourite device	• Visits more destination sites compared to other generations • Inspired by a good offer advertisement & by pictures posted by experts • Usually attracted by informative ads & less by pictures • When booking, they prefer Online Travel Agencies mainly accessing the internet from a desktop device • Budget is not a key component while travelling and compared to other generations, they tend to spend more on food & less on attractions and tours and shopping	

4.4 SYNTHESIS

PRIMARY MARKET AREA SUMMARY



POPULATION SIZE AND GROWTH

- ✓ Approximately 74 510 people / 20 347 households reside in the primary market area.
- ✓ The average annual growth rate of population is 2.24% per annum, while the average annual growth rate of households is 3.06% per annum.



AGE AND GENDER PROFILE

- ✓ The age and gender profile reveals that:
  - The largest segment of the resident population is between the ages of 15 to 34 (35.3%) – classified as the youth to mature population,
  - The second largest segment of the resident population are between the ages of 35 to 64 (35.0%) – classified as the adult population.
  - The third largest segment of the resident population are between the ages of 0 to 14 year (25.8%) – classified as children.
  - The smallest segment of the resident population is older than 65 years (4.0%) – classified as elderly.
- ✓ The profile shows a proportionally large contribution from the below 35-year categories (65.6%), indicating a young expanding working age population.



RACIAL PROFILE

- ✓ The racial profile of the primary market area shows that 70.0% are Coloured, 15.4% White, 14.0% Black African and 0.6% Indian / Asian.



MIGRATION PROFILE

- ✓ Since 2001, the primary market area has experienced a proportionally large influx of population, 30.3% of the population are migrants of which, 28.8% of the 30.3% of migrants are South African, while 1.55% of the 30.3% are from outside the South African border.



EDUCATION PROFILE

- ✓ **Highest Level of Education Attained**
  Of the population only 1.5% have obtained no education.
  The largest portion of the primary market area has some secondary education (39.1%), followed by 27.5% who obtained Grade12 / Matric.
  17.5% of the population have a higher education.
- ✓ **Attendance at an Education Institution (Persons Aged 20 and Older)**
  Of the persons aged 20 years and older, 17.9% are currently enrolled at an educational institution. They are primarily enrolled at a University (57.8%).
  11.0% at a FET College and 10.5% at an other College.



EMPLOYMENT PROFILE

Economically Active Population and Employment

- ✓ Of the population of the primary market area, 69.0% are economically active, meaning that just more than half of the population are of working age and are actively participating in the economy or seeking employment.
- ✓ The remaining 31.0% represent population that fall outside the scope of the economically active population definition and represent people who are not available for work such as full-time scholars and students, full-time homemakers, those who are retired and those who are unable or unwilling to work.
- ✓ Of the economically active population, 84.8% are employed and 15.2% are unemployed. The primary market area reflects low to moderate dependency ratios.

Employment per Industry

- ✓ The biggest employment economic sectors in the market area include:
  - Community, social and personal services are most prominent (25.7%)
  - Wholesale and retail trade sector (19.2%)
  - Financial; insurance; real estate and business services (17.1%)
- ✓ Employment per industry:
  - Primary sector (2.6%) – agriculture; hunting, forestry is most prominent (2.3%).
  - Secondary sector (18.8%) – the manufacturing sector most prominent (10.4%)

- Tertiary sector (69.6%) – wholesale and retail trade sector are the most prominent (19.2%).

Employment per Occupation

- ✓ In the primary market area, 27.9% of the employed population is employed in *semi-skilled occupations*. Service workers are the most prominent (16.5%).
- ✓ *Low-skilled* occupations are 47.9%, of which elementary occupations (21.1%) are the most prominent.
- ✓ Skilled occupations are 27.9% of employed persons, of which technicians and associate professionals (9.6%) are the most prominent.



DWELLING TYPOLOGY

- ✓ The primary dwelling type for households in the primary market area are house or brick structures – formal dwellings (93.8%).
- ✓ The largest segment of formal dwellings are free standing houses on single erven (84.0%).
- ✓ Smaller segments of households reside in informal main residences and flats / apartments.



TENURE STATUS

- ✓ Of households in the primary market area, 37.5% own a property which have not finished paying off their property.
- ✓ 26.6% are renting the property where they reside.
- ✓ 22.5% own a property which have been paid off the bond registered to the property.
- ✓ 13.4% of the households occupy the property rent-free



HOUSEHOLD INCOME PROFILE

- ✓ Affluent households (R1.4 million and more) make up 2.3% of households.
- ✓ Approximately 8.6% of households in the primary market area earn no income.
- ✓ 28.1% earn between R22 646 – R88 272 per month and 35.9% between R88 273 – R355 401 per month.
- ✓ The weighted average annual household income for the resident population for 2023 amounts to **R271 759 per annum**, which amounts to **R22 647 per month** for **all SEM groups.**
- ✓ For SEM groups 2 and higher, the average income is **R429 189 per annum,** which amounts to **R35 766 per month.**



SEM PROFILE

- ✓ The discontinuation of the All-Media Products Survey (by the South African Audience Research Foundation (SAARF)), on which the Living Standard Measure (LSM) classifications were based, gave way to a new measurement system called The Socio-Economic Measure model (SEM). The newly released SEM model is a more accurate reflection of South African society in terms of how people live and is not dependent solely on durables, as the historical LSMs have been. The new SEM offers marketers a statistical and technical solution that depicts how our citizens are living, not only what they have in their homes.
- ✓ Approximately **31.3%** of the primary market area's households are classified within the SEM Supergroup 1 with **68.7%** of households classified within the **SEM Supergroup 2+** categories.



GENERATIONAL PROFILE

- ✓ The largest segment of is represented by Generation Z (32.4%), followed by Millennials (26.0%) and Generation X consumers (21.0%).
- ✓ The Baby Boomers (7.9%) and Silent Generation (1.2%) form 9.1% of the population.

HOUSEHOLD SURVEY RESULTS

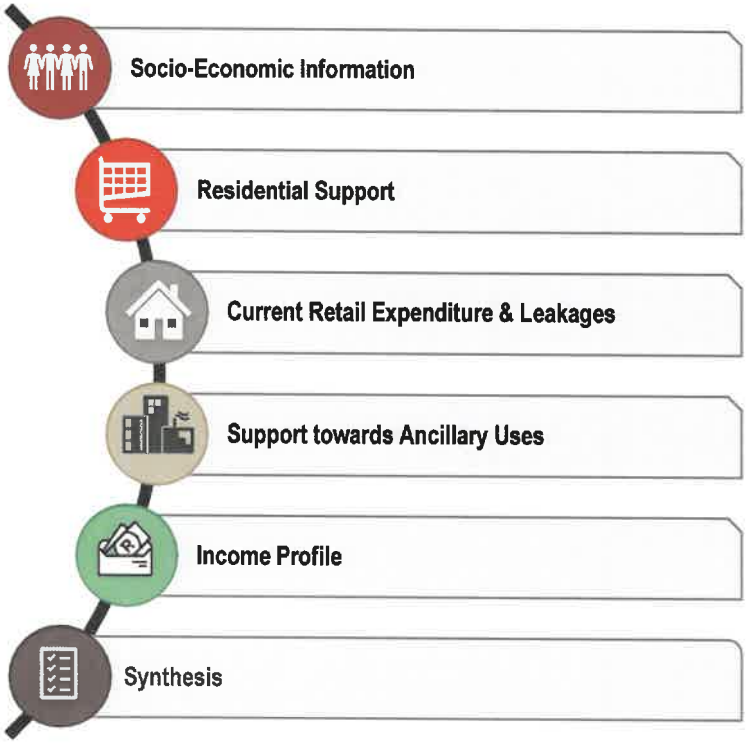


CHAPTER

5. HOUSEHOLD SURVEY RESULTS

5.1 INTRODUCTION

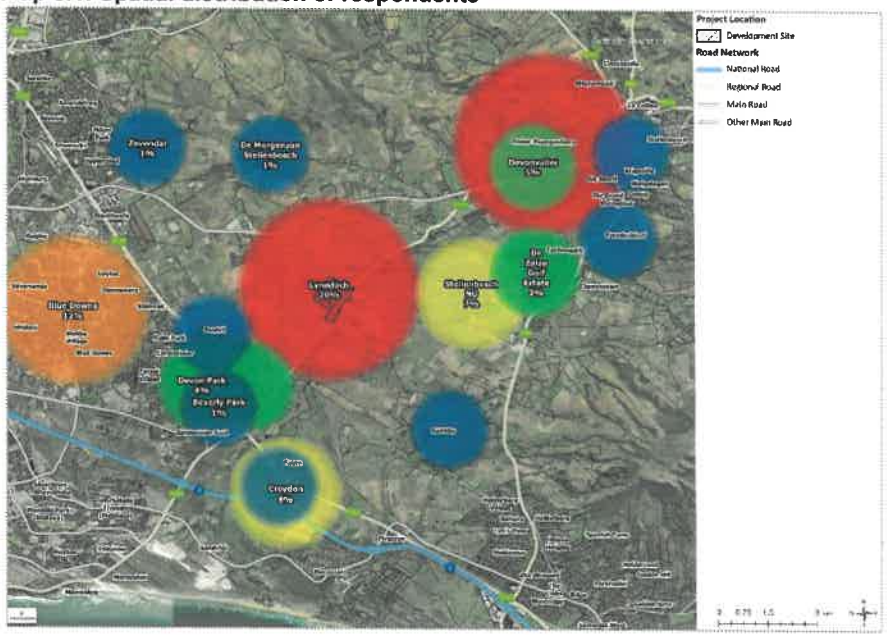
Subsequent paragraphs provide survey results to assess the potential for various land uses in the primary trade for new mixed-use development located along the R310 (Baden Powell Drive) in LYNEDOCH, approximately 12,5km south-west of Stellenbosch, Western Cape Province. A proportionate, stratified random sample was applied to conduct the perception survey in the surrounding area, which represents a large captive market for potential consumers.



5.2 DISTRIBUTION OF RESPONDENTS

Map 5.1 geographically illustrates the spatial distribution of the respondents in terms of their origin. From the map the majority of respondents who participated was located in Lynedoch, Onder Papegaaiberg, Blue Downs, Stellenbosch NU, Devonvallei and Devon Park.

Map 5.1: Spatial distribution of respondents



Beverly Park	Devon Park	Paradyskloof
Blue Downs	Devonvallei	Penhill
Croydon	Dewalser	Raithby
Croydon Vineyard	Eerste River	Stellenbosch Bo Dorp area
De Morgenzon Stellenbosch	Lynedoch	Stellenbosch NU
De Wijnlanden	Onder Papegaaiberg	Val de Vie
De Zalze Golf Estate	Paarl	Zevendal

5.3 SOCIO-ECONOMIC PROFILE

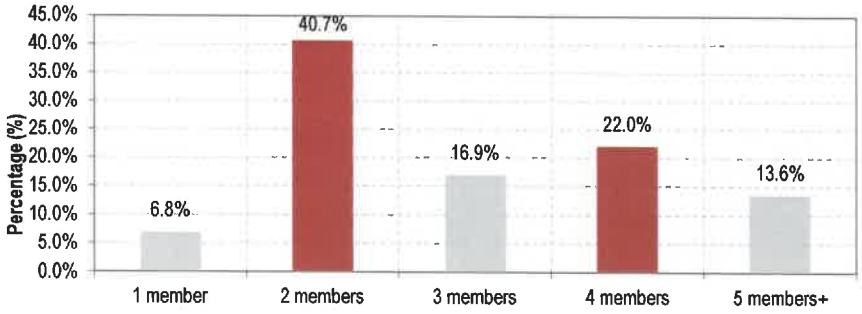
Describe your household

Respondent households are primarily characterised as

- Parents with adult children **28.8%**
- Mature adults **27.1%**
- Parents with small children **22.0%**

How many MEMBERS do you have in your household?

The prevalence of parents with adult and small children highlights that a sizeable cohort of households surveyed consist of **2 people (40.7%) and 4 people (22.0%)** in a household.



What is your HOME LANGUAGE?

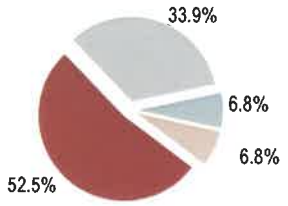
The primary **languages** spoken by households surveyed include:

- **Afrikaans – 76.3%**
- English – 15.3%
- IsiZulu – 3.4%
- Setwana – 3.4%
- Tsonga – 1.7%

ETHNIC Group

The majority of respondents (52.5%) indicated they are **White** and 33.9% Coloured.

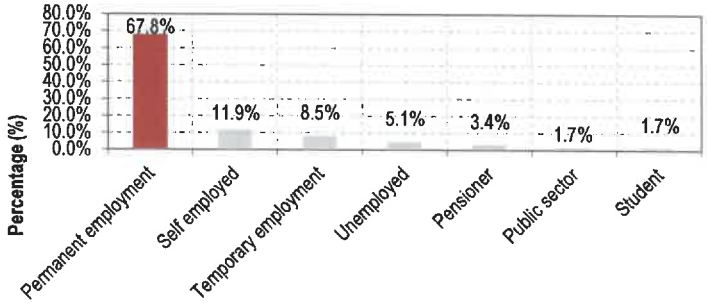




EMPLOYMENT Status

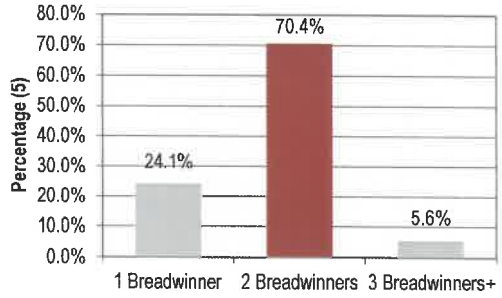
Respondents are typically **permanently employed (67.8%)** or **self-employed (11.9%).**





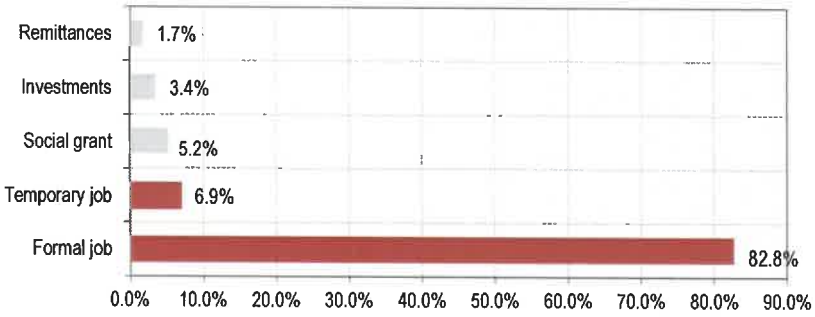
Number of BREADWINNERS in household:

- **1** breadwinner 24.1%
- **2** **breadwinners 70.4%**
- **3** breadwinners 5.6%



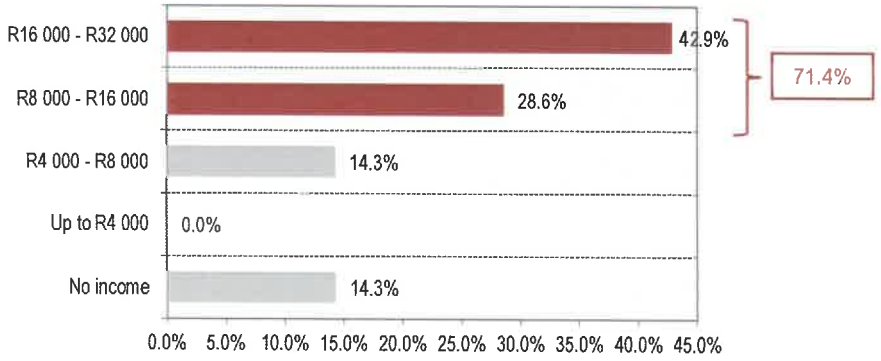
INCOME sources:

The majority of households **(82.8%)** earn their income from a **formal job**, 6.9% from a **temporary job** and 5.2% from a **social grant.**



Average monthly HOUSEHOLD INCOME profile (before deductions):

Data shows that the majority of respondents 42.9% (households) are primarily **middle-income households** earning between R16 000 to R32 000 followed by 28.6% earning between R8 000 and R16 000 per month.



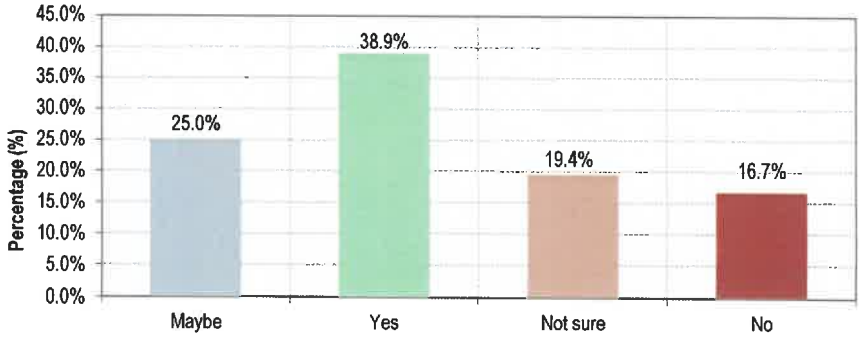
5.4 RESIDENTIAL SUPPORT AND PREFERENCES



RESIDENTIAL SUPPORT

Perceived DEMAND for a new residential development in the Lynedoch area?

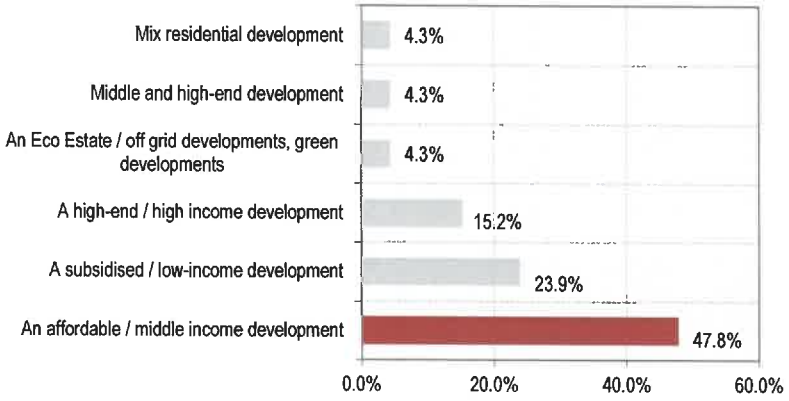
The majority of respondents **(38.9%)** indicated there is a **demand** for a new residential development in the Lynedoch area.



RESIDENTIAL PREFERENCES

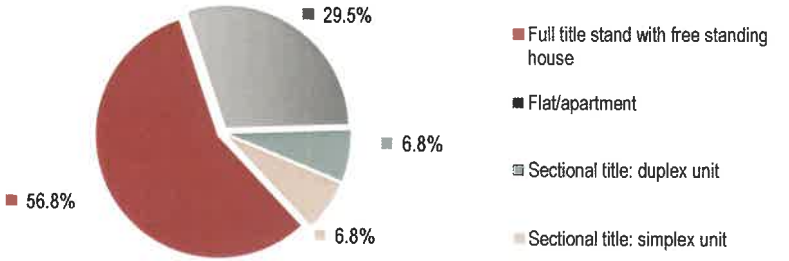
What type of development is there demand for?

47.8% of the respondents prefer an **affordable / middle income** development.



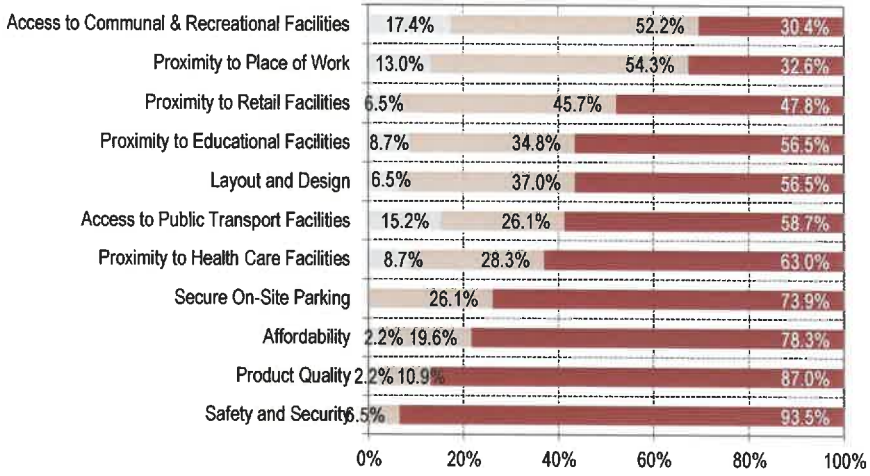
Type of DWELLING UNITS in the residential development

The type of dwelling unit preferred is a full title stand with **freestanding house** (**56.8%**), and **flats / apartments** (29.5%).



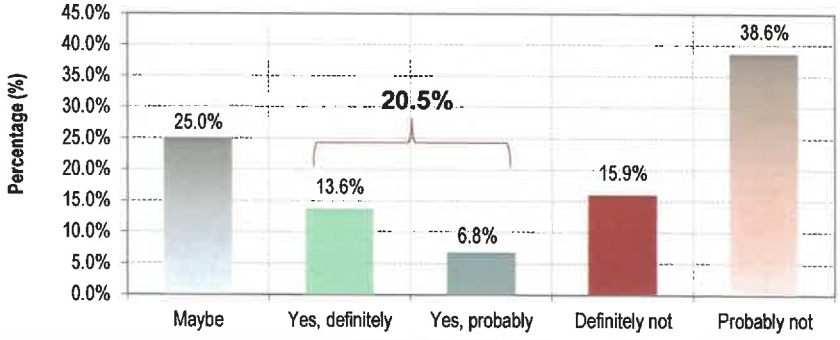
To your mind, what will be critical success factors for such new residential development.

Respondents highlighted **safety and security** (**93.5%**), **product quality,** (**87.0%**) and **affordability** (78.3%) as the three most important factors when considering a residential development:



Would you consider MOVING to this development

54.1% of respondents would definitely / probably consider moving to this development.



Residential Unit Composition

Respondent stated preferences include:

BEDROOMS

2, 3, 4
(10.5%, 78.9% & 10.5% respectively)

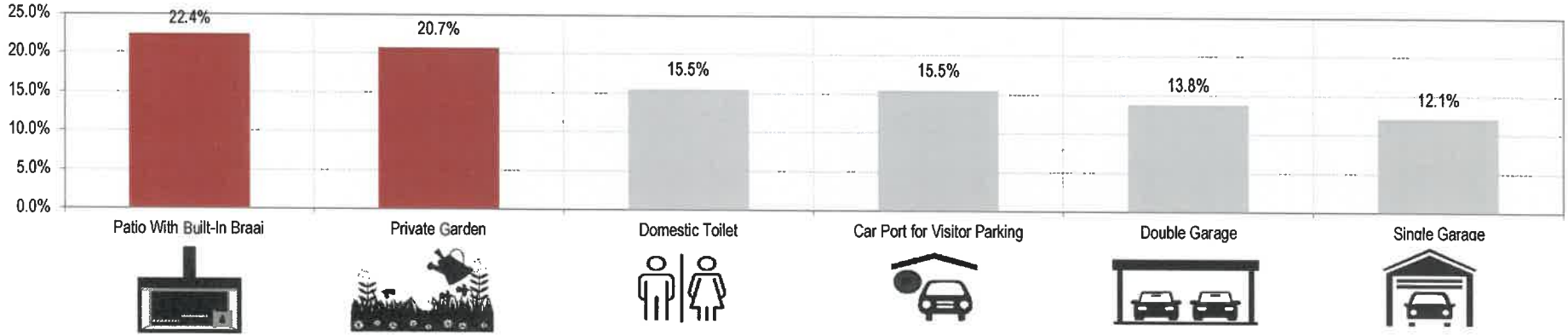
BATHROOMS

1 to 2
(95.7% & 4.3% respectively)

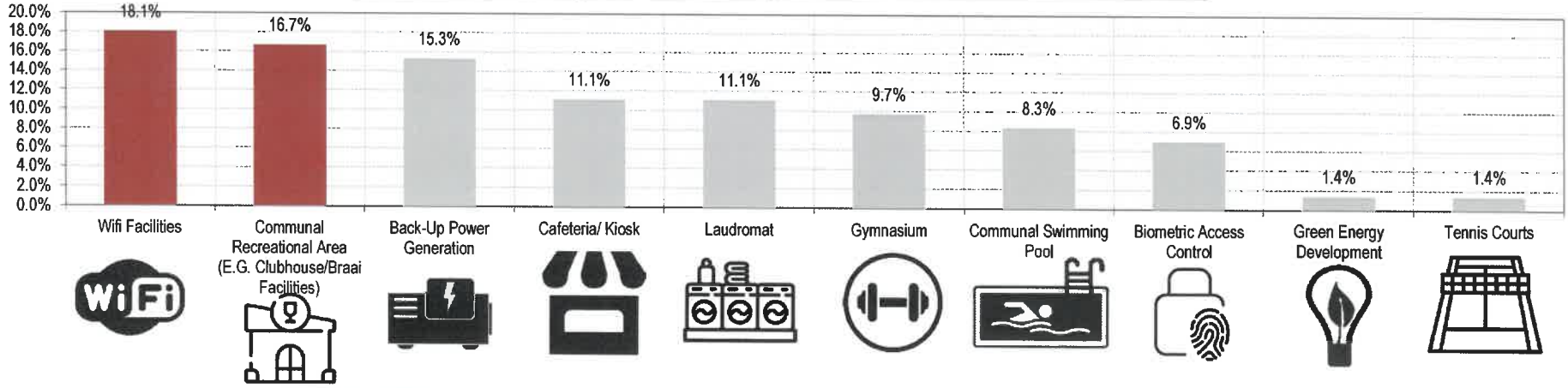
LIVING AREAS

1 & 2
(34.8% & 65.2% respectively)

Which of the following should also form part of the RESIDENTIAL UNIT offering?



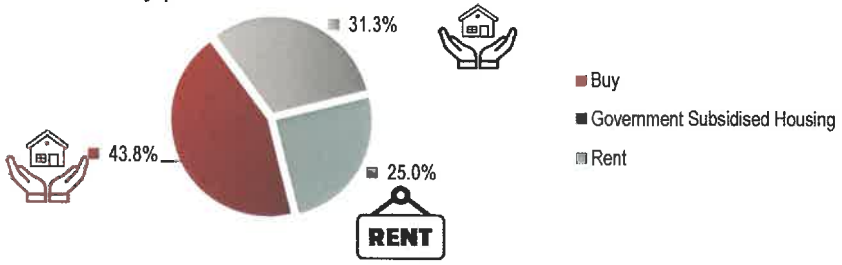
Which of the following should also form part of the RESIDENTIAL DEVELOPMENT?



AFFORDABILITY

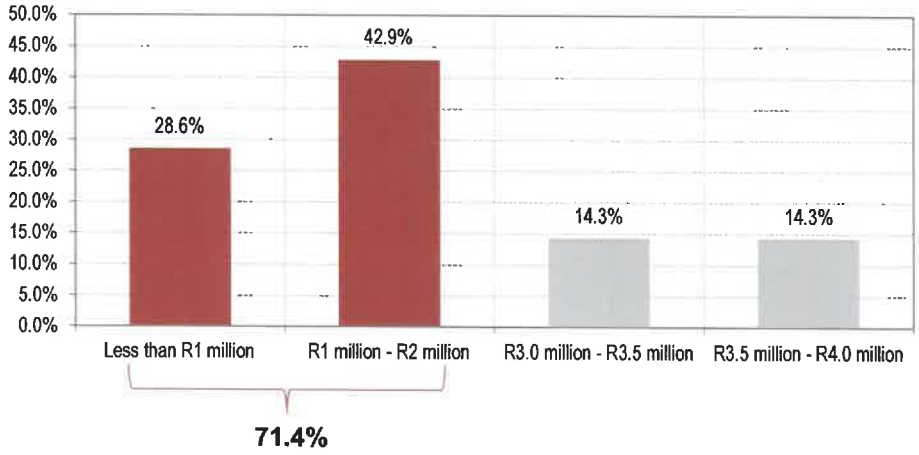
Affordability Profile

43.8% of respondents identified they will be able to **BUY, 31.3%** would be able to afford a **government subsidised house,** and **25.0%** would rent based on the affordability profile.



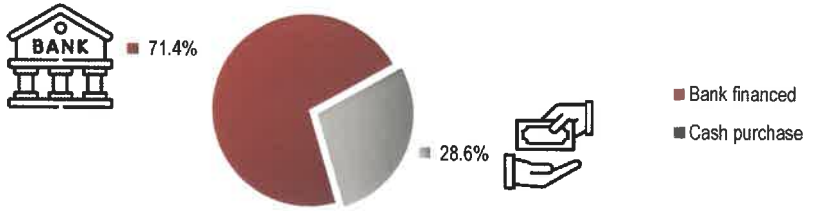
If you were to BUY a new residential property what would be a REASONABLE MARKET PRICE?

42.9% of respondents indicated that they would buy a property in region of **R1 million to R2 million,** followed by **28.6%** for **less than R1 million.**



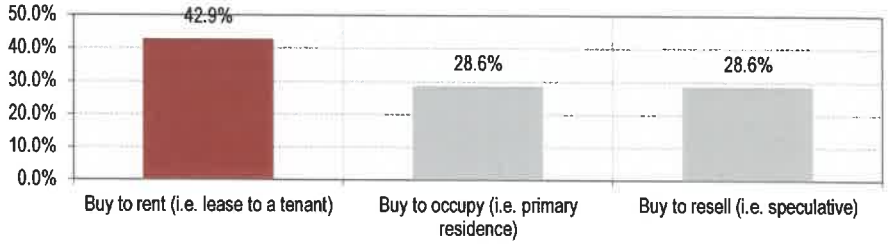
Would the purchase of a property/house be BANK-FINANCED OR BOUGHT CASH?

The majority of respondents **(71.4%)** the property would be bank-financed and 28.6% would do a cash purchase.

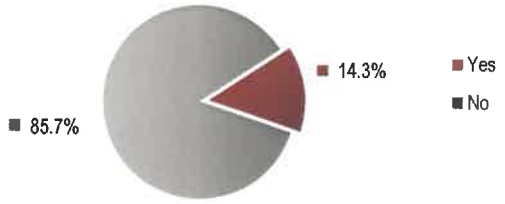


Would the purchase be for your OWN USAGE, to LEASE OUT or to RESELL?

42.9% of all respondents would purchase a property to lease to a tenant, whereas 28.6% would buy to occupy or buy to resell. A smaller proportion (14.3%) of all respondents indicated that they would rent it out as student accommodation.



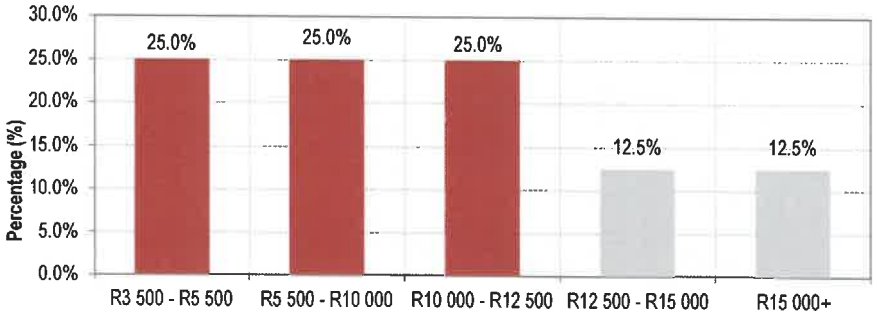
Would the purchase be to use the unit specifically as STUDENT ACCOMMODATION?



14.3% of respondents would purchase the unit specifically as **student accommodation.**

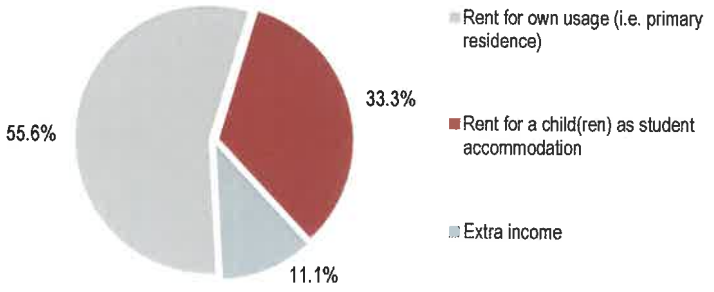
RENTAL Profile

Respondents opting to **rent** a property are mainly willing to rent for **less than R12 500 (75.0%)** followed by 25.0% willing to rent for R12 500 and more per month.



If you were to rent, would you rent for your OWN USAGE (i.e. your household) or would you rent for a child(ren) as STUDENT ACCOMMODATION?

55.6% of respondents would rent the unit for own usage, 33.3% for a child as student accommodation and 11.1% for an extra icome.

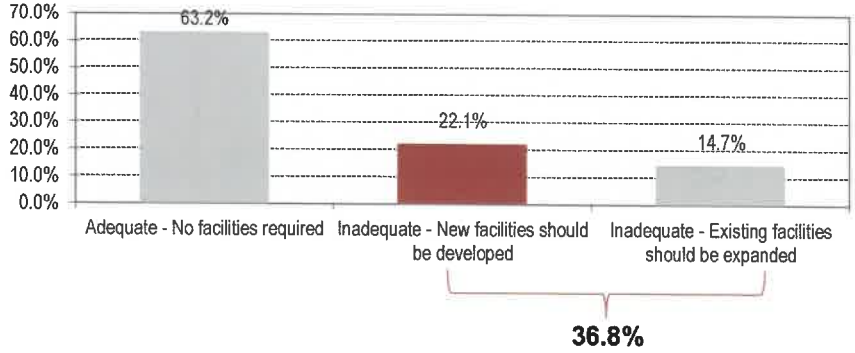


5.5 RETAIL SUPPORT AND PREFERENCES

Retail Expenditure & Leakages

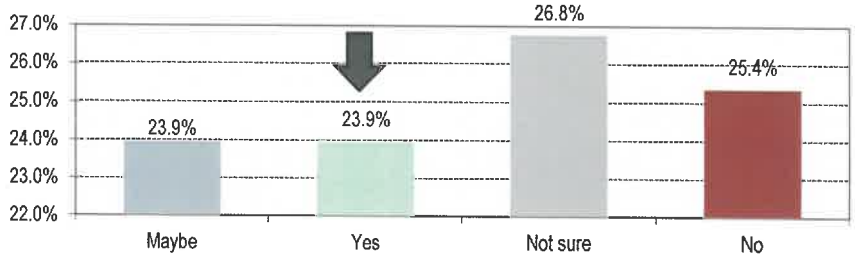
Describe the RETAIL OFFERING in the area.

Approximately **36.8%** indicated that the retail offering is inadequate of which **22.1%** believe **new facilities should be developed.**



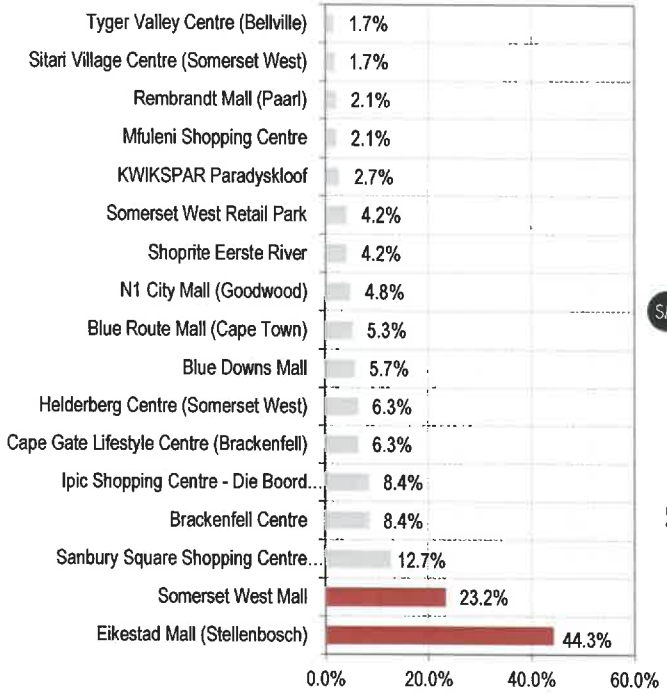
In your opinion, is there a NEED FOR AN ADDITIONAL SHOPPING CENTRE in the area?

23.9% of respondents believe there is a need for an additional shopping centre.



FAVOURITE SHOPPING CENTRES in the area

Eikestand Mall in Stellenbosch is the overall favourite shopping centre (44.3%), followed by **Somerset West Mall** (23.2%).

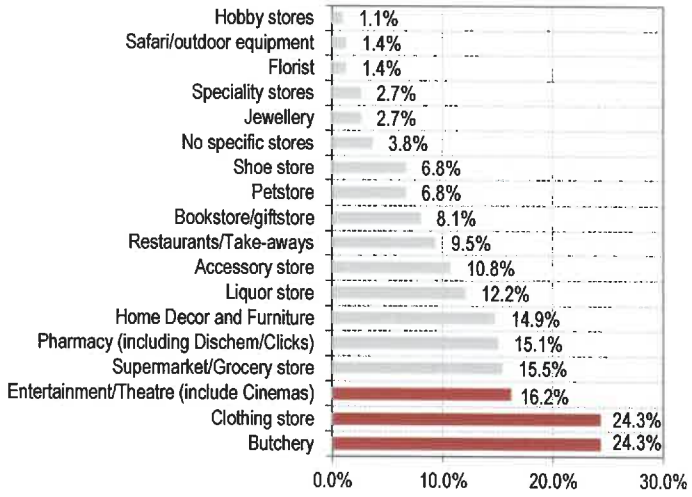


EIKESTAD MALL STELLENBOSCH
44.3%

SOMERSET MALL
23.2%

SANBURY SQUARE
12.7%

SHOPS believed to be in demand

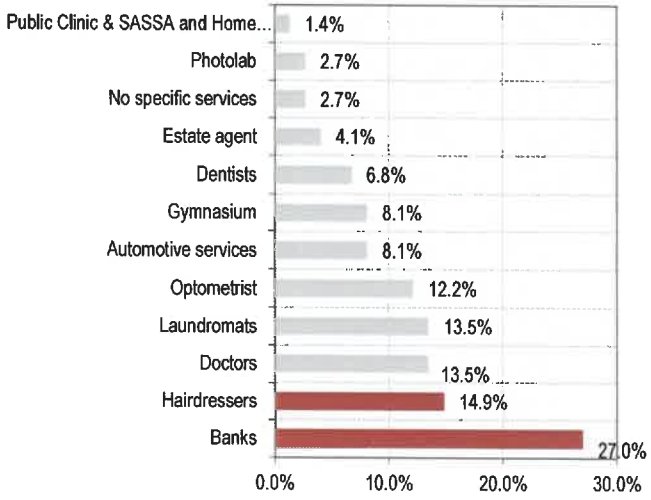


Butchery
24.3%

Clothing Store
24.3%

Entertainment
16.2%

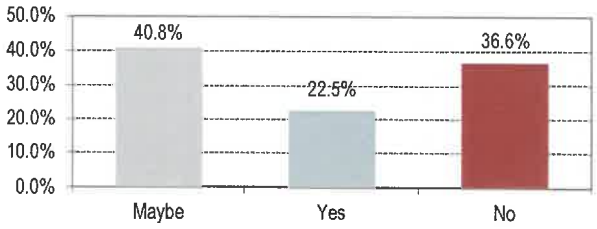
SERVICES believed to be in demand



Banks
27.0%

Hairdressers
14.9%

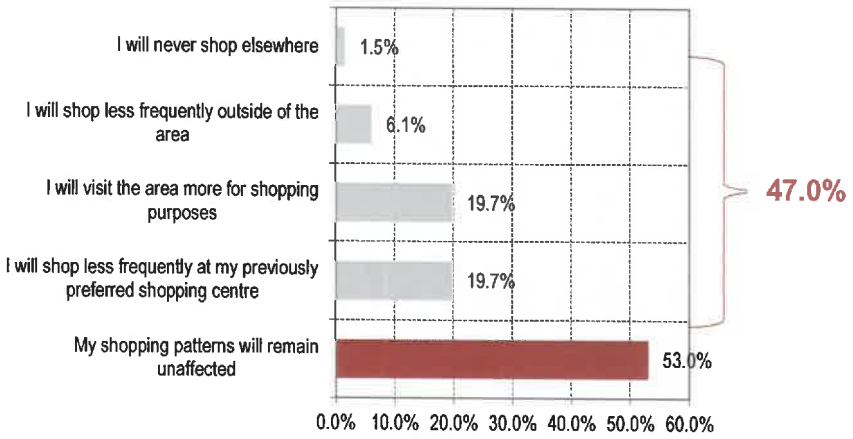
Would you SHOP at the new shopping centre if built if part of the larger mixed-use precinct?



22.5% of respondents indicate they **would shop** at the new centre if built and 40.8% **maybe.**

Shopping BEHAVIOUR

47.0% suggests a moderate degree of anticipated consumer behaviour elasticity.



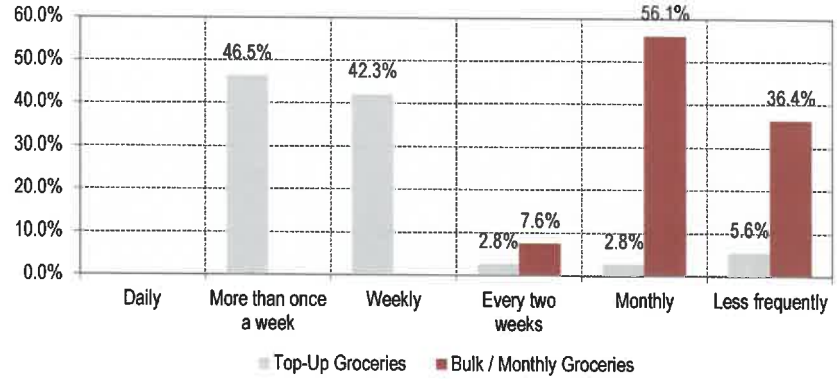
Please indicate the FREQUENCY of your grocery shopping

Bulk / monthly shopping is conducted:

- **monthly** (56.1%) and
- **less frequently** (36.4%).

Top-up grocery shopping is conducted:

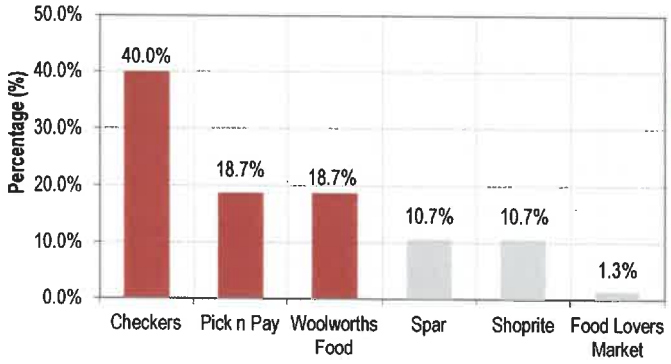
- **more than once a week** (48.5%) or
- **weekly** (42.3%).



Grocery Anchor Preferences

Preferred Grocery Anchor

Shoprite (**40.0%**), Boxer / Spar (**18.7%**) are the preferred grocery anchors.



40.0% prefer Checkers

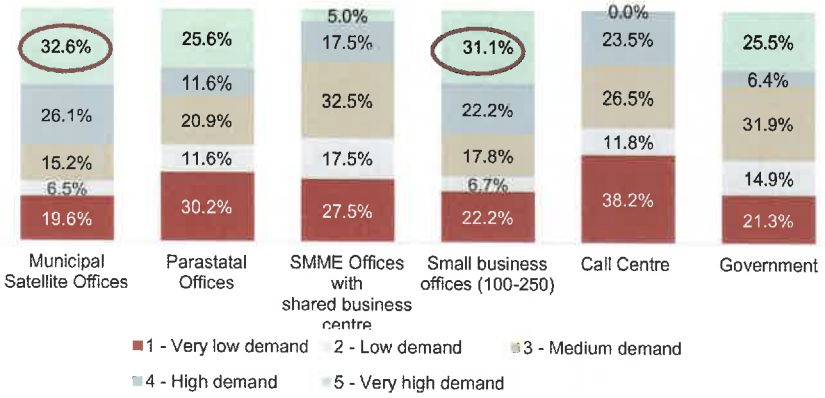
18.7% prefer Pick n Pay

WOOLWORTHS FOOD

5.6 SUPPORT FOR ANCILLARY SERVICES

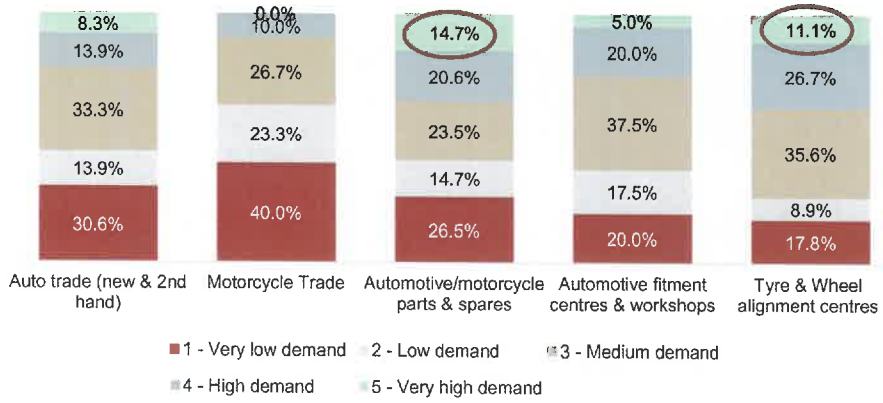
Office Space Support

Overall, respondents believe that a high perceived demand exists for office space in the market area; **municipal satellite offices (32.6%)** and **small offices (31.1%)** have the highest demand.



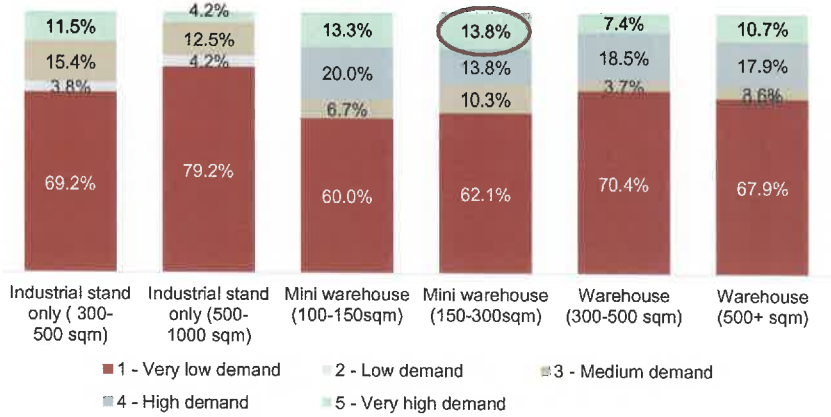
Automotive Activities Support

Respondents believe that there is very low and low perceived demand for automotive related activities and services in the market area. **"Automotive / motor vehicle parts"** are the highest in demand and **"Tyre and wheel alignment centres".**



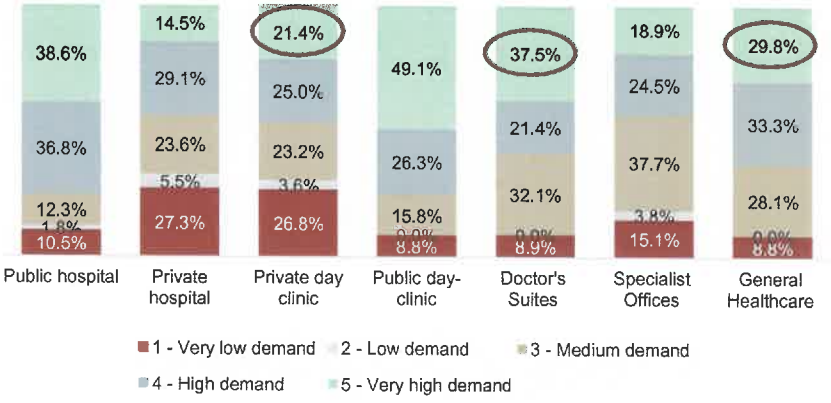
Industrial / Warehouse Support

Respondents believe that a very low perceived demand exists for any industrial / warehouse facilities in the market area. A mini-warehouse with units **150 - 300m²** is the highest in demand.



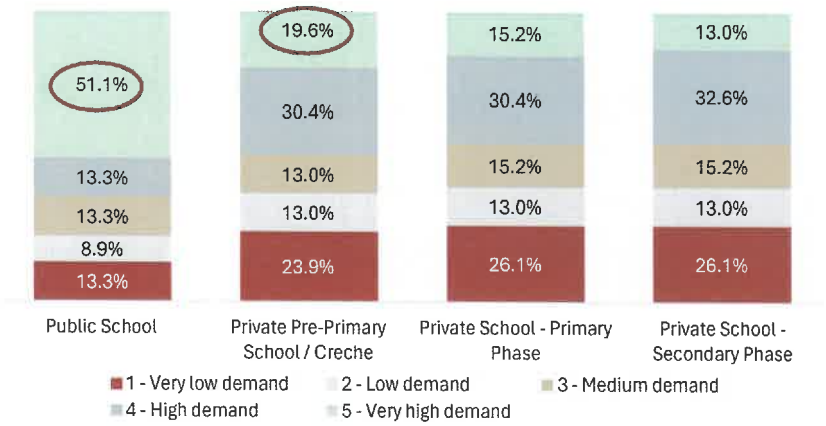
Healthcare Facility Support

Overall respondents believe that a high and very high perceived demand for a healthcare facility in the market area. A **private day clinic, doctor's offices** and a **general healthcare** are the healthcare facilities who have the highest demand.



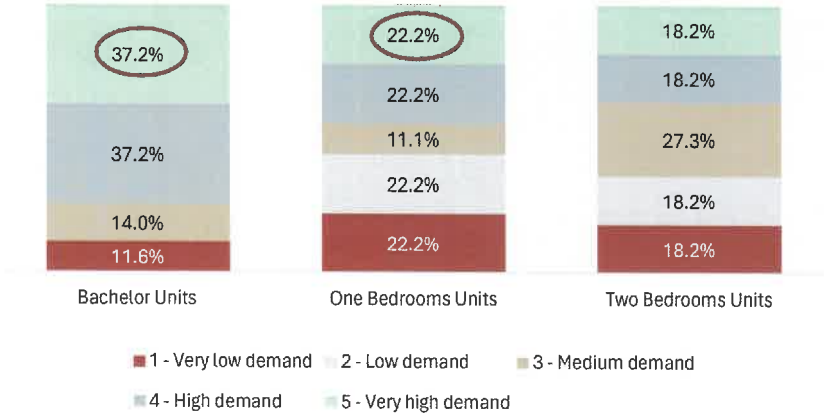
Education Facility Support

Overall respondents believe that a high and very high perceived demand for an education facility in the market area. A **public school** and a **private pre-primary school/creche** are the two healthcare facilities who have the highest demand.



Student Accommodation Support

Overall respondents believe that a high and very high perceived demand for a student accommodation facility in the market area. **Bachelor units** and **one-bedroom units** have the highest demand.



5.7 SYNTHESIS

The consumer survey identifies key characteristics and consumer preferences in the primary market area of the proposed development. The consumer survey seeks to highlight stated consumer preferences with regard to a new mixed-use development located along the R310 (Baden Powell Drive) in **Lynedoch,** approximately 12,5km south-west of **Stellenbosch, Western Cape Province.**

Key outcomes from the survey include:

SOCIO-ECONOMIC INFORMATION & INCOME

- ✓ **Dominant households** represent the following:
  - Parents with adult children – 28.8%
  - Mature adults – 27.1%
  - Parents with small children – 27.1%
- ✓ **Employment status:**
  67.8% of respondents are permanently employed, followed by 11.9% who are self-employed.
- ✓ The prevalence of parents with small and adult children highlights that a sizeable cohort of households (68.6%) surveyed, consist of mostly **2 and 4 people** in a household (40.7% and 22.0% respectively).
- ✓ Most of the respondents (76.3%) indicated their **home language** is Afrikaans, and the dominant ethnic group of respondents is English (15.3%).
- ✓ **Ethnic group**:
  The majority of respondents (52.5%) indicated they are White, 33.9% Coloured.
- ✓ 70.4% of respondents indicated they have **two breadwinners** in the household.
- ✓ Average monthly household **income profile** (before deductions):
  - Data shows that respondents (households) are primarily middle-income households earning between R16 000 to R32 000 (42.9%) followed by between.
  - 28.6% of household earn between R8 000 and R16 000 per month.
- ✓ The majority of households (82.8%), **earn their income** from a formal job, and 6.9% from a temporary job.

RESIDENTIAL SUPPORT & PREFERENCES

Potential Support towards New Residential Development:

- ✓ 38.9% are of the view that there is a **demand** for a new residential development in the area.
- ✓ **Type of development**:
  - An affordable / middle income development – 47.8%
  - A subsidized / low-income development – 23.9%
  - A high-end / high income development – 15.2%
- ✓ **Preferred type of dwelling units** in the new residential development:
  - Full title stands with free standing house – 56.8%
  - Flat/apartment – 29.5%
  - Sectional title: duplex unit – 6.8%
  - Sectional title: simplex unit – 6.8%
- ✓ Critical **success factors** for such new residential development
  - Safety and Security – 93.5%
  - Product Quality – 87.0%
  - Affordability – 78.3%
  - Secure On-Site Parking – 73.9%
  - Proximity to Health Care Facilities – 92.5%
- ✓ Would you **consider moving** to a new development?
  - Maybe – 25.0%
  - Yes, probably –6.8%
  - Yes definitely – 13.6% } **20.5%**
  - Probably not –38.6%
  - Definitely not – 15.9%
- ✓ What **composition** of **residential units** would you prefer? (Majority options)
  - 2, 3 & 4 bedrooms (10.5%, 78.9% and 10.5%, respectively),
  - 1 bathroom (15.8%) and 2 bathrooms (68.4%),
  - 2 living areas (52.6%),
- ✓ Which of the following should form part of the **residential unit offering?**
  - Patio With Built-In Braai – 22.4%
  - Private Garden – 20.7%
  - Domestic Toilet – 15.5%
  - Car Port for Visitor Parking – 15.5%
  - Double Garage – 13.8%
  - Single Garage – 12.1%
- ✓ Which of the following should form part of the **residential development?**
  - Wifi Facilities - 18.1%
  - Communal Recreational Area (E.G. Clubhouse/Braai Facilities) - 16.7%
  - Back-Up Power Generation - 15.3%
  - Cafeteria/ Kiosk - 11.1%
  - Laudromat - 11.1%

Affordability

- ✓ Which option would you be **able to afford**?
  - 43.8% of the respondents indicated they would be able to buy a unit in terms of their affordability.
  - 31.8% of respondents would be able afford a government subsidized housing unit,
  - 25.0% would be able to rent in the new development.
- ✓ What would be a **reasonable market price** if you buy**?**
  - Less than R1 million - 28.6%
  - R1 million - R2 million - 42.9% } **71.4%**
  - R3.0 million - R3.5 million - 14.3%
  - R3.5 million - R4.0 million - 14.3%
- ✓ 71.4% indicated they would make use of **bank finance** to buy a residential unit, whereas 28.6% would buy the unit with a cash transation.
- ✓ Would the purchase be for your **own usage, to lease** out or to **resell**?
  - Buy to rent (i.e. lease to a tenant) - 42.9%
  - Buy to occupy (i.e. primary residence) - 28.6%
  - Buy to resell (i.e. speculative) - 28.6%

  42.9% of all respondents would purchase a property to lease to a tenant, whereas 28.6% would buy to occupy or buy to resell.
- ✓ 14.3% of respondents indicated that they would **purchase** the unit as a **student accommodation**.
- ✓ What would be a **reasonable monthly rental?**
  - R3 500 - R5 500 - 25.0%
  - R5 500 - R10 000 - 25.0%
  - R10 000 - R12 500 - 25.0%
  - R12 500 - R15 000 - 12.5%
  - R15 000 and more - 12.5%
- ✓ If you were to rent, would you **rent** for your own usage (i.e. your household) or would you rent for a child(ren) as student accommodation?

✓ 55.6% indicated they would **rent for own usage** (primary residence), 33.3% would rent for their children as **student accommodation** and 11.1% for an extra income.

RETAIL SUPPORT AND PREFERENCES

Retail Expenditure & Leakages:



✓ What would best describe the **retail offerings** in your area?
- Adequate - no new facilities required – 63.2%
- Inadequate - new facilities should be developed – 22.1%
- Inadequate - existing facilities should be expanded – 14.7%

✓ 23.9% of the respondents indicated that there is a **need for an additional** shopping centre in the area and 22.5% would shop there if built.

✓ **Overall favourite shopping centre** in the area:
- Eikestad Mall (Stellenbosch) - 44.3%
- Somerset West Mall - 23.2%
- Sanbury Square Shopping Centre (Eerste River) - 12.7%
- Brackenfell Centre - 8.4%
- Ipic Shopping Centre - Die Boord (Stellenbosch) - 8.4%

✓ **Type of shops in demand** in a new shopping centre:
- Butchery – 24.3%
- Clothing – 24.3%
- Entertainment/Theatre (include Cinemas) – 15.5%
- Supermarket/Grocery store – 98.1%

✓ **Type of services** in demand in a new shopping centre:
- Banks – 27.0%
- Hairdressers – 14.9%
- Doctors – 13.5%
- Laundaromats – 13.5%

Grocery anchor preferences:



✓ **Preferred grocer** for grocery shopping:
- Checkers – 40.0%
- Pick n Pay – 18.7%
- Woolworths Food – 18.7R
- Spar – 10.7%
- Shoprite – 10.7%

✓ **Frequency** of your grocery shopping:

Top-up groceries:	*Bulk groceries:*
✓ More than once a week – 46.5% ✓ Weekly – 42.3%	✓ Monthly – 56.1% ✓ Less frequently – 36.4%

Shopping behaviour:



✓ How would a new retail centre affect your **current shopping behaviour?**
- 47.0% suggests a moderate degree of anticipated consumer behaviour elasticity.
- 19.7% indicated they would shop less frequently outside the area.
- 19.7% of respondents indicated that they would visit the area more for shopping purposes.
- 53.0% indicated their patterns will remain unaffected.

SUPPORT TOWARDS ANCILLARY USES

In summary, a demand for the following facilities was highlighted by respondents:

✓ Respondents believe that some ancillary services have demand in the market area:

- **Office space:** high perceived demand exists for office space in the market area,
  - **Municipal satellite offices** and
  - **Small offices** have the highest demand.

- **Automotive services:** low to very low perceived demand exists for an
  - **Automotive and motor vehicle parts,** and
  - **Tyre and wheel alignment centres** have the highest demand.

- **Industrial and warehouse services:** very low perceived demand exists for any industrial or warehouse facilities in the market area.
  - A mini-warehouse with units of **150–300m²** is the most in demand.

- **Healthcare facilities** = high and very high perceived demand for a healthcare facility in the market area.
  - A **private day clinic** and a
  - **Doctor's offices** and
  - **General healthcare** are the healthcare facilities who have the highest demand.

- **Education facilities** = high and very high perceived demand for an education facility in the market area.
  - A **public school** and a
  - **Private pre-primary school/creche** are the two healthcare facilities who have the highest demand.

- Overall respondents believe that a high and very high perceived demand for a **student accommodation facility** in the market area.
  - **Bachelor units** and
  - **One-bedroom units** have the highest demand.

MARKET-BASED RESIDENTIAL POTENTIAL

6. MARKET-BASED RESIDENTIAL POTENTIAL

6.1 INTRODUCTION

This section of the report focuses on the residential market, with the objective of estimating the development potential within the designated area. To reach this objective, the supply and demand for residential facilities within the market area should be identified and assessed in terms of current trends.

Subsequent paragraphs highlight the following main headings to identify the aforesaid beneficiaries:



6.2 GENERAL RESIDENTIAL MARKET INDICATORS

The following provides an overview of the main residential market indicators.

Price Growth	• House price growth in South Africa declined in February 2023, with buying activity declining, and properties sitting on the market for longer. • The FNB House Price Index's annual growth declined in February, averaging 2.3% year-on-year (YoY), down from 2.7% in January. • The average time on the market also stretched to 75 days, which was last seen in Q3 2020.
House Price Inflation Trends	• National year-on-year house price inflation is at 2.31%, having decreased consistently since early 2021. • Annual property inflation remained steady in KwaZulu-Natal and the North West, increased in Limpopo and Mpumalanga, and decreased in the Eastern Cape, Free State, Gauteng, the Northern and Western Cape. • Annual property inflation in the Low Value segment was once again much higher than that in other segments - inflation for properties in the Low Value segment was 10.3%, compared to 3.2% for properties in the Mid Value segment.
Price Brackets	• In Q4 2022, the R500k-R750k was the best performing, however, in Q1 2023, the R250k-R500k bracket saw the most robust activity, with its rating increasing from 6.4 to 8.0. • The <R250k bracket saw the second-best rating – increasing to 6.6 from 5.6 the last quarter. • FNB said that the higher activity in the lower-priced segments shows a downscaling trend amid increasing higher financial pressures as homeowners look for cheaper alternatives.
Market Volumes	• Market volumes continue to soften, albeit still above pre-pandemic levels. • Similarly, internal mortgage applications are significantly ahead of the pre-pandemic 2019 levels.
Mortgage Trends	• Mortgage extension remains relatively robust, with the latest data showing growth of 6.9% y/y in October, much quicker than the post-Global Financial Crisis (GFC) average of 3.8%.

Rental Market	• In 2022, the rental market continued to recover from the low rental growth rates recorded in most of 2020 and 2021 as a result of the global pandemic. • However, ongoing recovery and rising rental growth rates can't be guaranteed as we move into 2023, as higher interest rates, persistently high levels of inflation and a struggling economy all affect tenants' ability to pay higher rents. • Higher interest rates make it less affordable for tenants to buy properties, which increases the demand for (and prices of) rental properties. • Nationally, the average rent increased by 3.4% from Q4 2021 to Q4 2022. This was an average increase of R268 to R8 175 over the year.
Factors Supporting Market Growth	• There are four key factors that have supported market resilience: o The pandemic-induced changes in consumer preferences o Structurally improved affordability following a decade-long real house price correction. o Credit availability o A higher household formation rate.
Outlook	• The South African residential property market in 2023 is expected to be a buyer's market, as house price inflation is likely to be below inflation. According to Lightstone, local and global challenges will shape HPI in the country, but the stagnant economy will have the biggest impact. • Paul-Roux De Kock, the Chief Analytics Officer at Lightstone, stated that the company's three scenarios predict HPI in South Africa to be between 0.9% (low) to 2.3% (mid) or 3.7% (high). This prediction is in line with the South African Reserve Bank's (SARB) recent increase in interest rates by 25 basis points, as well as its revised GDP growth forecast of just 0.3% for 2023. • The mid-value market segment is expected to be the most resilient in all scenarios, as it is anticipated to benefit from the more active informal economy and activity from buyers out of the higher value segments looking to downscale. The low HPI scenario could lead to an accelerated decline in HPI, while the high HPI scenario may see HPI bounce back in the second quarter and end 2023 with strong upward momentum going into 2024. • All in all, the property market in South Africa is expected to face challenges in 2023, as the country's economy remains stagnant and the challenges with electricity and water continue. This means that house prices are likely to grow less than inflation, making it a buyer's market.

6.3 LOCAL RESIDENTIAL MARKET ACTIVITY

Subsequent section provides an overview of market activity of selected suburbs in the immediate vicinity of the proposed mixed-use development. It should be noted that these properties are properties currently available to lease in the market.

6.3.1 RESIDENTIAL PROPERTIES LISTED FOR SALE IN THE PIMARY MARKET AREA (CURRENT LISTINGS)

The following provides a concise overview of property market activity of selected suburbs in the immediate vicinity of the proposed mixed-use development. It should be noted that these properties are properties currently for sale / available in the market.

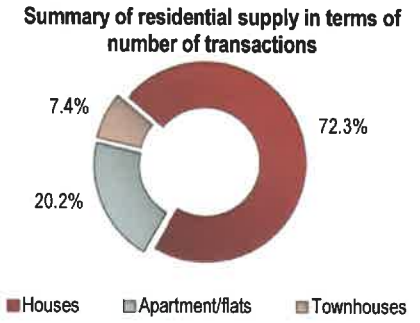
Surrounding areas include:

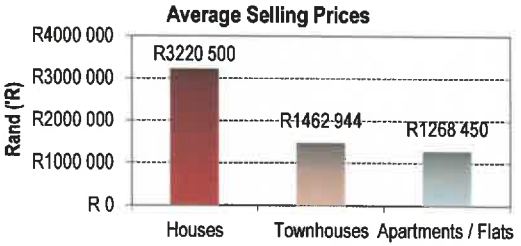
- Aan De Wijnlanden
- Clairewood
- Croydon
- De Wijnlanden Residential Estate
- De Zalze Winelands Golf Estate
- Devon Park - Eersterivier
- Devon Park Village
- Digteby Estate
- Eersterivier Industria
- Eersterivier South
- Helderberg Village
- Highbury
- Kelderhof Country Village
- Kuilsrivier Industria
- Longlands Country Estate
- Lyndoch
- Onder Papegaaiberg
- Penhill
- Raithby
- Russels Rest
- Rustdal
- The Wines
- The Orchards

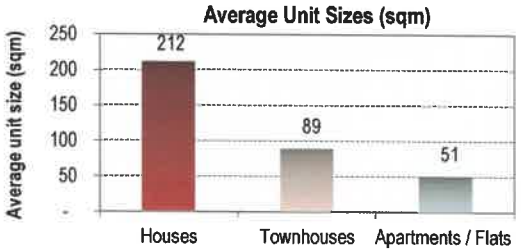
Table 6.1: Residential Properties Listed for Sale

Size	Minimum	Maximum	STD Deviation	Average asking price	Number of properties	%
Apartment / Flat						
1 Bedroom	R580 000	R5 500 000	R1 663 173	R1 583 333	15	22.1%
2 Bedrooms	**R650 000**	**R8 500 000**	**R1 470 613**	**R1 099 110**	**51**	**75.0%**
3 Bedrooms	R2 350 000	R4 100 000	R1 237 437	R3 225 000	2	2.9%
Average price				**R1 268 450**	**68**	**100.0%**
Houses						
1 Bedroom	R299 999	R299 999		R299 999	1	0.4%
2 Bedrooms	**R299 999**	**R7 200 000**	**R1 271 741**	**R1 629 372**	**50**	**20.6%**
3 Bedrooms	**R435 000**	**R12 500 000**	**R1 859 464**	**R2 584 128**	**133**	**54.7%**
4 Bedrooms	R1 100 000	R20 160 000	R3 936 384	R5 762 222	45	18.5%
5 Bedrooms	R1 199 999	R15 900 000	R4 992 915	R8 903 000	10	4.1%
6+ Bedrooms	R1 299 000	R3 100 000	R805 361	R2 198 500	4	1.6%
				R3 220 500	**243**	**100.0%**
Townhouses						
1 Bedroom	R325 000	R580 000	R93 529	R461 000	9	4.7%
2 Bedrooms	**R459 000**	**R1 000 000**	**R105 688**	**R669 541**	**95**	**50.0%**
3 Bedrooms	**R557 500**	**R1 490 000**	**R232 718**	**R841 686**	**83**	**43.7%**
4 Bedrooms	R1 319 000	R1 995 000	R390 289	R1 544 333	3	1.6%
Average price				**R1 462 944**	**25**	**100.0%**

Source: Demacon, 2023







Findings:

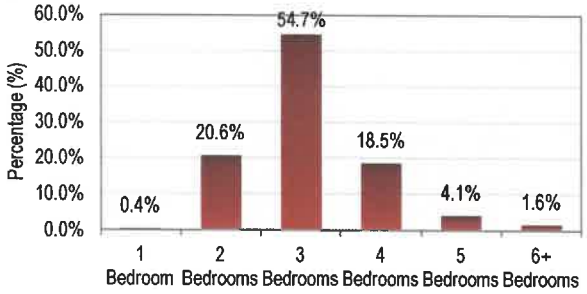
- ✓ Properties for sale in the market area were analysed to determine market activity in the primary catchment.
- ✓ The results indicate that **freestanding houses** constitute 72.3% of all properties for sale, with 20.2% apartments and 7.4% townhouses.
- ✓ There was a total of **243 freestanding houses, 68 apartments,** and **25 townhouses** listed on the market.
- ✓ The **average selling prices:**
  - Houses: R3 220 500
  - Townhouses: R1 462 944
  - Apartments / Flats: R1 268 450
- ✓ The majority of *houses* in the listings were **2- or 3-bedroom units;** *apartments* were **1- or 2-bedroom units;** and *townhouses* were **2- and 3-bedroom units.**

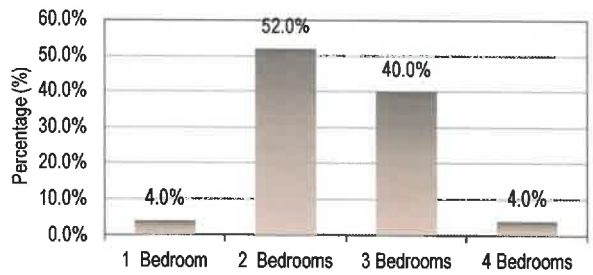
✓ The **unit size** of houses ranges between 45m² and 693m² (average of **212m²**), apartments are in the region of **51m²**, and townhouses are **89m²**.

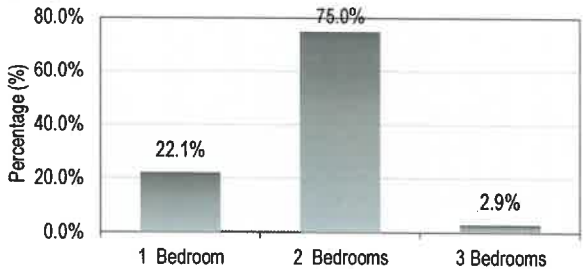
The following information provides a graphical description of the preceding data. The data provides key descriptive information of properties for sales in the market.

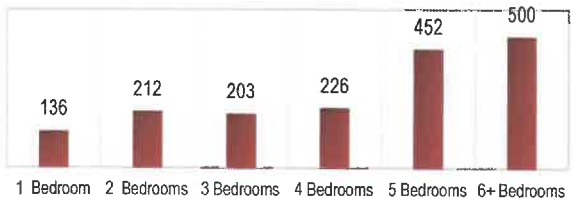
Table 6.2: Key descriptive information of properties for sale

FREE-STANDING HOMES	TOWNHOUSES	APARTMENTS / FLATS
PROPERTIES in immediate surrounding area **243**	**PROPERTIES** in immediate surrounding area **25**	**PROPERTIES** in immediate surrounding area **68**
Average Price **R3 220 500**	**Average Price** **R1 462 944**	**Average Price** **R1 268 450**
Distribution of Bedrooms	**Distribution of Bedrooms**	**Distribution of Bedrooms**
Average Unit Size 45 – 693m² **212m² (average)**	**Average Unit Size** 55 – 168m² **89m² (average)**	**Average Unit Size** 34 – 132m² **51m² (average)**

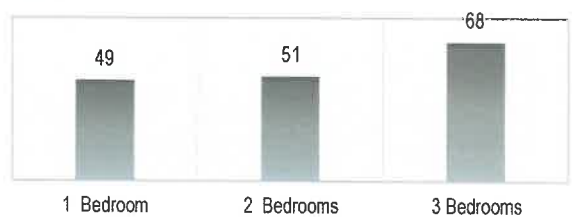






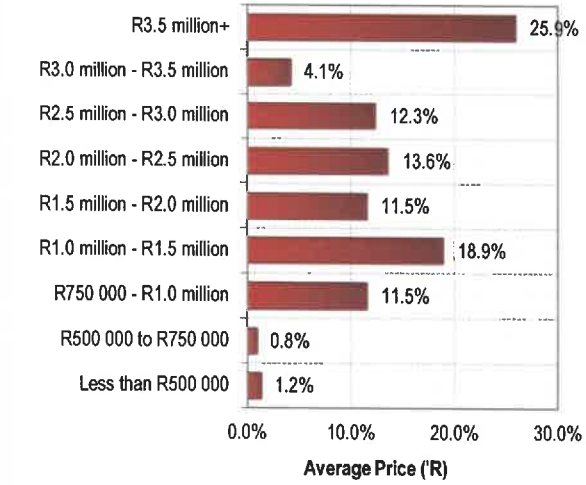




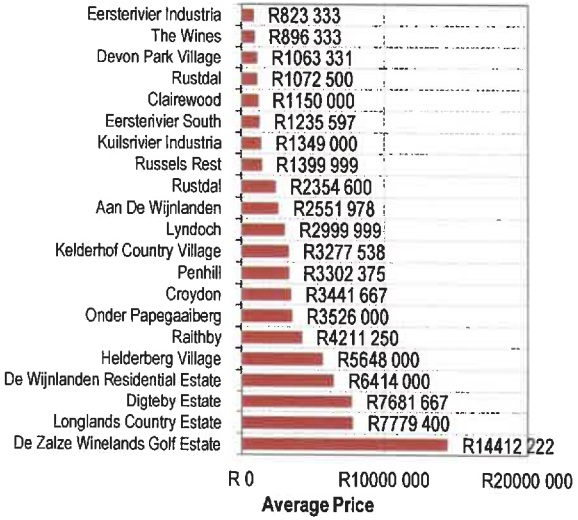


FREE-STANDING HOMES

Average Price Range Distribution

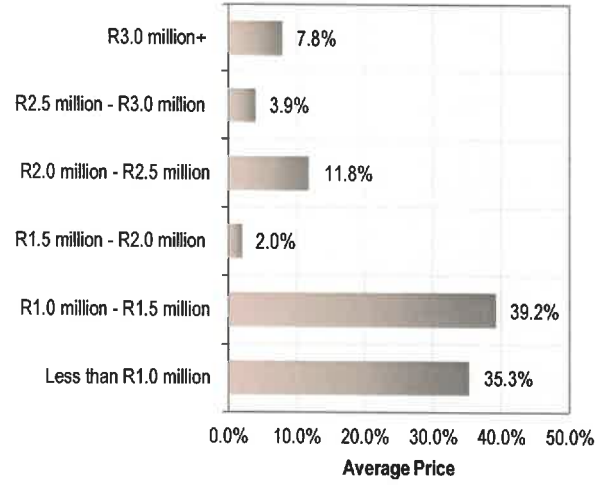


Average Price Per Suburb

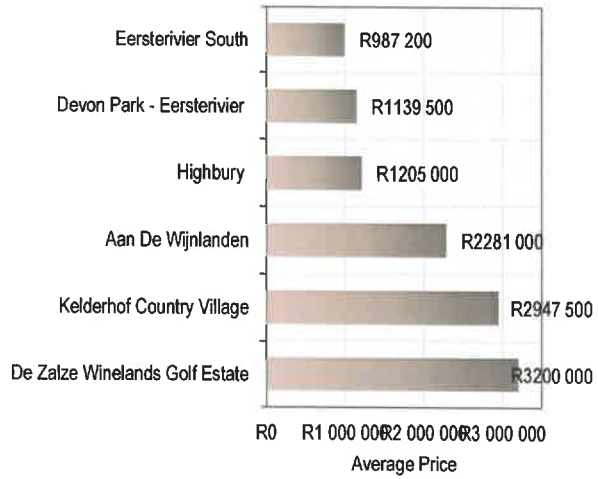


TOWNHOUSES

Average Price Range Distribution

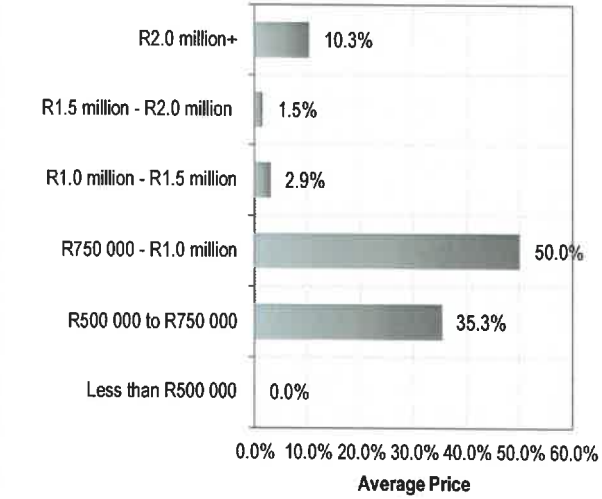


Average Price Per Suburb

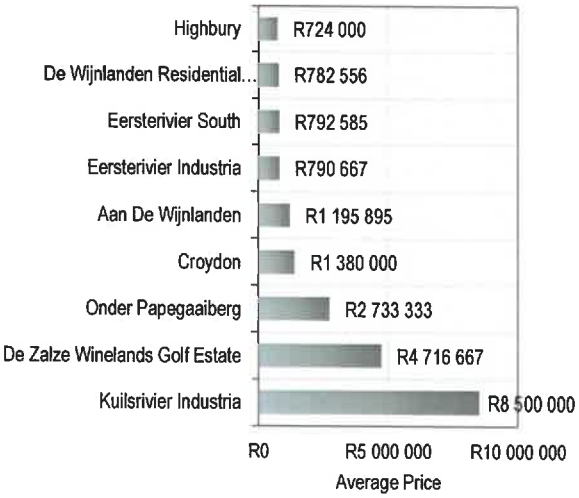


APARTMENTS / FLATS

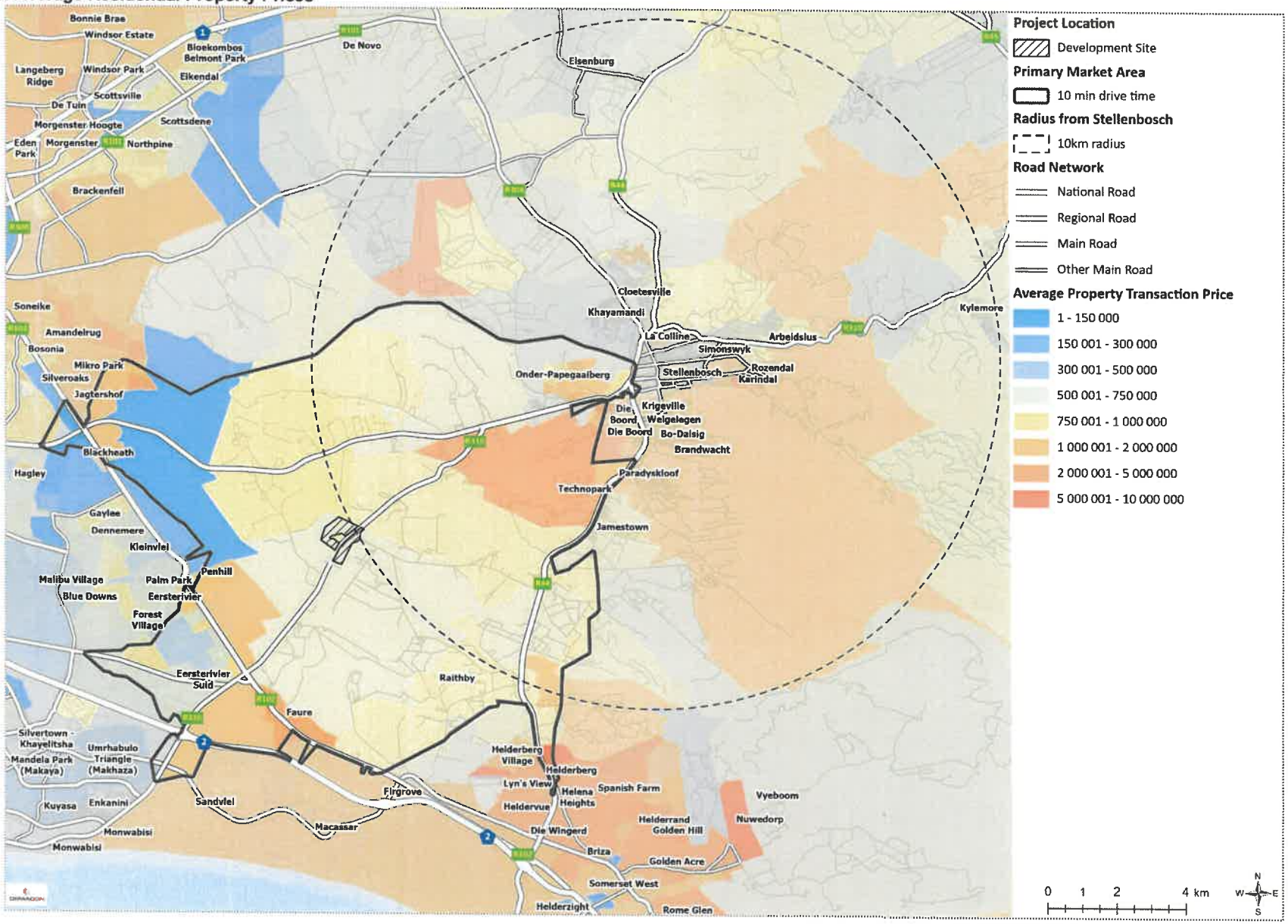
Average Price Range Distribution



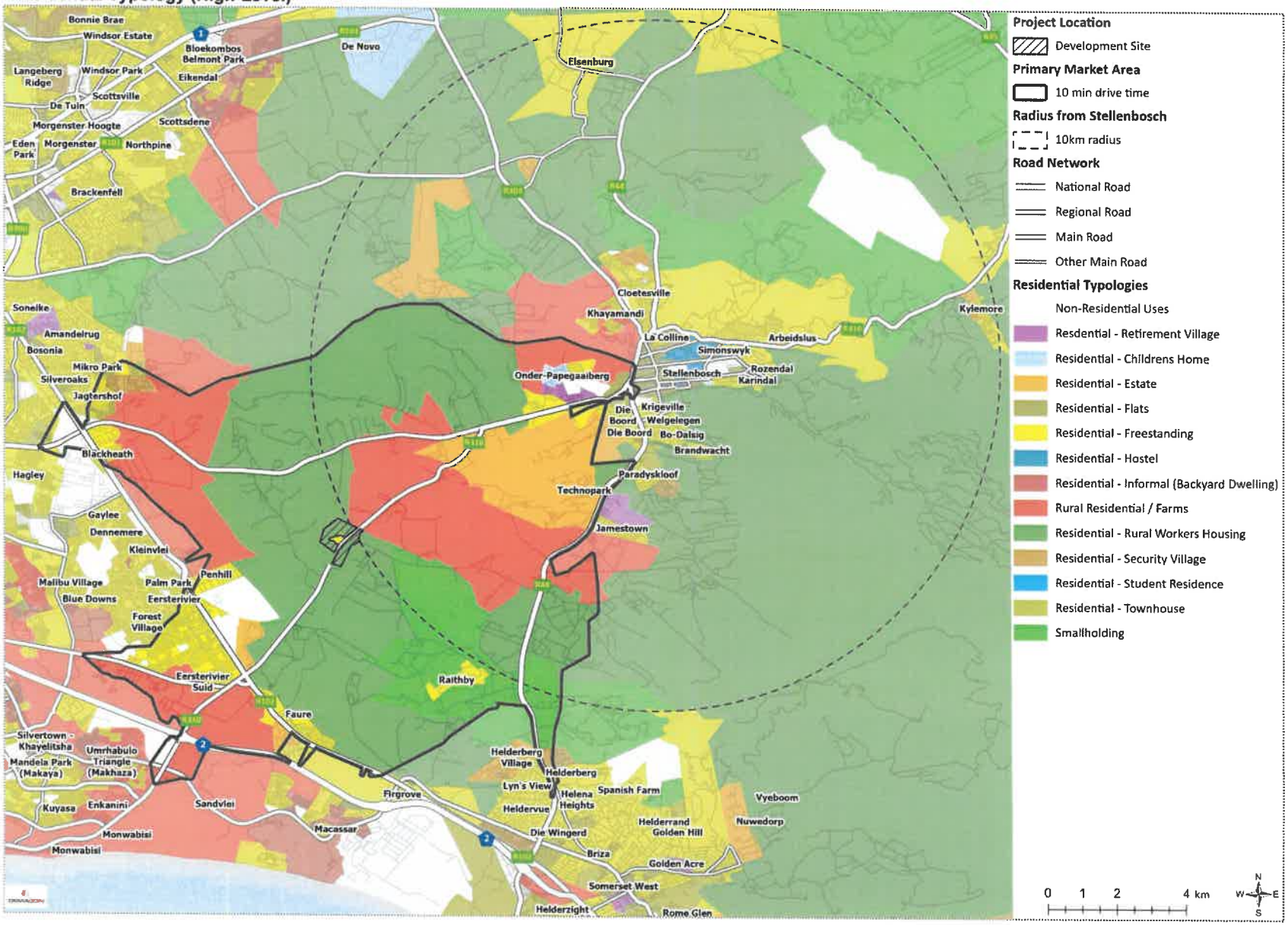
Average Price Per Suburb



Map 6.1: Average Residential Property Prices



Map 6.2: Residential Typology (High-Level)



6.3.2 RESIDENTIAL RENTALS LISTED IN THE MARKET AREA

The following table provides the property activity of immediate surrounding suburbs within the primary trade area - these are **rental properties** in the market. The table below summarises data in terms of bedroom units, quantity, average prices, standard deviation, and classification.

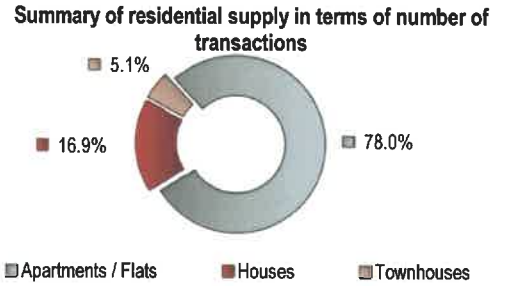
The following suburbs were selected for the analysis:

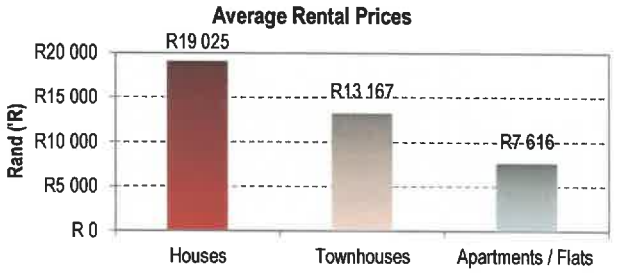
Aan De Wijnlanden	Devon Park-Eersterivier	Highbury	Raithby
Croydon	Devon Park-Stellenbosch	Kelderhof Country Village	The Wines
De Wijnlanden Residential Estate	Eersterivier Industria	Onder Papegaaiberg	Vlottenburg
De Zalze Winelands Golf Estate	Eersterivier South	Penhill	

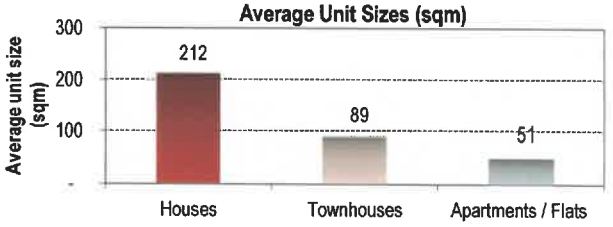
Table 6.3: Residential Properties Listed to Rent

Size	Minimum	Maximum	STD Deviation	Average Rental	Number of properties	%
Apartments / Flats						
0.5 Bedroom	R4 750	R4 750	-	R4 750	1	2.2%
1 bedroom	R3 500	R15 000	R3 438	R7 713	8	17.4%
2 Bedrooms	R5 100	R14 000	R1 799	R7 433	36	78.3%
3 Bedrooms	R16 300	R16 300	-	R16 300	1	2.2%
Average rental				**R7 616**	**46**	**100.0%**
Houses						
1 bedroom	R4 700	R4 700	-	R4 700	1	10.0%
2 Bedrooms	R6 250	R8 500	R1 146	R7 250	3	30.0%
3 Bedrooms	R9 500	R33 000	R14 597	R16 167	5	50.0%
4 Bedrooms	R55 000	R55 000	-	R55 000	1	10.0%
Average rental				**R19 025**	**10**	**100.0%**
Townhouses						
2 Bedrooms	R8 500	R22 000	R7 654	R13 167	3	100.0%
Average rental				**R13 167**	**3**	**100.0%**

Source: Demacon, 2023







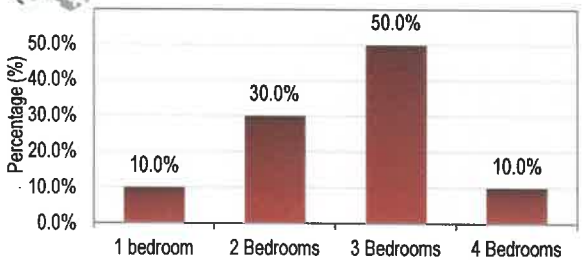
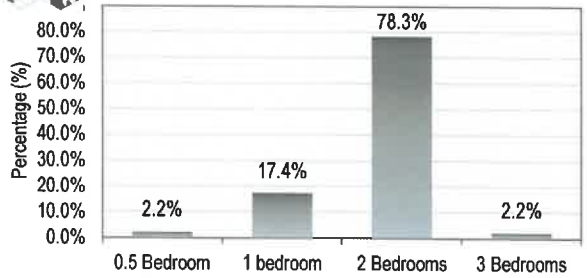
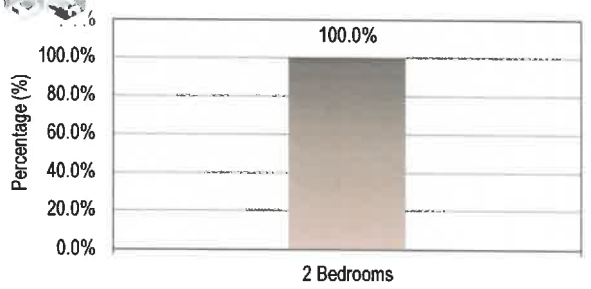
Findings:

- ✓ There was a total of 59 rental properties analyzed of which 46 were apartments / flats, 10 houses, and
- ✓ In terms of the number of transactions, 78.0% of the properties were listed as apartments / flats, 16.9%
- ✓ The **average rental prices are as follows:**
  - Houses: R19 025,
  - Townhouses: R13 167
  - Apartments and flats: R7 616

- ✓ The most popular properties were;
  - 2-bedroom apartments listed for R7 433,
  - 3-bedroom houses listed for R16 167 and
  - 2-bedroom townhouses listed for R8 500.
- ✓ **Average unit sizes** for houses are in the region of **172m²**, apartments / flats are **51m².**townhouses are **52m².**

The data provides key descriptive information of properties for rent in the market.

Table 6.4: Key descriptive information of properties for rent

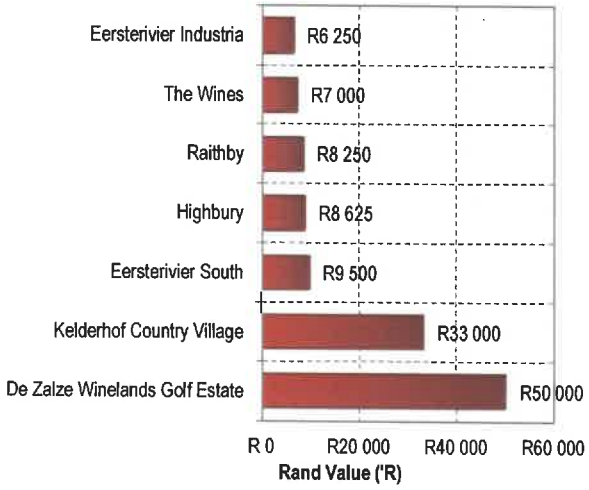
FREE-STANDING HOMES	APARTMENTS / FLATS	TOWNHOUSES
PROPERTIES in immediate surrounding area **10**	**PROPERTIES** in immediate surrounding area **46**	**PROPERTIES** in immediate surrounding area **3**
Average Rental **R19 025**	**Average Rental** **R7 616**	**Average Rental** **R13 167**
Distribution of Bedrooms 	**Distribution of Bedrooms** 	**Distribution of Bedrooms** 
Average Unit Size 50 – 280m² **172m² (average)** 	**Average Unit Size** 30 – 70m² **51m² (average)** 	**Average Unit Size** 50 – 54m² **52m² (average)** 

FREE-STANDING HOMES

Average Rental Range Distribution

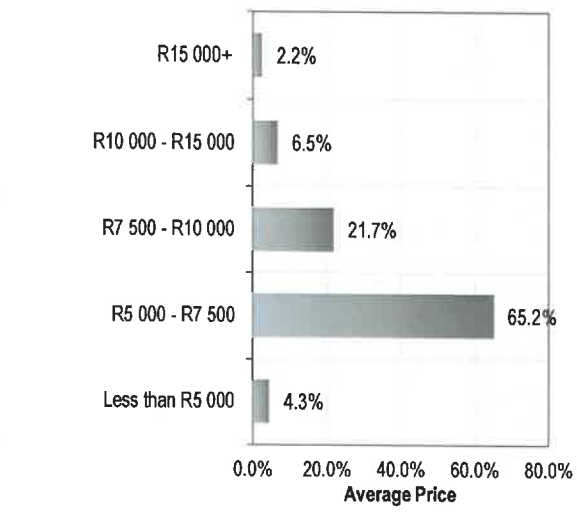


Average Rental Per Suburb

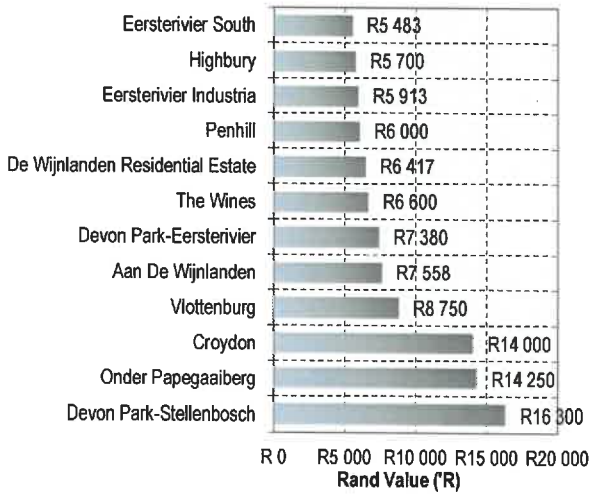


APARTMENTS / FLATS

Average Rental Range Distribution

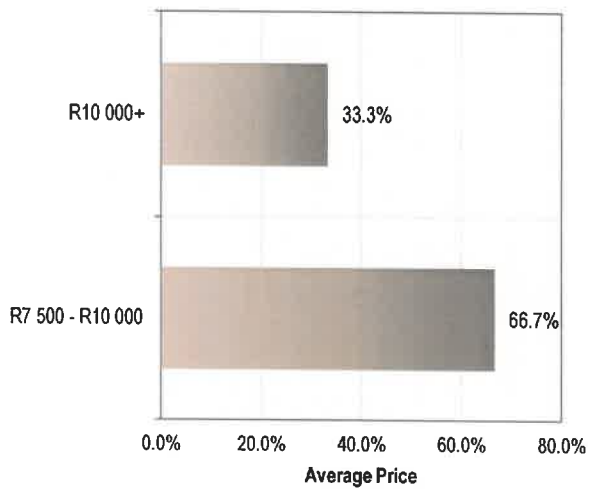


Average Rental Per Suburb

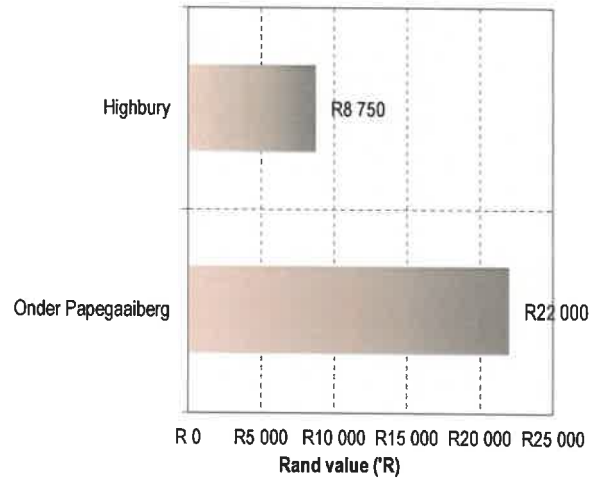


TOWNHOUSES

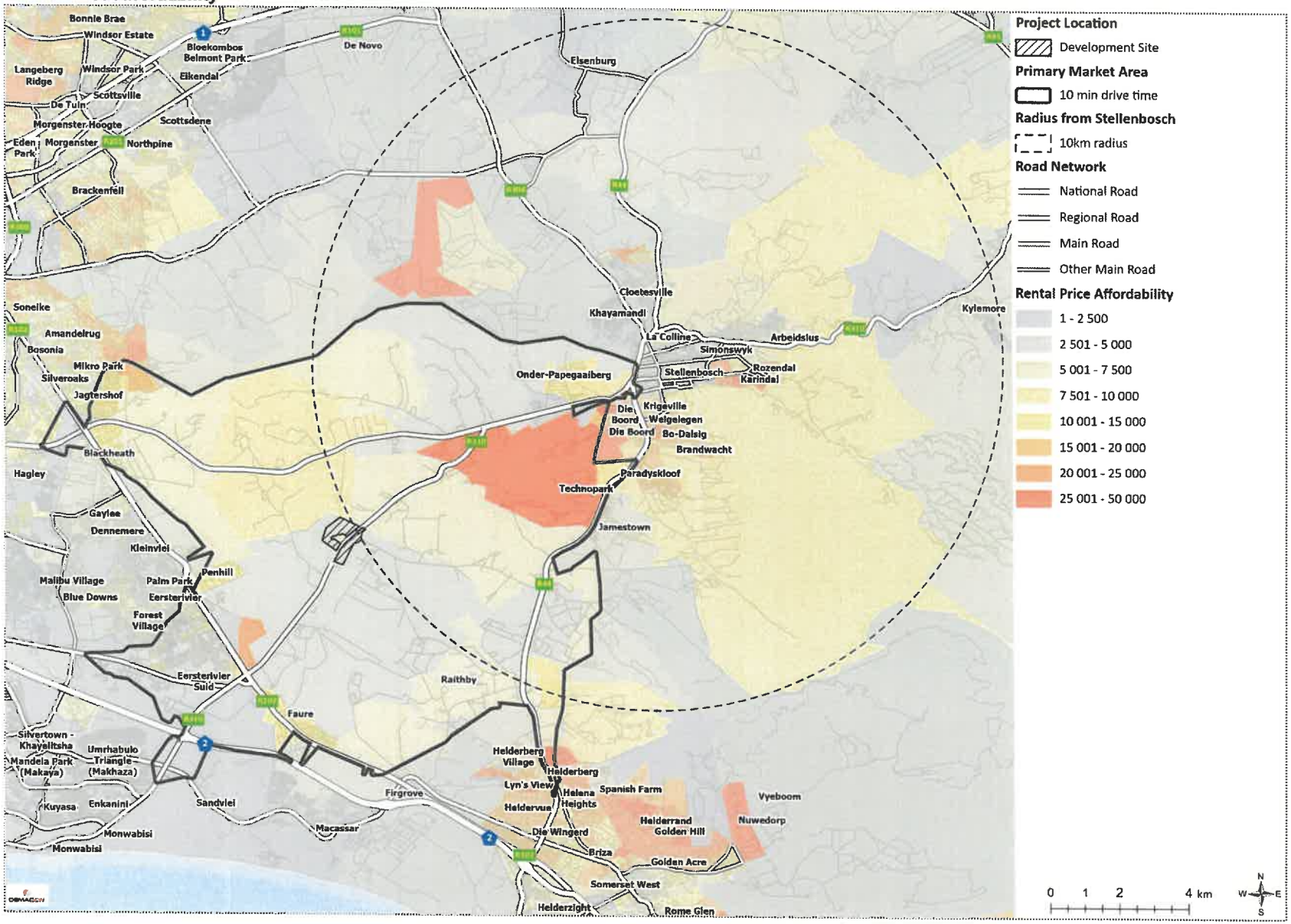
Average Rental Range Distribution



Average Rental Per Suburb

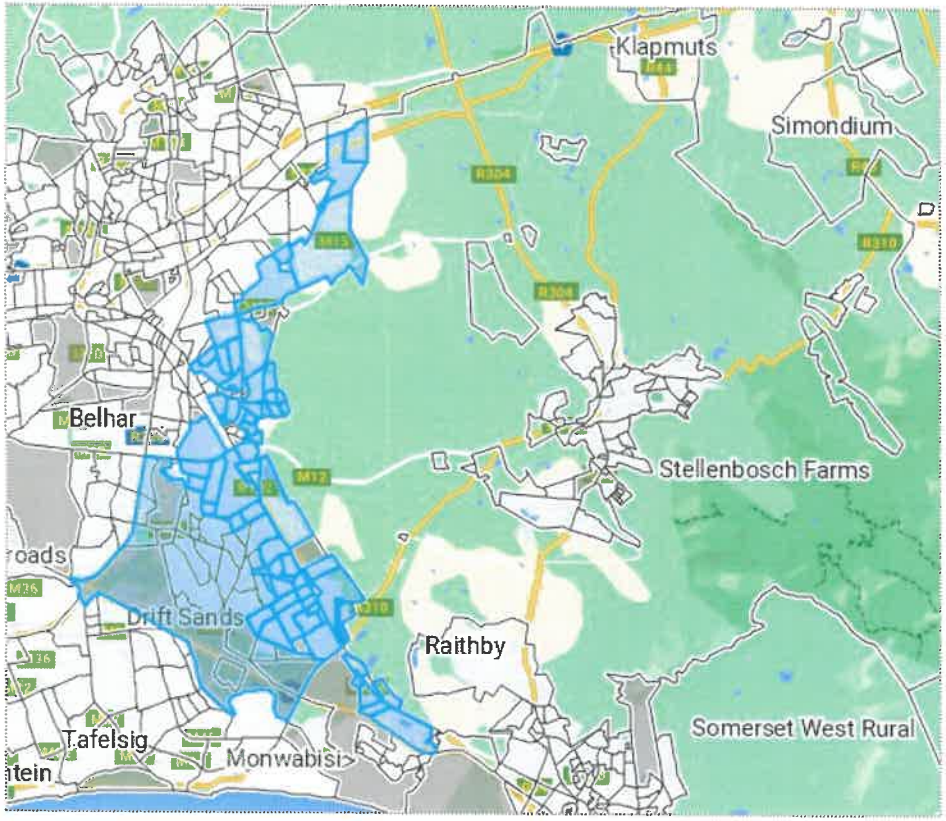


Map 6.3: Rental Price Affordability



6.3.3 RESIDENTIAL RENTAL DATA - CURRENT TOWNHOUSE LISTINGS (West of the Primary Market Area)

SUMMARY OF TOWNHOUSE RENTALS



The following summarizes current rentals of townhouses in the areas west of Lynedoch.

Total Townhouse Listings **15**

Distribution of Bedrooms **2 bedrooms & 3 bedrooms**

2 Bedroom Units Price Range: **R6 200 - R14 500**

3 Bedroom Units Price Range: **R15 500 - R22 000**

Findings:

- There are 15 townhouse listings within these areas.
- The lower-end rentals represent largely older stock, whereas the higher rentals reflect new / modern stock.
- The vast majority of rental listings are 2-bedroom townhouses.

320

6.3.4 LOCAL PROPERTY TRENDS & STATISTICS (SALES REGISTERED IN THE DEEDS OFFICE)

Subsequent section provides a summary of properties registered in the Deeds Office for Lynedoch.

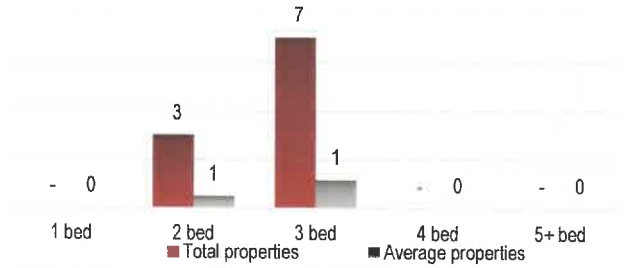
Summary of properties registered in the Deeds Office, 2023

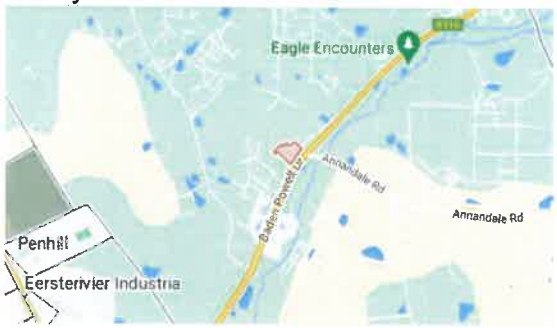
AVERAGE PRICE

1	N/A
2	N/A
3	R300 000
4	N/A
5+	N/A

AVERAGE PRICE PER BEDROOM R300 000

TOTAL & AVERAGE PROPERTIES FOR SALE PER BEDROOM TYPE (6-MONTH SIZE)





ANNUAL PROPERTIES FOR SALE

This graph shows the annual number of sales registered in the deed's office, as well as the average selling price and asking price of all listings for the same time period.

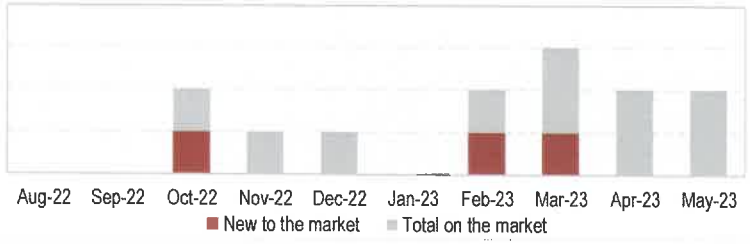


Lynedoch

- There have been **51 sales** since 2014, averaging **9** properties per year.
- Average asking price (2022): **R5 000 000**
- Average sales price (2022): **R2 400 000**
- Sales prices achieved in 2022 are, on average, **42.7%** higher than in 2022.
- Sales prices in 2022 are ±108.3% lower than the asking price in 2022.

MONTHLY PROPERTIES FOR SALE

This graph shows the monthly number of properties and properties new to the market in Lynedoch.



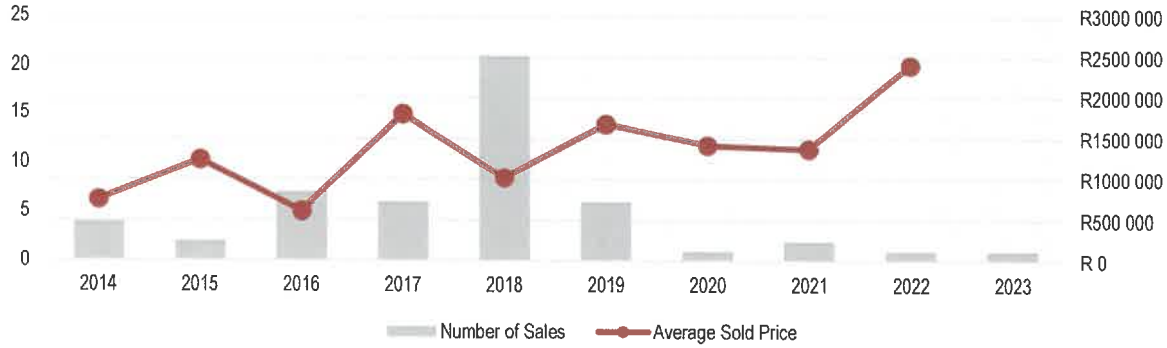
Lynedoch

- Total of **12 units** from Aug 2022 and July 2023, average of 1 per month
- New **units: 5 new units** from Aug 2022 and July 2023, average of 1 per month.

LOCAL PROPERTY TRENDS & STATISTICS (Sales registered in the deeds office) – Lynedoch

SOLD ERVEN

This graph depicts the annual number of sold erven in Lynedoch and the average sold price as recorded at the South African Deeds office.

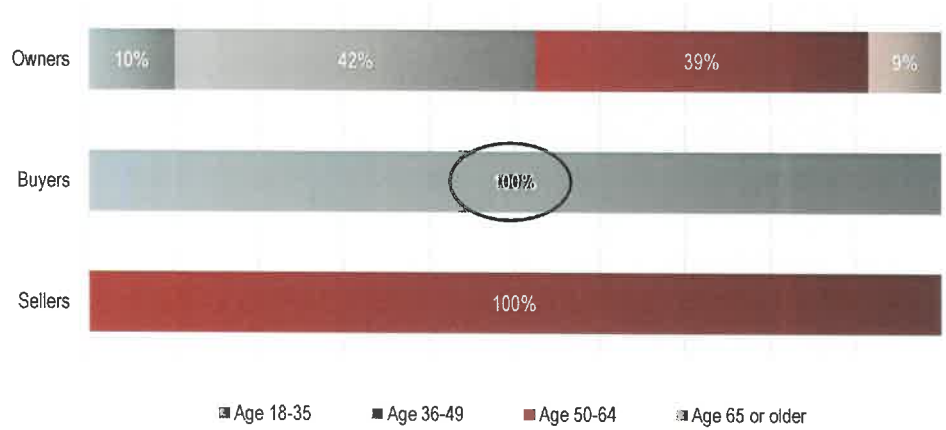


Lynedoch

- There have been **51 sold erven** since 2014, an average of 5 per annum.
- The average price per erven (2014 – 2022) is approximately R1 362 344.
- In 2022, one erf was sold for an average price of R2 400 000.

AGE PROFILE

This graph shows the property buying and selling trends relative to age in Lynedoch, as registered in the South African Deeds office. Buyers and Sellers are those who have appeared in a registered transfer in their respective roles within the last 6 months, while owners are those who purchased their property more than 6 months ago.



Lynedoch

- The majority of owners in the Lynedoch (42.0%), were between the age of 36 to 49 years old.
- 100% of buyers were between 18 and 34 years of age
- 100% of sellers were between 50 and 64 years of age

Source: Demacon ex Property 24, 2023

6.3.5 TRANSACTIONAL DATA

The following section contains the most recent property registrations in **Lynedoch**, as well as Stellenbosch Town (refer to map below), alongside pricing and sizing of transactions where applicable.

LYNEDOCH PROPERTY REGISTRATIONS

The table below provides property registrations from April 2019 to 30 January 2022. No further transactions were recorded in Lynedoch.

Table 6.5: Lynedoch Property Registrations (2019/04/01 - 2022/01/30)

Township	Number of Properties	Sales Price			Unit Size (m²)			R/m²	
		Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum
LYNEDOCH	10	R370 000	R2 800 000	R1 821 460	96	302	187	R2 336	R17 187

Source: Demacon ex Lightstone 2023

Findings:

- There was a total of 10 properties from April 2019 to the end of January 2022.
- The average sales price in Lyndoch was **R1.8 million** with an average unit size of 187m² and ranged between R2 336 per m² to R17 187 per m².

6.3.6 ESTATES IN THE PRIMARY MARKET AREA

The following table provides a summary of estates in the area along with pricing, sizing, and Lightstone Deeds Data.

Table 6.6: Estates in the area

NAME OF ESTATE	LOCATION	SECTIONAL TITLE / NO OF ERVEN IN ESTATE	PRICING
DIGTEBY ESTATE DIGTEBY ESTATE	Township: Vlottenburg Municipality: Stellenbosch	55 erven **Market Stock**: Freehold properties	**Lightstone Deeds Transfer data** – Aug 2021 to June 2023: Number of transfers: 10 Sales prices: R5.1 million to R8 million (average R6.3 million) **Properties listed currently:** 4- and 5-bedroom houses Price: R5.7 million to R8.9 million (average R7.6 million) Unit sizes: 280m² to 550m² Stand sizes: 400m² to 1 000m²
LONGLANDS ESTATE	Polkadraai Rd, Vlottenburg Township: Longlands Cape Municipality: Stellenbosch	110 erven, Approximately 20 hectares **Market Stock**: Freehold properties	**Lightstone Deeds Transfer data** – May 2019 to Aug 2023: Number of transfers: 23 Sales prices: R2.1 million to R12.5 million (average R6 million)

NAME OF ESTATE	LOCATION	SECTIONAL TITLE / NO OF ERVEN IN ESTATE	PRICING
LONGLANDS COUNTRY LIFESTYLE ESTATE			**Properties listed currently:** 3-, 4- and 5-bedroom houses Price: R5.9 million to R10 million (average R7.7 million) Unit sizes: 314m² to 557m² Stand sizes: 600m² to 810m²
DE WIJNLANDEN RESIDENTIAL ESTATE DE WIJNLANDEN RESIDENTIAL ESTATE	Township: Eersterivier Municipality: City of Cape Town	**Market Stock**: Freehold properties & Sectional Title **Sectional Title Units** in Estate: 20 (8.55%) **Number of Erven**: 214 (91.45%) **Total number of properties**: 234	**Lightstone Deeds Transfer data** – Oct 2021 to April 2023: Number of transfers: 28 Sales prices: R485 000 to R6 million (average R3.75 million) **Properties listed currently:** 3- and 4-bedroom houses Price: R4.85 million to R8.8 million (average R6.4 million) Unit sizes: 335m² to 693m² Stand sizes: 625m² to 1 164m² 1- and 2-bedroom apartments: R580 000 to R1 million Unit sizes: 37 to 66m²
DE ZALZE WINELANDS GOLF ESTATE De Zalze winelands golf estate	Township: Kuilsriver Municipality: City of Cape Town	**Market Stock**: Freehold properties	**Lightstone Deeds Transfer data** – May 2022 to May 2023: Number of transfers: 25 Sales prices: R2.6 million to R37 million (average R16 million) **Properties listed currently:** 3-, 4- and 5-bedroom houses Price: R9.75 million to R20 million (average R6.4 million) Unit sizes: 335m² to 693m² Stand sizes: 625m² to 1 164m² 1-bedroom apartments: R3.7 million to R5.5 million Unit sizes: 81m² 1-bedroom townhouse: R3.2 million Unit size: 80m²

Source: Demacon ex Property24 & Lightstone, 2023

6.4 RESIDENTIAL DEMAND MODELLING

6.4.1 INTRODUCTION

The residential market demand dynamics sub-section focusses on the residential market, with the objective of estimating the development potential within the market area. Demand modelling was completed for the **short to medium term** and is reflected in five-year intervals.

6.4.2 DEFINING MARKET DEMAND

Definition

The residential market refers to land uses associated with human habitation such as housing or dwelling units. Residential use can vary in typology, density, tenure, structure, layout, and affordability. 'Residential' does not include hotels or guesthouses, which are defined as being 'short stay' accommodation.

Defining demand

Residential demand depends on a variety of factors. In this context, residential demand can be conceptualised as follows:

$$Dres. = f\{P_o; P_{\%}; Q; P_r; P_{r\%}, ROI, I, T_x; Y; H_h; R; C_i; H_s; H_p\}$$

Where:

P_o	=	Population Size
$P_{\%}$	=	Population growth rate
Q	=	Existing quality of residential environment
P_r	=	House prices
$P_{r\%}$	=	Growth in house prices
ROI	=	Return on investment
I	=	Interest rates
T_x	=	Rates and Taxes
Y	=	Household income
H_h	=	Household size
R	=	Rent
C_i	=	Cap Rates
H_s	=	Housing shortage
H_p	=	Housing preferences

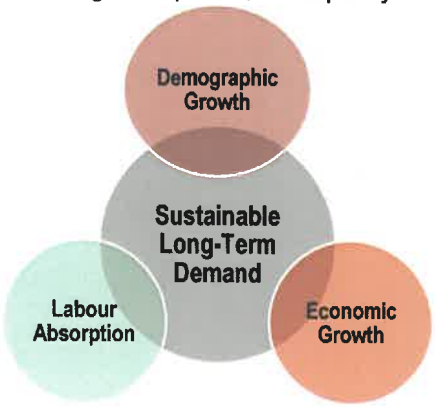
In essence, market demand for housing is a function of:

- ✓ Socio-economic characteristics – size, distribution, etc
- ✓ Socio-economic growth trends – distribution, rate of change, etc
- ✓ Household annual income profiles
- ✓ Current subsidised housing demand and backlogs
- ✓ Urban development trends
- ✓ Real estate market indicators – rental rates, supply, etc

In order to purposefully estimate demand for social housing, a multi-layer data analysis is undertaken – the purpose is to define the target market and its trends based on various data sources at designated points in time. This is done to understand the possible future direction of growth and market demand based on credible and substantiated historic data (such as Statistics South Africa) and considering any potential trends that influence beneficiaries of the social housing product (market rental trends, development influencers and economic climate).

Sustainable Long-Term Demand

The multi-layered approach allows for estimating medium- to long-term sustainable demand. Sustainable demand referes to demand that may exist within the market area that would enable social housing institutions and projects to become sustainable over a medium- to long-term period, i.e capacity of a market area and its asociated economy to generate empoyment that in turn provides the target market with the capability to rent a social housing unit.

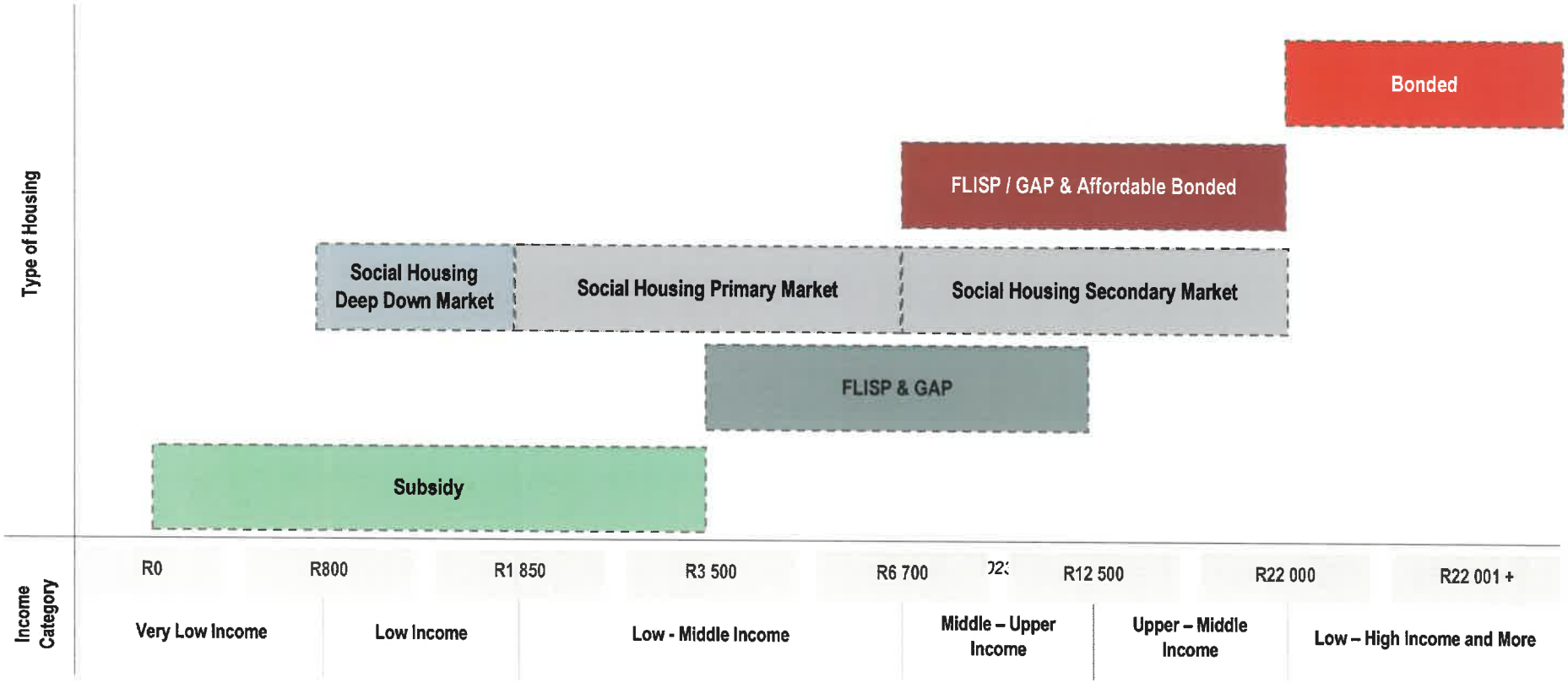


Economic factors influence the sustainabaility of semi-subsidised housing schemes, i.e. social housing. Social housing projects are depdent on a target market that has the ability to pay rental rates. Without income generated from rental rates, social housing projects would become financially unfeaseable due to not having operational capital. It is thus important to consider the effects that economic factors such as economy size and growth trends; and labour absorption trends have on the social housing target market within market area.

In the context of the preceding, the growth of the housing market demand is calibrated by considering, not only long-term demographic growth attributes, but also considering economic growth trends and labour absorption capabilities

of the local economy. The calibration ensures that demand estimations generated for housing is sustained demand and not short-term high growth with medium- to long-term under performance.

Diagram 6.1: Housing Income Categories



6.4.3 DEFINING MARKET DEMAND

BONDED UNITS (Short to Medium Term – 3 to 5 years)

INCOME AND HOUSING AFFORDABILITY RECOMMENDATIONS

The table below indicates a range of income midpoints, midpoint house prices and classifications attainable by the source market area.

Table 6.7: Residential Affordability Profile

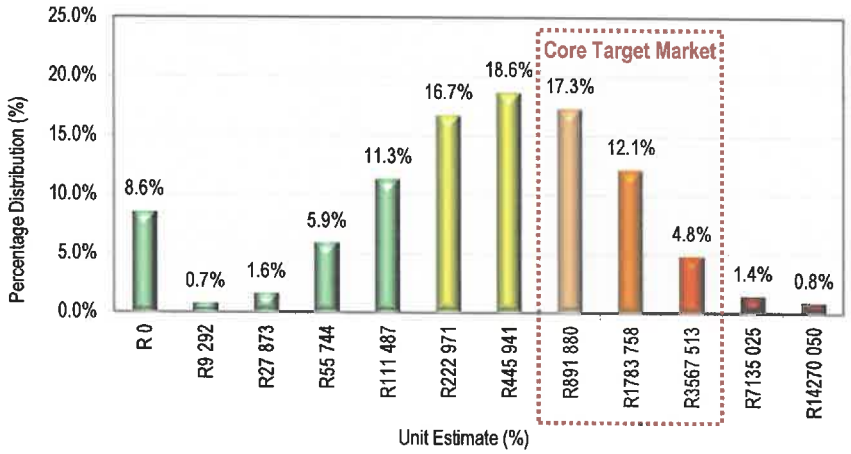
Income Midpoint 2023 (R)	House Price (Midpoint)	Generic Indicative Unit Size	(%)	Number of Units (±300)	Classification
R0	R0	40m² - 50m²		-	Subsidy / Social
R3 050	R9 292	40m² - 50m²		-	Subsidy / Social
R9 147	R27 873	40m² - 50m²	-	-	Subsidy / Social
R18 294	R55 744	40m² - 50m²		-	Subsidy / Social
R36 587	R111 487	50m² - 60m²		-	Subsidy / Social
R73 174	R222 971	60m² - 70m²	-	-	FLISP / Gap
R146 347	R445 941	80m² - 90m²	-	-	FLISP / Gap
R292 693	R891 880	120m² - 140m²	47.3%	142	Middle to Higher Income
R585 385	R1 783 758	140m² - 400m²	33.3%	100	Middle to Higher Income
R1 170 769	R3 567 513	420m² - 750m²	13.2%	40	Higher Income
R2 341 537	R7 135 025	780m² - 1000m²	3.9%	12	Top-End
R4 683 075	R14 270 050	1 000m²+	2.3%	7	Top-End

Source: Demacon Demand Modelling, 2023

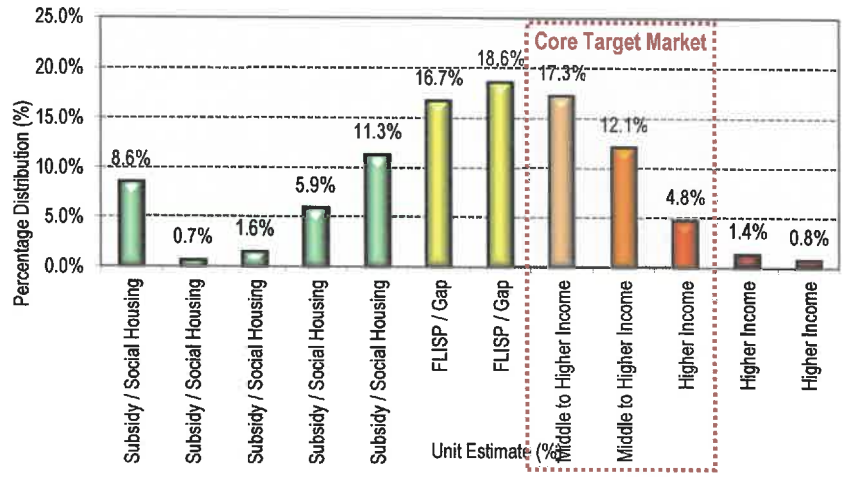
- ✓ The core target market of the bonded segment is households earning on average between **R292 693** and **R1 170 769** annually.
- ✓ This segment can afford houses between **R891 880** and **R3 567 513**
- ✓ The total units recommended over the short term to medium term for the bonded segment of the project, is a maximum of **±300 units.**

The following graphs indicates the target market housing profile based on the affordability analysis within the delineated source market.

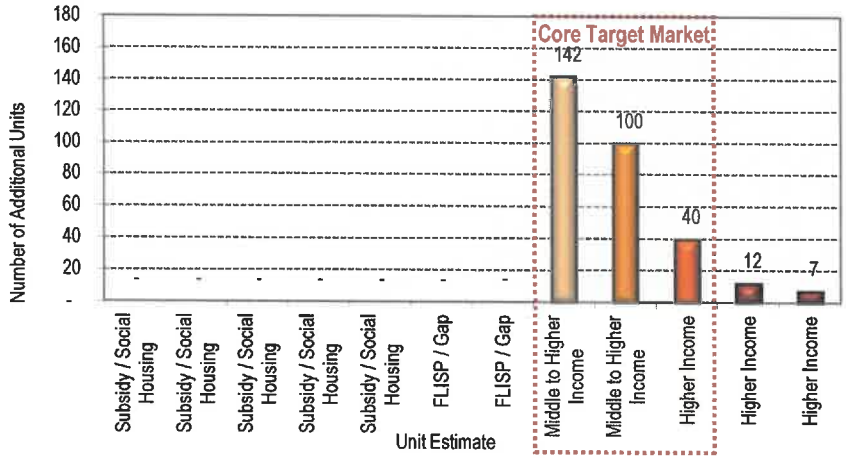
MARKET ARREA HOUSING AFFORDABILITY PROFILE



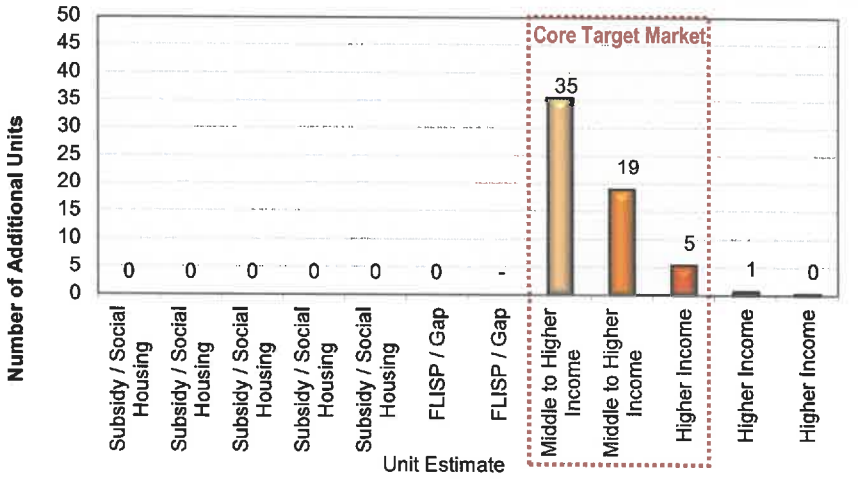
MARKET OPTIMUM UNIT TYPOLOGY (PERCENTAGES)



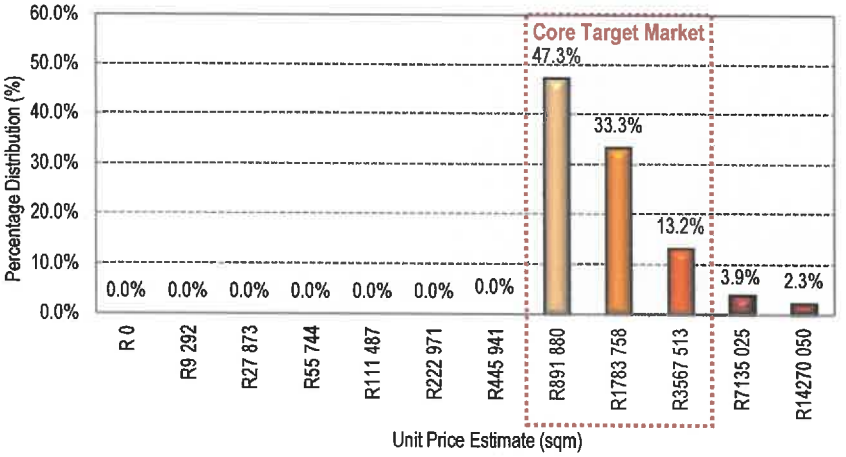
PROJECT OPTIMUM UNIT TYPOLOGY (UNITS)



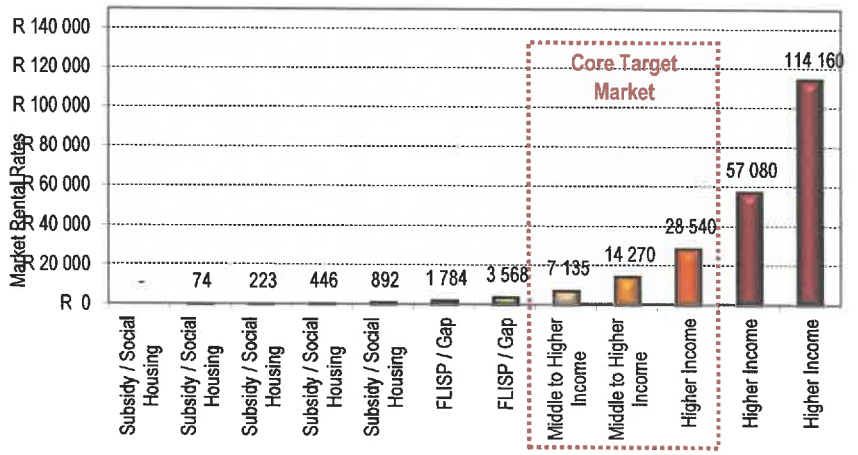
PROJECT POTENTIAL RENTAL STOCK PER PRODUCT TYPE (NUMBERS)



UNIT PRICE ESTIMATE (MEDIAN PORTFOLIO VALUES)



MARKET FORECAST RENTAL RATES



SUMMARY OF MARKET RECOMMENDATIONS – SHORT TERM

TOTAL MARKET				
	Additional Households: Base Year +5 Years		322	A
	Annualised Market Growth (Full Housing Spectrum)		64	B
	Bonded & Credit linked		71.9%	C
	Bonded & Credit Linked take-up per annum		46	D
	Annual secondary market contribution (units / annum)	Min	146	E
		Max	292	F
	Total annual Bonded & Credit Linked demand	Min	193	G
		Max	339	H
PROJECT SPECIFIC – BONDED / MARKET BASED HOUSING UNITS				
	Project Bonded & Credit Linked Units		**300**	I
	Forecast market share of total market sales	Min	20%	J
		Max	25%	K
	Project Forecast Total Annual Take-Up Rate (Units / Annum)	Min	39	L
		Max	85	M
	Years to 80% Take-Up (Social Housing Units)	Min	3.5	N
		Max	7.8	O
		Avg	5.7	P
	Optimum point of market entry		2024+	

Source: Demacon Demand Modelling, 2023

Explanatory Notes:
A = increase in demand for new units, 2023 – 2028
B = Annualised market growth, i.e., of A/5
D = B x C
E & F = Annual secondary market contribution (i.e., the contribution made by re-sales in the target affordability income brackets)
G & H = Annual new entry-level to executive flat/ apartment demand; D + E and D + F
I = Project entry-level to executive flat/ apartment units
J & K = assumed market share of market area

FINDINGS: Short to Medium Term – 3 to 5 years

- ✓ An estimated 322 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 64 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 46 units per annum.
- ✓ A total of **±300 units** could be developed and taken-up over the short term to medium term (80% take-up).
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**
- ✓ A first phase of **100 to 150 units** is recommended (3- to 5-year take-up forecast).

BONDED UNITS (Medium to Longer Term – 5 to 10 years)

INCOME AND HOUSING AFFORDABILITY RECOMMENDATIONS

The table below indicates a range of income midpoints, midpoint house prices and classifications attainable by the source market area.

Table 6.8: Residential Affordability Profile

Income Midpoint 2023 (R)	House Price (Midpoint)	Generic Indicative Unit Size	(%)	Number of Units (±750)	Classification
R0	R0	40m² - 50m²		-	Subsidy / Social
R3 050	R9 292	40m² - 50m²		-	Subsidy / Social
R9 147	R27 873	40m² - 50m²	-	-	Subsidy / Social
R18 294	R55 744	40m² - 50m²		-	Subsidy / Social
R36 587	R111 487	50m² - 60m²		-	Subsidy / Social
R73 174	R222 971	60m² - 70m²	-	-	FLISP / Gap
R146 347	R445 941	80m² - 90m²	-	-	FLISP / Gap
R292 693	R891 880	120m² - 140m²	47.3%	355	Middle to Higher Income
R585 385	R1 783 758	140m² - 400m²	33.3%	249	Middle to Higher Income
R1 170 769	R3 567 513	420m² - 750m²	13.2%	99	Higher Income
R2 341 537	R7 135 025	780m² - 1000m²	3.9%	30	Top-End

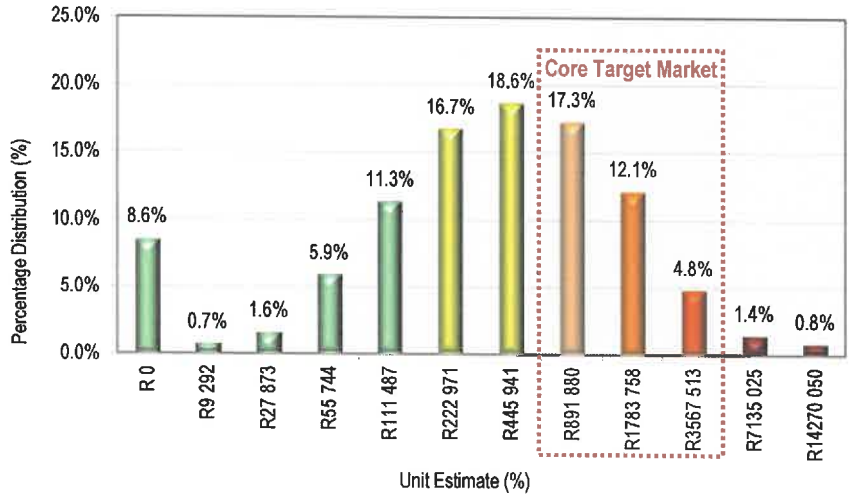
Income Midpoint 2023 (R)	House Price (Midpoint)	Generic Indicative Unit Size	(%)	Number of Units (±750)	Classification
R4 683 075	R14 270 050	1 000m²+	2.3%	17	Top-End

Source: Demacon Demand Modelling, 2023

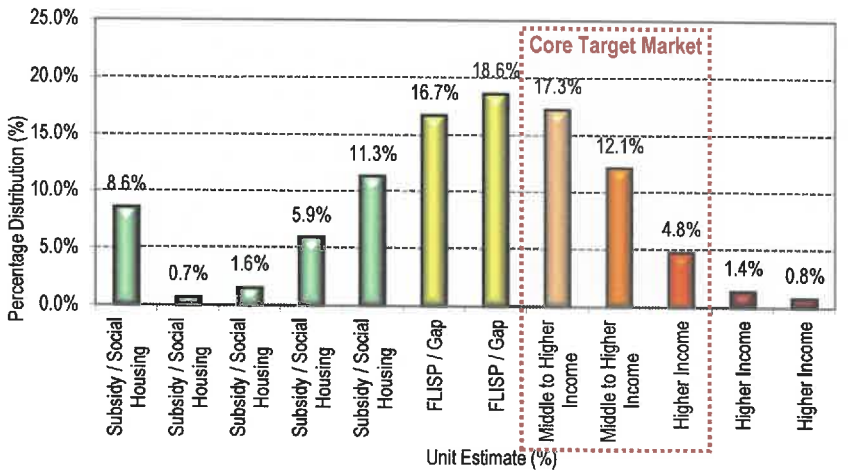
- ✓ The core target market of the bonded segment is households earning on average between **R292 693** and **R1 170 769** annually.
- ✓ This segment can afford houses between **R891 880** and **R3 567 513**
- ✓ The total units recommended over the medium to longer term for the bonded segment of the project, is a maximum of **±750 units.**

The following graphs indicates the target market housing profile based on the affordability analysis within the delineated source market.

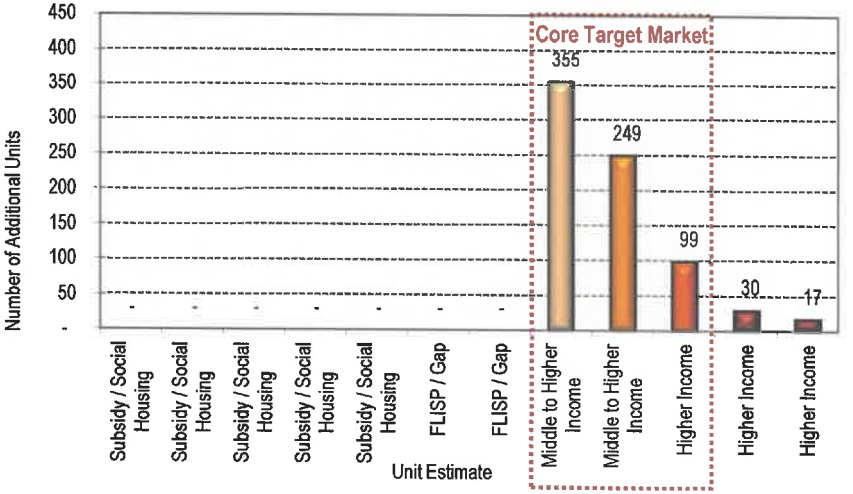
MARKET ARREA HOUSING AFFORDABILITY PROFILE



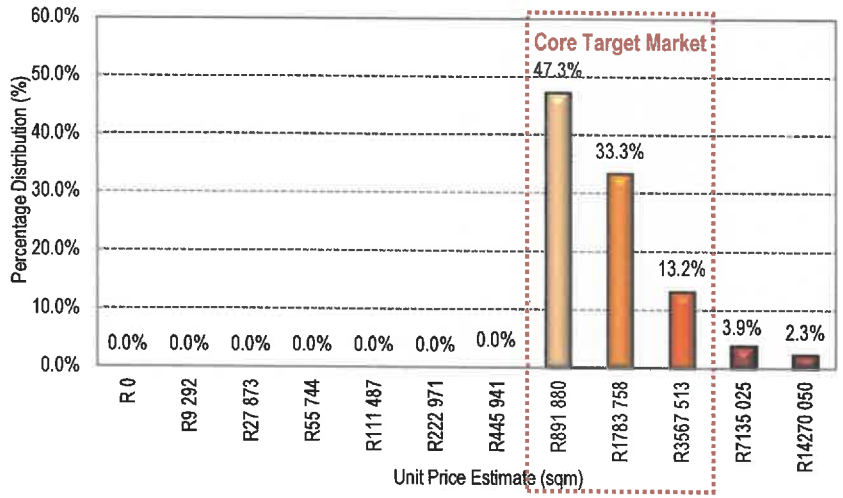
MARKET OPTIMUM UNIT TYPOLOGY (PERCENTAGES)



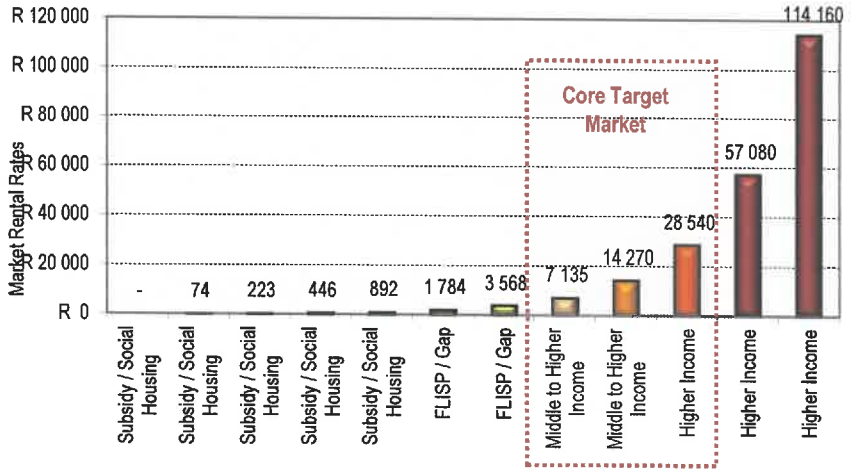
PROJECT OPTIMUM UNIT TYPOLOGY (UNITS)



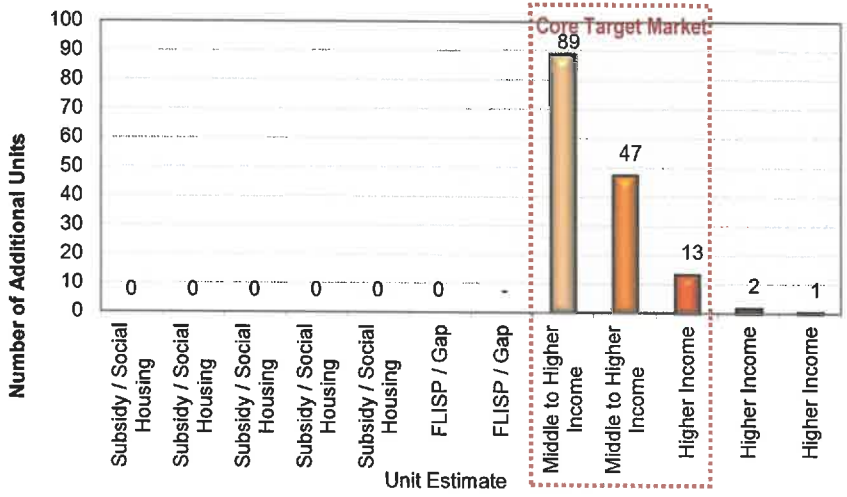
UNIT PRICE ESTIMATE (MEDIAN PORTFOLIO VALUES)



MARKET FORECAST RENTAL RATES



PROJECT POTENTIAL RENTAL STOCK PER PRODUCT TYPE (NUMBERS)



SUMMARY OF MARKET RECOMMENDATIONS (Medium to Longer Term 5 to 10 years)

TOTAL MARKET				
	Additional Households: Base Year +5 Years		431	A
	Annualised Market Growth (Full Housing Spectrum)		86	B
	Bonded & Credit linked		71.9%	C
	Bonded & Credit Linked take-up per annum		62	D
	Annual secondary market contribution (units / annum)	Min	146	E
		Max	292	F
	Total annual Bonded & Credit Linked demand	Min	208	G
		Max	354	H
PROJECT SPECIFIC – BONDED / MARKET BASED HOUSING UNITS				
	Project Bonded & Credit Linked Units		750	I

Forecast market share of total market sales	Min	20%	J
	Max	30%	K
Project Forecast Total Annual Take-Up Rate (Units / Annum)	Min	42	L
	Max	106	M
Years to 80% Take-Up (Social Housing Units)	Min	7.1	N
	Max	18.0	O
	Avg	12.5	P
Optimum point of market entry		2024+	

Source: Demacon Demand Modelling, 2023

Explanatory Notes:
A = increase in demand for new units, 2023 – 2028
B = Annualised market growth, i.e., of A/5
D = B x C
E & F = Annual secondary market contribution (i.e., the contribution made by re-sales in the target affordability income brackets)
G & H = Annual new entry-level to executive flat/ apartment demand; D + E and D + F
I = Project entry-level to executive flat/ apartment units
J & K = assumed market share of market area

FINDINGS: (Medium to Longer Term – 5 to 10 year

- ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
- ✓ A total of **±750 units** could be developed and taken-up over the medium to longer term (80% take-up) over a 5- to-10-year period.
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**

BONDED UNITS (Long Term – 10 to 15 years)

INCOME AND HOUSING AFFORDABILITY RECOMMENDATIONS

The table below indicates a range of income midpoints, midpoint house prices and classifications attainable by the source market area.

Table 6.9: Residential Affordability Profile

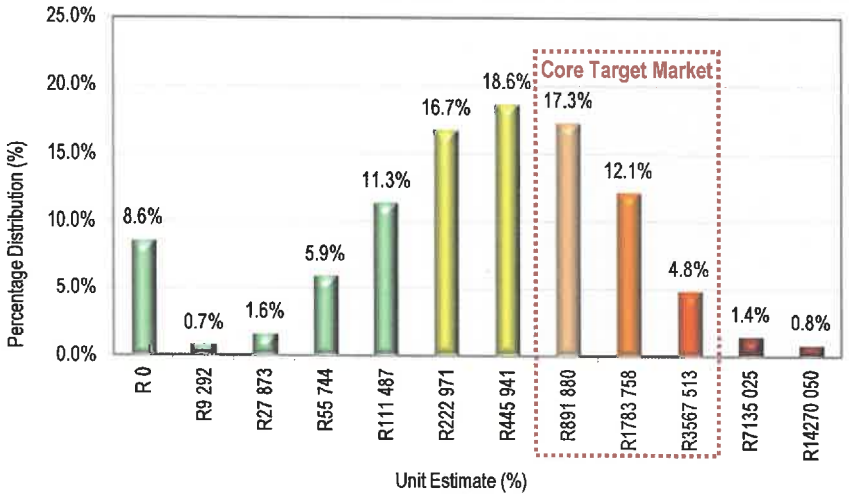
Income Midpoint 2023 (R)	House Price (Midpoint)	Generic Indicative Unit Size	(%)	Number of Units (±1 500)	Classification
R0	R0	40m² - 50m²		-	Subsidy / Social
R3 050	R9 292	40m² - 50m²		-	Subsidy / Social
R9 147	R27 873	40m² - 50m²	-	-	Subsidy / Social
R18 294	R55 744	40m² - 50m²		-	Subsidy / Social
R36 587	R111 487	50m² - 60m²		-	Subsidy / Social
R73 174	R222 971	60m² - 70m²	-	-	FLISP / Gap
R146 347	R445 941	80m² - 90m²	-	-	FLISP / Gap
R292 693	R891 880	120m² - 140m²	47.3%	709	Middle to Higher Income
R585 385	R1 783 758	140m² - 400m²	33.3%	499	Middle to Higher Income
R1 170 769	R3 567 513	420m² - 750m²	13.2%	198	Higher Income
R2 341 537	R7 135 025	780m² - 1000m²	3.9%	59	Top-End
R4 683 075	R14 270 050	1 000m²+	2.3%	35	Top-End

Source: Demacon Demand Modelling, 2023

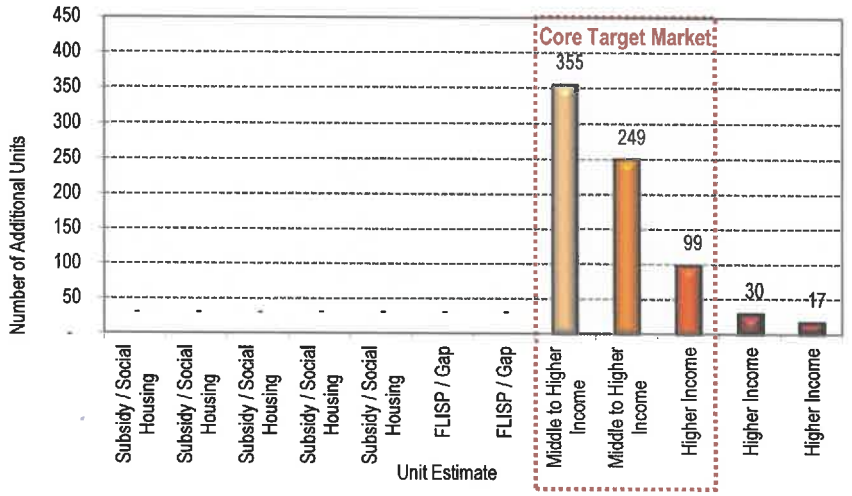
- ✓ The core target market of the bonded segment is households earning on average between **R292 693** and **R1 170 769** annually.
- ✓ This segment can afford houses between **R891 880** and **R3 567 513**
- ✓ The total units recommended over the long term for the bonded segment of the project, is a maximum of **±1 500 units.**

The following graphs indicates the target market housing profile based on the affordability analysis within the delineated source market.

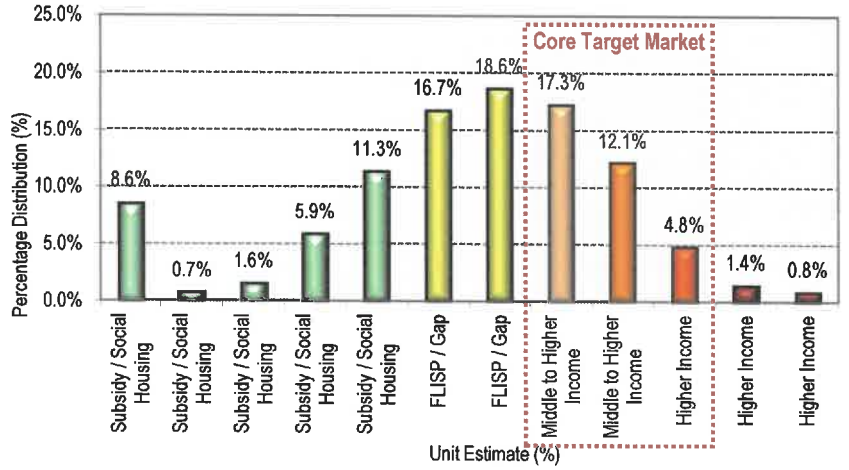
MARKET ARREA HOUSING AFFORDABILITY PROFILE



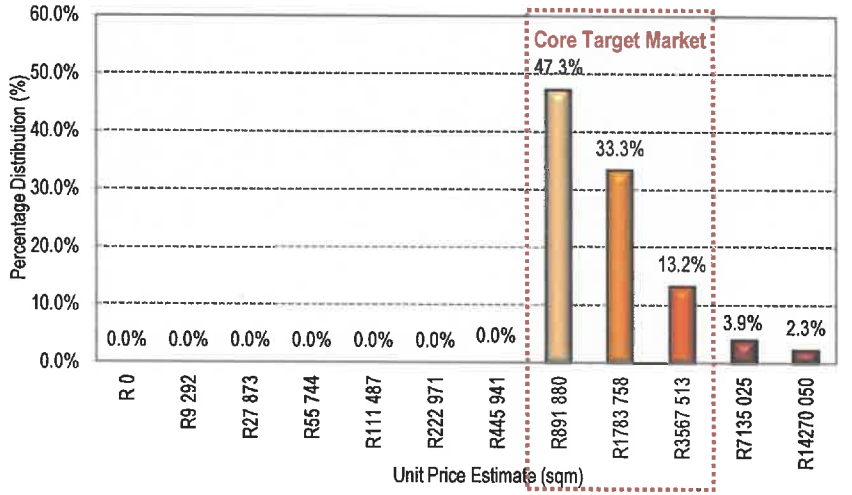
PROJECT OPTIMUM UNIT TYPOLOGY (UNITS)



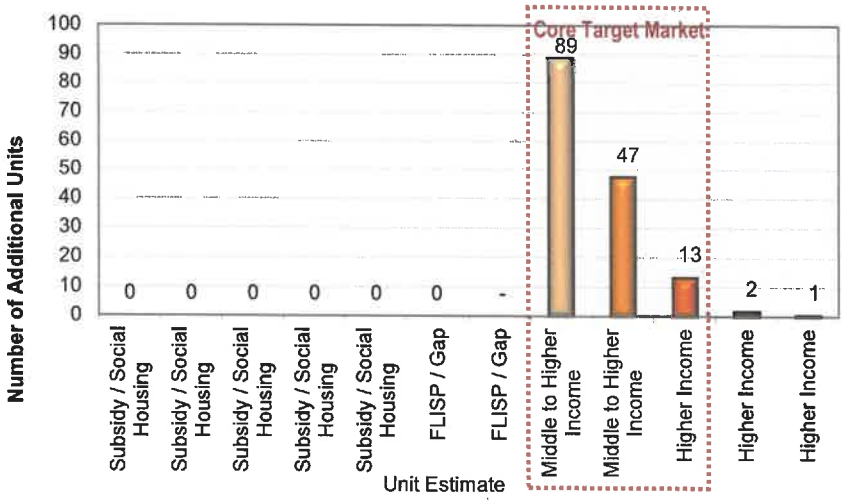
MARKET OPTIMUM UNIT TYPOLOGY (PERCENTAGES)



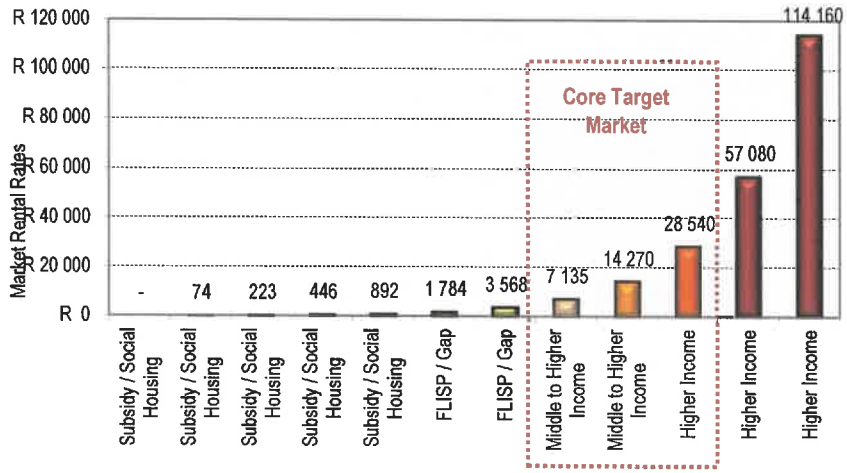
UNIT PRICE ESTIMATE (MEDIAN PORTFOLIO VALUES)



PROJECT POTENTIAL RENTAL STOCK PER PRODUCT TYPE (NUMBERS)



MARKET FORECAST RENTAL RATES



SUMMARY OF MARKET RECOMMENDATIONS (Long Term 10 to 15 years)

TOTAL MARKET				
	Additional Households: Base Year +5 Years		431	A
	Annualised Market Growth (Full Housing Spectrum)		86	B
	Bonded & Credit linked		71.9%	C
	Bonded & Credit Linked take-up per annum		62	D
	Annual secondary market contribution (units / annum)	Min	146	E
		Max	292	F
	Total annual Bonded & Credit Linked demand	Min	208	G
		Max	354	H
PROJECT SPECIFIC – BONDED / MARKET BASED HOUSING UNITS				
	Project Bonded & Credit Linked Units		**1 500**	I
	Forecast market share of total market sales	Min	20%	J
		Max	30%	K
	Project Forecast Total Annual Take-Up Rate (Units / Annum)	Min	42	L
		Max	106	M
	Years to 80% Take-Up (Social Housing Units)	Min	14.1	N
		Max	36.0	O
		Avg	25.1	P
	Optimum point of market entry		2024+	

Source: Demacon Demand Modelling, 2023

Explanatory Notes:
A = increase in demand for new units, 2023 – 2028
B = Annualised market growth, i.e., of A/5
D = B x C
E & F = Annual secondary market contribution (i.e., the contribution made by re-sales in the target affordability income brackets)
G & H = Annual new entry-level to executive flat/ apartment demand; D + E and D + F
I = Project entry-level to executive flat/ apartment units
J & K = assumed market share of market area

FINDINGS: (Longer Term – 10 to 15 years)

- ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
- ✓ A total of **±1 500 units** could be developed and taken-up over the long term (80% take-up).
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**

6.5 SYNTHESIS

This chapter provided an overview of the residential market trends underlining the source market area. The following summarise the findings of the residential supply and demand in terms of the housing affordability and the net demand modelling.

RESIDENTIAL SUPPLY

Properties for sale in the market area:

Findings:

- ✓ Properties for sale in the market area were analysed to determine market activity in the primary catchment.
- ✓ The results indicate that **freestanding houses** constitute 72.3% of all properties for sale, with 20.2% apartments and 7.4% townhouses.
- ✓ There was a total of **243 freestanding houses, 68 apartments,** and **25 townhouses** listed on the market.
- ✓ The **average selling prices:**
  - Houses: R3 220 500
  - Townhouses: R1 462 944
  - Apartments / Flats: R1 268 450
- ✓ The majority of *houses* in the listings were **2- or 3-bedroom units;** *apartments* were **1- or 2-bedroom units;** and *townhouses* were **2- and 3-bedroom units**.
- ✓ The **unit size** of houses ranges between 45m² and 693m² (average of **212m²**), apartments are in the region of **51m²**, and townhouses are **89m²**.

Properties to rent in the market area:

Findings:

- ✓ There was a total of 59 rental properties analyzed of which 46 were apartments / flats, 10 houses, and 1 townhouse.
- ✓ In terms of the number of transactions, 78.0% of the properties were listed as apartments / flats, 16.9% houses and 5.1% as townhouses.
- ✓ The **average rental prices are as follows:**
  - Houses: R19 025,
  - Townhouses: R13 167
  - Apartments and flats: R7 616
- ✓ The most popular properties were;
  - 2-bedroom apartments listed for R7 433,
  - 3-bedroom houses listed for R16 167 and
  - 2-bedroom townhouses listed for R8 500.
- ✓ **Average unit sizes** for houses are in the region of **172m²**, apartments / flats are **51m²**.townhouses are **52m²**.

GAP ANALYSIS

DEVELOPMENT TYPE	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Bonded Units	✓	Moderate to High

❑ DEVELOPMENT RECOMMENDATIONS:

BONDED UNITS (Short to Medium Term – 3 to 5 years)

- ✓ An estimated 322 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 64 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 46 units per annum.
- ✓ A total of **±300 units** could be developed and taken-up over the short term to medium (80% take-up).
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**
- ✓ A first phase of **100 to 150 units** is recommended (3- to 5-year take-up forecast).

Table 6.10: Optimum Typology and Pricing Distribution (Target Market)

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m²)
47.3%	24.6%	74	R650 000 - R800 000	15	R5 500 – R7 000	Bachelor	35 - 40
	22.7%	68	R800 000 - R1.3 million	14	R7 000 – R10 000	1 bedroom, 1 bathroom	45 – 50
33.3%	17.3%	52	R1.3 million - R1.7 million	10	R10 000 – R15 000	1.5-bedroom, 1 bathroom	50 - 60
	16.0%	48	R1.7 million - R2.5 million	10	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	60 - 70
19.5%	13.2%	40	R2.5 million - R3.5 million	8	R20 000 - R30 000	2 bedrooms, 2 bathrooms	70 – 80
	6.3%	19	R3.5 million+	4	R30 000+	3 bedrooms, 2 bathrooms	80+
TOTAL	100.0%	±300		±61*			

Source: Demacon Modelling, 2023
**part of the 300 units*

BONDED UNITS (Medium to Longer Term – 5 to 10 years)

- ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
- ✓ A total of **±750 units** could be developed and taken-up over the medium to longer term (80% take-up).
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**

Table 6.11: Optimum Typology and Pricing Distribution (Target Market)

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m²)
47.3%	24.6%	184	R650 000 - R800 000	37	R5 500 – R7 000	Bachelor	35 - 40
	22.7%	170	R800 000 - R1.3 million	34	R7 000 – R10 000	1 bedroom, 1 bathroom	45 – 50
33.3%	17.3%	130	R1.3 million - R1.7 million	26	R10 000 – R15 000	1.5-bedroom, 1 bathroom	50 - 60
	16.0%	120	R1.7 million - R2.5 million	24	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	60 - 70
19.5%	13.2%	99	R2.5 million - R3.5 million	20	R20 000 - R30 000	2 bedrooms, 2 bathrooms	70 – 80

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m^2)
	6.3%	47	R3.5 million+	10	R30 000+	3 bedrooms, 2 bathrooms	80+
TOTAL	100.0%	±750		±152*			

Source: Demacon Modelling, 2023
**part of the 750 units*

BONDED UNITS (Long Term – 10 to 15 years)

- ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
- ✓ A total of **±1 500 units** could be developed and taken-up over the long term (80% take-up).
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**

Table 6.12: Optimum Typology and Pricing Distribution (Target Market)

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m^2)
47.3%	24.6%	369	R650 000 - R800 000	75	R5 500 – R7 000	Bachelor	35 - 40
	22.7%	340	R800 000 - R1.3 million	69	R7 000 – R10 000	1 bedroom, 1 bathroom	45 – 50
33.3%	17.3%	259	R1.3 million - R1.7 million	52	R10 000 – R15 000	1.5-bedroom, 1 bathroom	50 - 60
	16.0%	239	R1.7 million - R2.5 million	48	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	60 - 70
19.5%	13.2%	198	R2.5 million - R3.5 million	40	R20 000 - R30 000	2 bedrooms, 2 bathrooms	70 – 80
	6.3%	94	R3.5 million+	19	R30 000+	3 bedrooms, 2 bathrooms	80+
TOTAL	100.0%	±1 500		±303*			

Source: Demacon Modelling, 2023
**part of the 1500 units*

Note: As the project gains momentum and becomes an established address, take-up is likely to accelerate.

RETAIL MARKET POTENTIAL

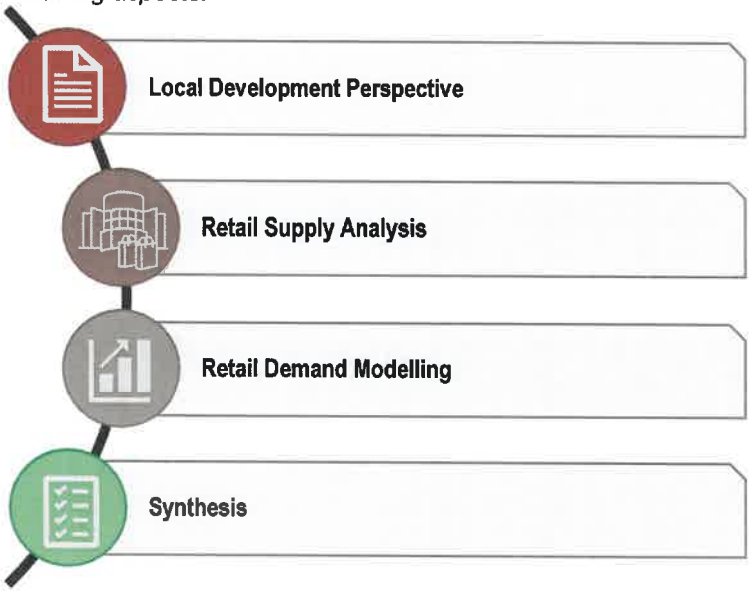
7

CHAPTER

7. RETAIL MARKET POTENTIAL

7.1 INTRODUCTION

This section of the report focuses on the retail market, with the objective of estimating the development potential within the designated area. In order to reach this objective, the supply and demand for development within the market area should be identified and assessed in light of current trends. Subsequent sub-sections provide a concise overview of the retail property market in terms of the following aspects:



7.2 LOCAL DEVELOPMENT PERSPECTIVE

The development and overall sustainability of a retail facility relies strongly on its location. The following location requirements determine the success of a retail facility:

- ✓ ***Visibility and exposure:*** Retail facilities should be highly visible and accessible to potential consumers. It should be in proximity to efficient road and transport networks.



- ✓ ***Accessibility:*** Retail facilities must be accessible to the local labour force as well as consumers. It should be accessible on a local and regional level, as well as on a site-specific basis referring to the ingress and egress from the development.
- ✓ ***Functionality & complementary:*** The centre should fit the urban context and should be functionally compatible.
- ✓ ***Sufficient buying power:*** Total disposable income of the market area population that is available to be spent at a specific retail facility.
- ✓ ***Competition:*** Existing shopping centres present competition and have an impact on the sustainability of future developments.
- ✓ ***Role & function in hierarchy:*** Should fit in with existing retail hierarchy of the area.
- ✓ ***Address value:*** Retail locates in areas where household expenditure is high, where it is accessible and visible.
- ✓ ***Growth:*** Growth in market population, disposable income, and retail support impact on developments.
- ✓ ***Traffic volume:*** Level of traffic volumes contribute to level of support and exposure.

7.3 RETAIL MARKET TRENDS

7.3.1 RETAIL MARKET INDICATORS

	Commercial Market Outlook (Business Tech, May 2023)	• The commercial property market is still expected to grow in 2023 – but at a far slower rate than in 2022, as rising interest rates have started to feed into the wider economy. • This is according to FNB Property Strategist John Loos, who noted that sales activity for commercial properties had declined this year after peaking in 2022. • In the latest FNB Commercial Property Broker Survey for the first quarter of 2023, all 3 major property classes (Office, Retail and Industrial) saw broker perceptions of slightly lower sales activity compared to the prior quarter, and in two of the three classes (Office and Retail) lower than the 1st quarter of a year ago. • Adding pressure to the market, the value of commercial mortgage loans granted has recorded significant declines, with the fourth quarter of 2022 showing a year-on-year decline of 5.67%, Loos said. • FNB expects that 2023 will see a weaker reading than the two years prior in terms of all property total returns. • According to Loos, the commercial property sector is likely to show the following markets: • All property growth is forecast to return to negative territory in 2023 after a small positive +0.8% growth rate in 2022. • The overall vacancy rate is forecast to rise mildly this year, following two prior years of small declines – thus remaining elevated. • These will likely cause net operating income growth to slow from its 6.6% rate recorded in 2022. • FNB's determinations into the commercial property space are based on Loos' belief that interest rates have likely peaked after 425 basis points worth of increases since late-2021 and will move sideways through the rest of 2023. • Loos said that despite the interest rate cycle ending, the full impact of recent rate hikes is still feeding through to the economy, and slower growth is expected in 2023 – with a weaker property market performance expected.
	Market Comeback	• SA's property brokers have signalled declining vacancy rates in the office, industrial and retail markets, according to FNB's Q1 Property Broker Survey. • In 2023, the retail property sector is anticipated to continue its recovery, with a retail vacancy rate of 5.8% and a reported success rate for renewals of 82.7%. • Looking ahead, SA Property Index predicts that most trends to emerge in 2023 will follow on from the market shifts that have begun in the post-pandemic environment of 2022, with continued recovery across all sectors as the priority.
	Retail Trade Sales (StatsSA, March 2023)	• Measured in real terms (constant 2019 prices), retail trade sales decreased by 1,6% year-on-year in March 2023. The largest negative contributors to this decrease were: general dealers (-1,9% and contributing -0,9 of a percentage point); and retailers in food, beverages, and tobacco in specialised stores (-6,6% and contributing -0,6 of a percentage point). • The positive contributor was retailers in textiles, clothing, footwear, and leather goods (6,3% and contributing 1,0 percentage point). • Seasonally adjusted retail trade sales decreased by 0,7% in March 2023 compared with February 2023. This followed month-on-month changes of -0,3% in February 2023 and 1,4% in January 2023. • Retail trade sales decreased by 1,0% in the first quarter of 2023 compared with the first quarter of 2022. The largest negative contributors to this decrease were retailers in hardware, paint, and glass (-5,7% and contributing -0,5 of a percentage point); general dealers (-1,0% and contributing -0,4 of a percentage point); and retailers in food, beverages and tobacco in specialised stores (-4,8% and contributing -0,4 of a percentage point). • The positive contributor was retailers in textiles, clothing, footwear, and leather goods (4,7% and contributing 0,8 of a percentage point). • Seasonally adjusted retail trade sales increased by 0,8% in the first quarter of 2023 compared with the fourth quarter of 2022. The main contributor to this increase was retailers in textiles, clothing, footwear

		and leather goods (4,4% and contributing 0,8 of a percentage point).
	Wholesale Retail Sales (StatsSA March 2023)	Sales at constant 2019 prices: results for March 2023 • Measured in real terms (constant 2019 prices), wholesale trade sales decreased by 1,4% in March 2023 compared with March 2022. • Seasonally adjusted wholesale trade sales decreased by 0,6% in March 2023 compared with February 2023. This followed month-on-month changes of 2,1% in February 2023 and 1,2% in January 2023. • In the first quarter of 2023, seasonally adjusted wholesale trade sales increased by 0,1% compared with the fourth quarter of 2022. Sales at current prices: results for March 2023 • Measured in nominal terms (current prices), wholesale trade sales increased by 8,3% in March 2023 compared with March 2022. The main contributors were dealers in: o machinery, equipment and supplies (35,9% and contributing 4,3 percentage points); o agricultural raw materials and livestock (26,3% and contributing 1,6 percentage points); o food, beverages, and tobacco (7,0% and contributing 1,1 percentage points); and o 'other' goods (12,8% and contributing 1,0 percentage point). • Wholesale trade sales increased by 10,7% in the first quarter of 2023 compared with the first quarter of 2022. The main contributors were dealers in: o machinery, equipment and supplies (23,3% and contributing 3,1 percentage points); o agricultural raw materials and livestock (34,1% and contributing 2,0 percentage points); o solid, liquid, and gaseous fuels and related products (7,4% and contributing 1,9 percentage points); and 'other' goods (19,1% and contributing 1,4 percentage points).

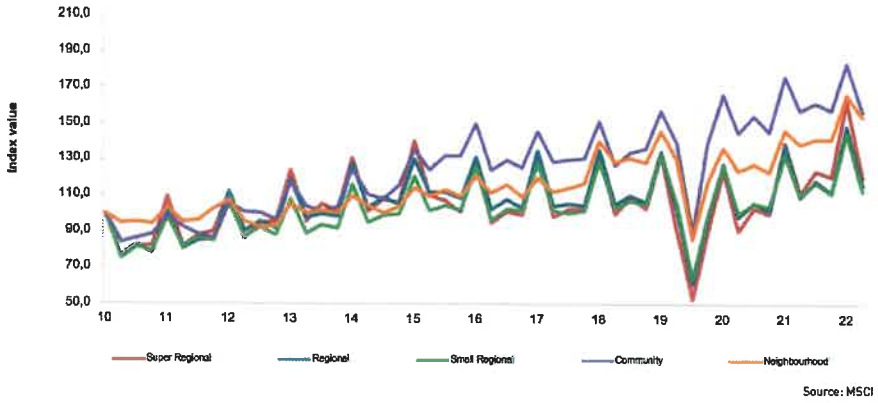
	Consumer Price Index	• Annual consumer price inflation was 7,1% in March 2023, up from 7,0% in February 2023. • The consumer price index increased by 1,0% in March 2023. • The main contributors to the 7,1% annual inflation rate were food and non-alcoholic beverages; housing and utilities; transport; and miscellaneous goods and services. • Food and non-alcoholic beverages increased by 14,0% year-on-year and contributed 2,4 percentage points to the total CPI annual rate of 7,1%. • Housing and utilities increased by 4,0% year-on-year and contributed 1,0 percentage point. • Transport increased by 8,9% year-on-year and contributed 1,3 percentage points. • Miscellaneous goods and services increased by 5,9% year-on-year and contributed 0,9 of a percentage point. • In March the annual inflation rate for goods was 9,4%, down from 9,5% in February; and for services it was 4,5% down from 4,6% in February
	ESG Focus (SA Property Insider)	• Tenants are increasingly opting for buildings that align to their ESG (Environmental, Social and Governance) requirements and this is set to continue in 2023. "They are looking to buildings that have been built to ensure a positive impact on both the environment and the communities in which they are located," he says. • "In recent years we have seen an increase in tenants prioritising the 'E' in ESG by requiring landlords to implement green building standards such as solar energy, carbon reduction measures, LED lighting, recycling, and recycling wastewater," says Jack. "This is a positive trend that we expect to be increasingly in the spotlight in the coming years," he concludes.

Source: DEMACON ex. MSCI, 2023

7.3.2 MSCI SOUTH AFRICA QUARTERLY RETAIL TRADING DENSITY INDEX

South African shopping centres continued their strong trading performance during Q1 2023 with the MSCI South Africa Quarterly Retail Trading Density Index recording a 9.8% year-on-year growth in annualised trading density (ATD).

Figure 7.1: Trading Index Per Shopping Centre Type



Source: Demacon ex. MSCI, 2023

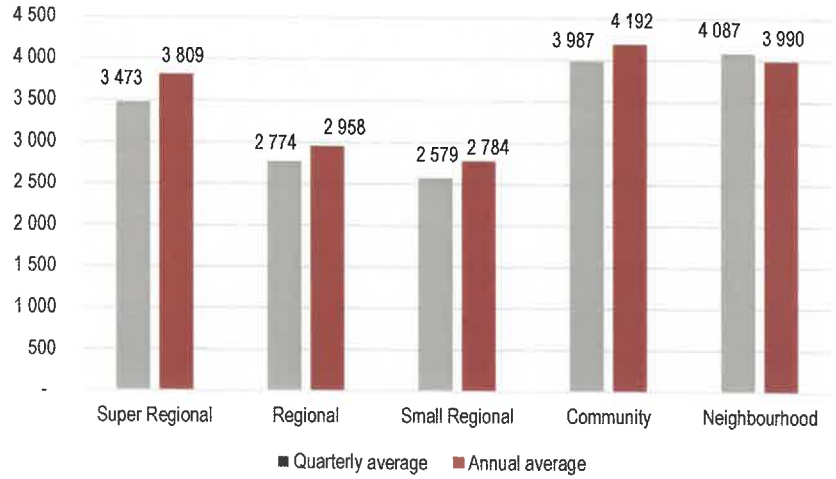
RESULTS FOR THE QUARTER TO MARCH 2023

Table 7.1: MSCI South Africa Trading Density, 2023: Q1

	Index March 2022 Dec 2010 = 100	Index March 2023 Dec 2010 = 100	Trading density Quarterly average R/m²/month	Trading density Annual average R/m²/month	Trading density growth % y/y
Super Regional	111.6	120.6	3 473.4	3 808.8	16.2%
Regional	109.7	116.3	2 773.6	2 957.7	8.8%
Small Regional	110.4	113.0	2 579.1	2 783.5	7.4%
Community	158.0	157.4	3 987.1	4 191.8	4.3%
Neighbourhood	138.7	154.7	4 086.5	3 990.3	12.9%

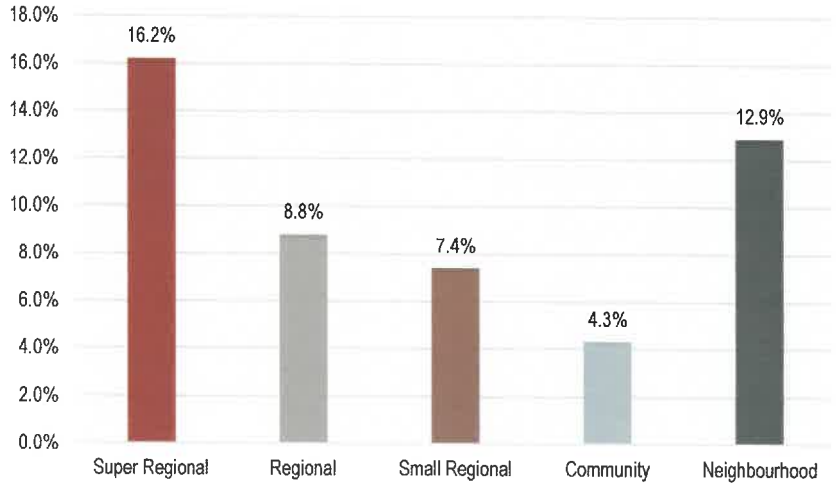
Source: Demacon ex. MSCI, 2023

Figure 7.2: Retail Trading Quarterly and Annual Index (R/m²/month)



Source: Demacon ex. MSCI, 2023

Figure 7.3: Trading Density Growth



Source: Demacon ex. MSCI, 2023

TRADING DENSITY BY TENANT CATEGORY, AVERAGE FOR QUARTER

Table 7.2: MSCI South Africa Trading Density by Tenant Category, 2023: Q1

	Apparel	Department Stores	Food	Food Service	Home Décor
	R/m²/month	R/m²/month	R/m²/month	R/m²/month	R/m²/month
Super Regional	3 086.0	2 862.1	3 564.8	4 363.9	1 972.5
Regional	2 193.2	2 296.5	3 024.0	3 923.6	1 622.3
Small Regional	1 832.2	2 209.3	3 157.1	3 428.5	1 585.0
Community	1 921.3	5 071.1	4 897.2	4 261.0	1 545.3
Neighbourhood	1 760.7	3 516.8	5 905.4	3 816.8	1 809.4
Category Includes	Menswear, womenswear, children's wear, unisex wear, lingerie, swimwear & shoes	Dept. store 1 (Electronics/appliance), Dept. store 2 (food/apparel/home)	Grocery/supermarkets, food speciality, bottle stores	Restaurant, Bar, Fast Food, Coffee Shop, Ice-Cream, Frozen Yoghurt, Drive Thru	Homeware & Interior, Furniture Focus, Art Gallery, Framers, Antiques & Carpets

Source: DEMACON ex. MSCI, 2023

Category Includes:

Apparel 1
Menswear, womenswear, children's wear, unisex wear, lingerie, swimwear & shoes.

Department Stores 2
Dept. store 1 (Electronics/appliance), Dept. store 2 (food/apparel/home)

Food 3
Grocery/supermarkets, food speciality, bottle stores.

Food Service 4
Restaurant, Bar, Fast Food, Coffee Shop, Ice-Cream, Frozen Yoghurt, Drive Thru.

Home Décor 5
Homeware & Interior, Furniture Focus, Art Gallery, Framers, Antiques & Carpets



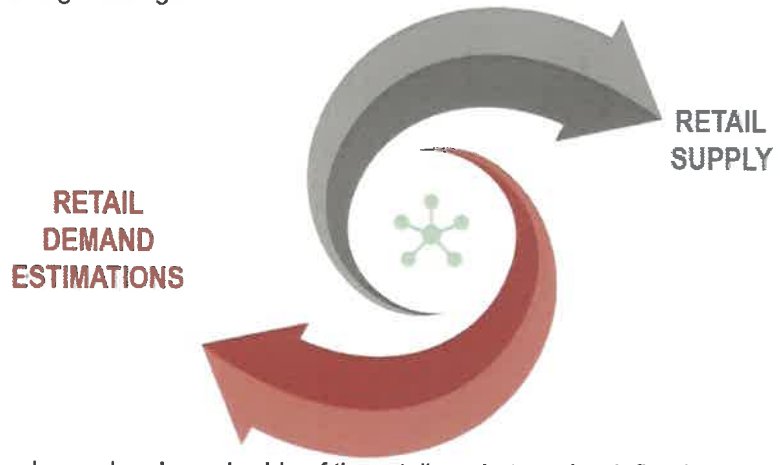
7.4 RETAIL MARKET POTENTIAL ASSESSMENT

7.4.1 RETAIL MARKET POTENTIAL ASSESSMENT

The demand-side dynamics within the market have been concisely described in preceding chapters, supported by a retail market growth assessment. An assessment of the net effective demand for additional retail floor space will be made in this chapter. A growth forecast, respectively for a five and ten-year horizon are provided based on economic, population and income growth prevalent in the market.

Retail demand modelling has become increasingly specialised over the past decade. One aspect that has changed is a notable shift away from broad based supply-demand estimations to multivariate, differentiated models. Contemporary models focus on specific expenditure patterns of selected LSM market segments.

The retail development potential estimations will be addressed under the following headings:



The demand and supply side of the retail market can be defined in terms of the following:

Defining Demand

Retail demand depends on a variety of customer-related aspects. It can be conceptualised as follows:

$$D_{ret} = f\{P_o; P_{\%}; Q; Y; R_e; C_p; S_f\}$$

Where:

P_o	=	Population size
$P_{\%}$	=	Population growth
Q	=	Existing quality of retail space
Y	=	Household income
R_e	=	Household expenditure patterns
C_p	=	Consumer preferences
S_f	=	Seasonality factors

Defining Supply

The supply of retail markets entails the following:

$$S_{ret} = f\{D_{ret}; GLA_{ret}; R; S_c; C_c; L_u; I_a; S_p; V_{ret}\}$$

Where:

D_{ret}	=	Demand
GLA_{ret}	=	Current rentable/useable area
R	=	Rent/m²
S_c	=	Competition
C_c	=	Construction cost
L_u	=	Surrounding land uses
I_a	=	Infrastructure availability
S_p	=	Speculative climate
V_{ret}	=	Vacancy

7.4.2 RETAIL SUPPLY IN THE MARKET AREA

Subsequent paragraphs provide an overview of the existing and proposed retail centres within the primary market area. The findings of the assessment are based on the following sources of information:

- ✓ Shopping Centre Directory, SA Council of Shopping Centres, 1996 – 2023
- ✓ Demacon GIS, 2023

❖ EXISTING RETAIL SUPPLY

The tables below indicate all the existing retail supply within the primary market area as well as within the immediate surrounding area. Table 7.4 indicates the proposed shopping centre supply within the immediate surrounding area. The name of the shopping centre, type, size, year developed, parking, retail floors, number of shops, and anchor stores are also provided. Refer to Map 7.1 for the shopping centre supply.

Table 7.3: Existing retail supply within the primary market area (±10-minute drive time isochrone)

Name of Shopping Centre	Street Address	Classification	GLA	Year Developed	Parking total	Nr of shops	Main Anchors
Zevenwacht Mall	Cnr Polkadraai & Van Riebeek Roads, Kuilsriver	Minor Regional Centre	39 517	2008 *Refurbished 2011*	1600	96	SuperSpar, Woolworths, Game, Edgars, Foschini, Jet, Truworths, Dis-Chem, Pep, OK Furniture
Eerste Rivier Mall (Grand Central)	Plain Street, Clairwood, Eersterivier	Neighbourhood Centre	14 000	1998	624	53	Shoprite, Mr Price, Jet, Ackermans, Aroma Liquor
City Centre - Eerste River	18 Forest Road, Clairwood, Eersterivier	Neighbourhood Centre	6 670	1990 *Refurbished 2018*	298	35	Pick n Pay
TOTAL (m^2)			60 187				

Source: Demacon ex SASCS, 2023

Table 7.4: Existing retail supply within the immediate surrounding area

Name of Shopping Centre	Street Address	Classification	GLA	Year Developed	Parking total	Nr of shops	Main Anchors
Aroma Centre	43 Andringa Street, Stellenbosch Central	Regional Mall	40 599	1974 *Refurbished 2012*	750	94	Checkers, Food Lover's Market, Woolworths, Game, Incredible Connection, Virgin Active, Clicks, @Home, Mr Price Home, Mr Price, Cotton:On, Truworths
Cavalier Centre	Cnr R44 & Webersvallei Road, Techno Park, Stellenbosch	Neighbourhood Centre	11 621	2003 *Refurbished 2015*	657	40	Pick n Pay, Woolworths, Clicks
Checkers Centre - Stellenbosch	Lansdowne Road, Makhaza, Khayelitsha	Neighbourhood Centre	9 836	2003	30	21	Shoprite, Cashbuild, OK Furniture, Pep, Banks, KFC, Fashion
Cylnor Convenience Centre	Cnr Nooiensfontein & Van Riebeeck Street, Kuils River	Neighbourhood Centre	8 721	1985 *Refurbished 2016*	350	49	Shoprite, Pep, Ackermans

Name of Shopping Centre	Street Address	Classification	GLA	Year Developed	Parking total	Nr of shops	Main Anchors
Drostdy Centre	Cnr Hindle Road & Eersterivier Road, Blue Downs	Neighbourhood Centre	8 651	2004	350	33	Shoprite, Pep
Eikestad Retail Node: 1. Eikestad Mall	Cnr Dorp & Mill Streets, Stellenbosch Central	Neighbourhood Centre	6 969	1985 *Refurbished 2000*	117	17	Checkers, Mugg & Bean, Stellies & Kloppers Sport
Eikestad Retail Node: 2. Mill Square	Cnr Andringa Street & Merriman Avenue, Stellenbosch Central	Neighbourhood Centre	5 720	1967 *Refurbished 2001*	230	25	Pick n Pay, Hungry Lion, Cash Crusaders
Heldervue Shopping Centre	Cnr Strand, Saffraan & Rokewood Avenues, Die Boord, Stellenbosch	Neighbourhood Centre	5 207	1994 *Refurbished 2004*	231	15	SuperSpar, Debonairs, Capitec, Dryclean
Ipic Shopping Centre - Die Boord	Cynaroide Street, Heldervue, Somerset West	Neighbourhood Centre	5 000	1980 *Refurbished 2000*	30	13	Spar, Tops, Caltex Garage, Chemist
Makhaza Shopping Centre	Main Road, Mfuleni, Cape Town	Neighbourhood Centre	4 539	2007	155	15	Shoprite, Pep, Small Shops
Mid Kuilen Centre (Shoprite Centre - Kuilsriver)	Cnr Andringa and Plein Street, Stellenbosch Central	Strip/Convenience Centre	4 434	*Refurbished 2014*	0	20	Cape Union, Cotton:On, Small shops
Paradys Kloof - Kwikspar Centre	Cnr Helshoogte Road & Cluver Avenue, Simonsrust	Local Convenience Centre	4 359	2002	140	24	SuperSpar, Post Office, Small Shops
River Park Shopping Centre	Cnr Bird & Alexander Streets, Stellenbosch Central	Strip/Convenience Centre	4 262	1995	170	19	Mr Price, The Dros
Shopping Centre - Cloetesville	Nooiensfontein Road, De Kuilen, Kuils River	Local Convenience Centre	3 837	*Refurbished 2008*	55	22	Pick n Pay, PnP Liquor, ATM, Small Shops
Shoprite Centre - Mfuleni	Van Riebeek Road, Kuilsriver	Local Convenience Centre	3 370	1994 *Refurbished 2003*	100	9	Spar, Tops at Spar
Simonsrust Shopping Centre	Cnr Helderberg & Old Stellenbosch Roads, Die Wingerd, Somerset West	Local Convenience Centre	1 250	0	75	5	KwikSpar, Tops at Spar, Small Shops
Stellenbosch Square	Cnr Blaauwklippen Road and Canterbury Lane & R44, Paradyskloof, Stellenbosch	Local Convenience Centre	1 250	0	120	5	KwikSpar, Hairdresser, Small Shops
Stelmark Centre	Lang Street, Cloetesville, Stellenbosch	Local Convenience Centre	840	0	30	5	Long Street Fruit & Veg, Mr Mini Supermarket, Butcher, Liquor Store. Friendly is closed and there is a Loan Shop
TOTAL (m^2)			130 465				

Source: Demacon ex SASCS, 2023

❖ PROPOSED RETAIL SUPPLY

The table below indicates all the proposed retail supply within the immediate surrounding area, as there is no proposed shopping centre supply within the primary market area.

Table 7.5: Proposed Retail Supply within the immediate surrounding area

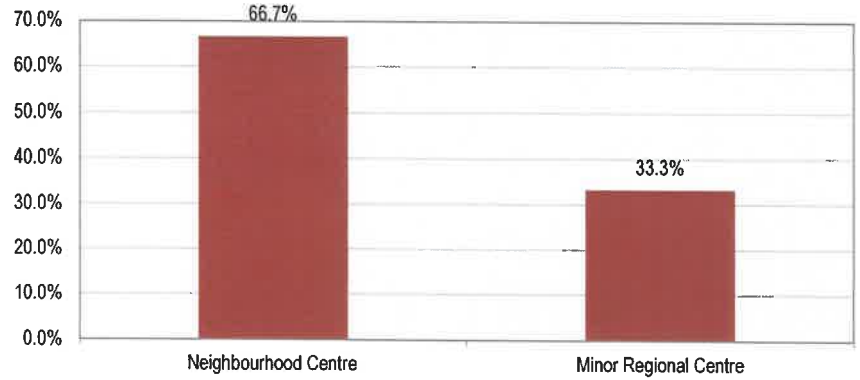
Name of Shopping Centre	Street Address	Classification	GLA	Name of Developer	Main Anchors
Firgrove	Firgrove Precinct	Convenience Centre	5 000	Lynx Real Estate	This is a mixed-use development but forms part of a larger area as it has some commercial and small retail
TOTAL (m²)			**5 000**		

Source: Demacon ex SASCS, 2023

Findings:

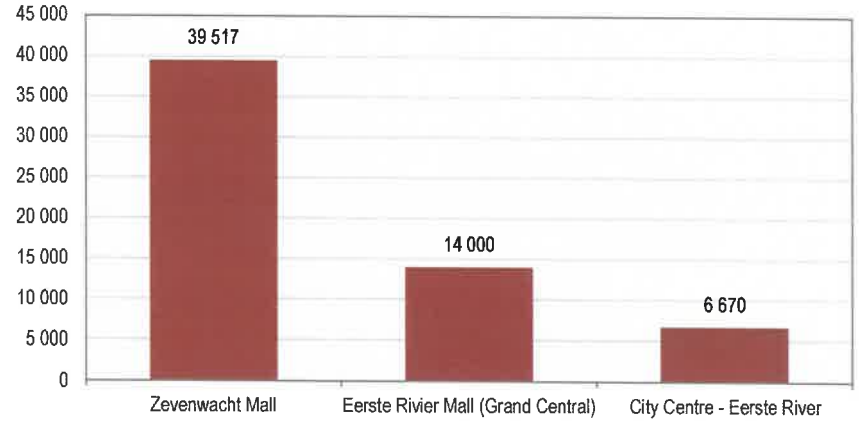
- ✓ The total **existing supply of shopping centre** retail floor space within the 10-minute drive time amounts to approximately **60 187m² GLA.**
- ✓ The existing supply within the immediate surrounding area amounts to **±130 465m² GLA**,
- ✓ There are no shopping centres within the primary market area (10-min drive time), only 1 shopping centre located to the south of Lynedoch namely Firgrove Centre with a proposed size of 5 000m² GLA.
- ✓ *To conclude, the above supply figures cannot directly be correlated with the demand of the market area due to the fact that most of the centres are trading off multiple trade areas and trade area overlap occurs.*

Figure 7.4: Summary of the Retail Supply in the primary market area – Centres by Category (10-minute drive time isochrone)



Source: Demacon ex SASCS, 2023

Figure 7.5: Summary of centres by Total Floor Area for primary market area (10-minute drive time isochrone)

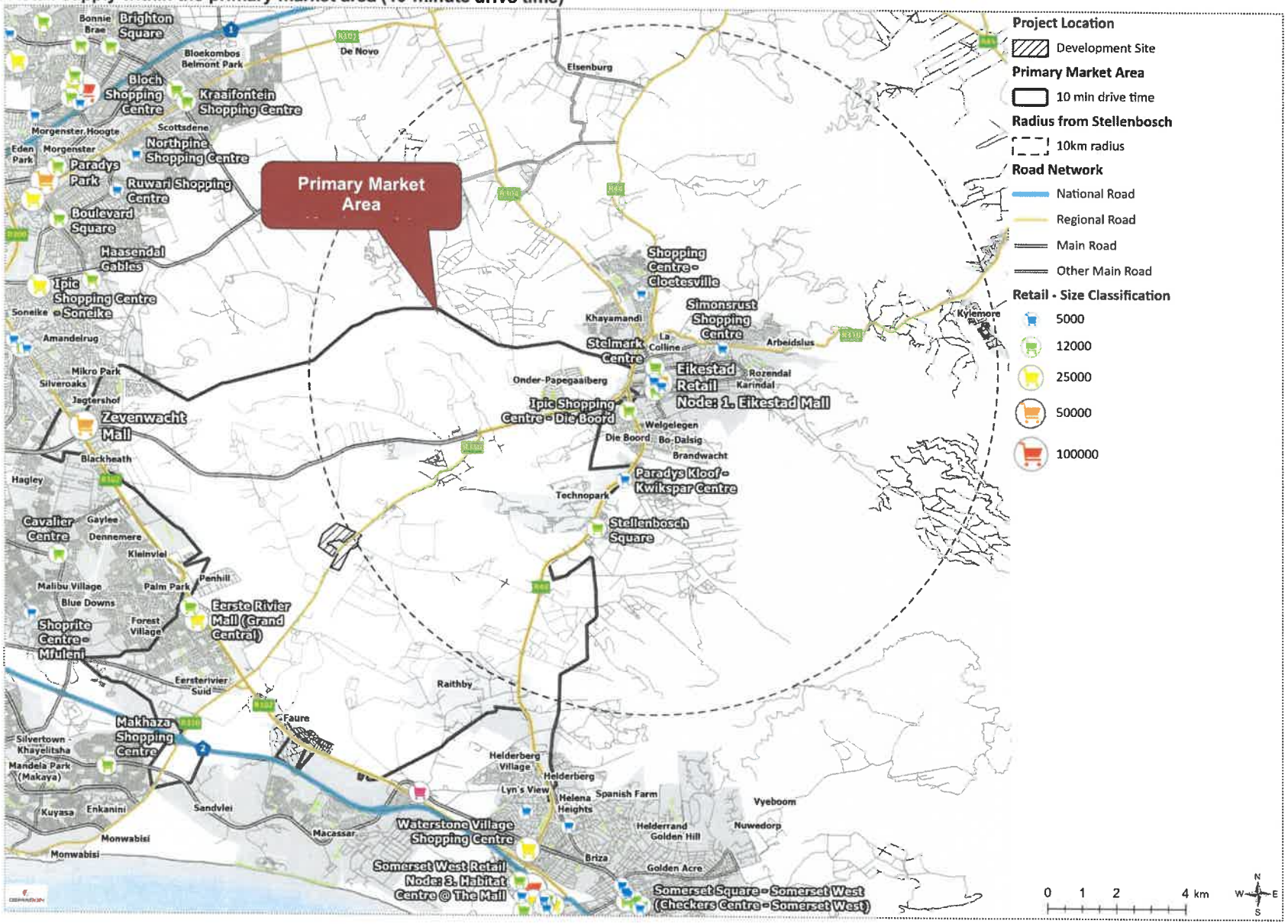


Source: Demacon ex SASCS, 2023

Findings:

- ✓ As seen from the above, there are **3 shopping centres** within 10-min drive time isochrone, consisting of:
  - 2 Neighbourhood Centres
  - 1 Minor Regional Mall

Map 7.1: Retail supply within the primary market area (10-minute drive time)



7.4.3 RETAIL DEMAND POTENTIAL

The retail market is a derived demand. The primary demand drivers are community income and expenditure profiles. An important concept in retailing is the fact that different order size shopping centres cater to different consumer needs and hence, do not compete directly for market share. In this context, the objective of this sub-section is to access the magnitude of retail development that can be sustained by the node and the new resident community.

The retail demand estimations are conducted based on prevalent population and income growth trends (all values: 2023 constant prices). The demand estimations are considered conservative and realistic. Subsequent paragraphs indicate the market potential analysis of the proposed development. The retail market estimations are based on a trade area-based technique.

The following tables summarise the current and forecast market expenditure and the retail floor space for retail facilities within the retail node. Demand values are presented for **2023, 2028** and **2033 (all values: constant 2023 prices).**

Two scenarios were modelled:
1. Both scenarios consider a 5-minute drive time,
2. The **optimistic scenario** is based on a *higher market share*. Over and above, the site stands to benefit from daily transient trade due to its favourable location - in close proximity to **Baden Powell Drive.**

BASELINE SCENARIO

Table 7.6: Market Area Retail Expenditure, 2023, 2028 and 2033

	Retail Category	2023 R/annum	2028 R/annum	2033 R/annum
	Groceries, Butchery & Liquor	R37 873 280	R59 272 841	R92 763 808
	Fashion & Footwear	R15 017 819	R23 503 347	R36 783 456
	Furniture, Homeware & Interior	R11 946 779	R18 697 075	R29 261 494
	Hardware & DIY	R13 408 767	R20 985 131	R32 842 372
	Entertainment, Book Stores, Gadgets & Hobbies	R4 879 061	R7 635 880	R11 950 386
	Cell Phone & Electronics	R16 752 308	R26 217 875	R41 031 776
	Restaurants, Coffee Shops, Takeaways	R7 984 705	R12 496 307	R19 557 103
	Health & Beauty	R13 767 776	R21 546 991	R33 721 700
	Sport & Outdoor Equipment	R6 887 089	R10 778 505	R16 868 690
	Other: Personal Goods & Services	R3 973 321	R6 218 368	R9 731 936
	TOTAL	R132 490 906	R207 352 318	R324 512 719

Source: Demacon Demand Modelling, 2023

❖ **MARKET RETAIL FLOOR SPACE DEMAN**

The above expenditure patterns translate into the demand for retail floor space as summarised in the table below.

Table 7.7: Retail Floor Space Demand, 2023, 2028 and 2033

	Retail Category	2023 (m^2 GLA)	2028 (m^2 GLA)	2033 (m^2 GLA)
	Groceries, Butchery & Liquor	1 169	1 657	2 467
	Fashion & Footwear	538	763	1 136
	Furniture, Homeware & Interior	531	753	1 121
	Hardware & DIY	596	845	1 258
	Entertainment, Book Stores, Gadgets & Hobbies	194	274	409
	Cell Phone & Electronics	665	942	1 403
	Restaurants, Coffee Shops, Takeaways	246	349	520
	Health & Beauty	546	774	1 153
	Sport & Outdoor Equipment	273	387	577
	Other: Personal Goods & Services	158	223	333

	Retail Category	2023 (m^2 GLA)	2028 (m^2 GLA)	2033 (m^2 GLA)
	Total	**4 916**	**6 969**	**10 377**
	Services	**865**	**1 227**	**1 826**
	Total	**5 782**	**8 195**	**12 203**

Source: Demacon Demand Modelling, 2023

OPTIMISTIC SCENARIO

Table 7.8: Market Area Retail Expenditure, 2023, 2028 and 2033

	Retail Category	2023 R/annum	2028 R/annum	2033 R/annum
	Groceries, Butchery & Liquor	R42 921 870	R67 174 039	R105 129 425
	Fashion & Footwear	R17 019 727	R26 636 394	R41 686 771
	Furniture, Homeware & Interior	R13 539 311	R21 189 435	R33 162 114
	Hardware & DIY	R15 196 185	R23 782 494	R37 220 331
	Entertainment, Book Stores, Gadgets & Hobbies	R5 529 451	R8 653 759	R13 543 398
	Cell Phone & Electronics	R18 985 427	R29 712 774	R46 501 400
	Restaurants, Coffee Shops, Takeaways	R9 049 083	R14 162 092	R22 164 107
	Health & Beauty	R15 603 051	R24 419 251	R38 216 875
	Sport & Outdoor Equipment	R7 805 153	R12 215 303	R19 117 322
	Other: Personal Goods & Services	R4 502 973	R7 047 290	R11 029 224
	TOTAL	R150 152 230	R234 992 832	R367 770 968

Source: Demacon Demand Modelling, 2023

MARKET RETAIL FLOOR SPACE DEMAND

The above expenditure patterns translate into the demand for retail floor space as summarised in the table below:

Table 7.9: Retail Floor Space Demand, 2023, 2028 and 2033

	Retail Category	2023 (m^2 GLA)	2028 (m^2 GLA)	2033 (m^2 GLA)
	Groceries, Butchery & Liquor	1 325	1 878	2 796
	Fashion & Footwear	610	865	1 288
	Furniture, Homeware & Interior	602	853	1 270
	Hardware & DIY	675	957	1 426
	Entertainment, Book Stores, Gadgets & Hobbies	219	311	463
	Cell Phone & Electronics	753	1 068	1 590
	Restaurants, Coffee Shops, Takeaways	279	396	590
	Health & Beauty	619	878	1 307
	Sport & Outdoor Equipment	310	439	654
	Other: Personal Goods & Services	179	253	377
	Total	**5 572**	**7 898**	**11 760**
	Services	**981**	**1 390**	**2 070**
	Total	**6 552**	**9 288**	**13 830**

Source: Demacon Demand Modelling, 2023

350

❖ IDEAL TENANT MIX

The following table provides the ideal tenant mix at optimum point of market entry.

Table 7.10: Ideal Tenant Mix

	Retail Category	Baseline Scenario m² GLA	Optimistic Scenario m² GLA
	Groceries, Butchery & Liquor	542	682
	Fashion & Footwear	249	314
	Furniture, Homeware & Interior	246	310
	Hardware & DIY	276	348
	Entertainment, Book Stores, Gadgets & Hobbies	90	113
	Cell Phone & Electronics	308	388
	Restaurants, Coffee Shops, Takeaways	114	144
	Health & Beauty	253	319
	Sport & Outdoor Equipment	127	159
	Other: Personal Goods & Services	73	92
	Total	**2 278**	**2 869**

Source: Demacon Demand Modelling, 2023

❖ SUMMARY OF RETAIL MARKET DEMAND ESTIMATIONS

In the context of residual nodal capacity calculations, the demand calculations indicate an optimum size of **±2 278m² GLA** in terms of the baseline scenario and **±2 869m² GLA** in terms of the optimistic scenario. Refer to table below.

Table 7.11: Summary of market demand estimations

		Baseline Scenario (Rand / sqm)	Optimistic Scenario (Rand / sqm)
	Total Annual Growth in Market Demand (Sqm/A)	411	465
	Centre Share of Growth (Sqm/A)	92	116
	Point Of Market Entry	2029+	2029+
	Additional Growth in Demand for Centre (Sqm)	831	1 047
	Retail GLA At OPME	1 937	2 440
	Services GLA at OPME	341	429
	OPME Centre Size (sqm GLA)	**±2 278m²**	**±2 869m²**
	On-Site Job Creation	76	96
	Retail Sales Potential (R2023 Value)	R60 081 770	R75 656 444
	Total Capital Investment (R2023 Value)	R43 289 861	R54 511 659
	Additional Parking Bays Required	137	172
	Parking Infrastructure & Landscaping Cost	R3 253 575	R4 096 982

Source: Demacon Demand Modelling, 2023
**OPME – Optimum Point of Market Entry*

7.5 SYNTHESIS

The findings of the preceding Chapter are integrated into an empirical assessment of retail market potential.

RETAIL SUPPLY

Findings:

- ✓ The total **existing supply of shopping centre** retail floor space within the 10-minute drive time amounts to approximately **60 187m² GLA.**
- ✓ The existing supply within the immediate surrounding area amounts to **±130 465m² GLA**,
- ✓ There are no shopping centres within the primary market area (10 min drive time), only 1 shopping centre located to the south of Lynedoch namely Firgrove Centre with a proposed size of 5 000m² GLA.
- ✓ As seen from the above, there are **3 shopping centres** within 10-min drive time isochrone, consisting of:
  - 2 Neighbourhood Centres and
  - 1 Minor Regional Mall
- ✓ *To conclude, the above supply figures cannot directly be correlated with the demand of the market area due to the fact that most of the centres are trading off multiple trade areas and trade area overlap occurs.*

GAP ANALYSIS

DEVELOPMENT TYPE	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Small Convenience Centre	✓	Moderate

RETAIL MARKET DEMAND ESTIMATIONS

- ✓ In the context of residual nodal capacity calculations, the demand calculations indicate an optimum size of **±2 278m² GLA** in terms of the *baseline scenario* and **±2 869m² GLA** in terms of the *optimistic scenario*.
- ✓ Considering the growth dynamics of the area, the *optimistic* scenario is deemed realistic achievable.
- ✓ The optimum point of market entry could be **2029+**
- ✓ An opportunity over the short to medium term exists for a **Small Convenience Centre**.
- ✓ The proposed shopping centre should be able to attain an annual sales potential of approximately **R60 million** (*baseline scenario*) and **R75 million** (*optimistic scenario*) based on benchmark trading densities.
- ✓ Permanent on-site job creation of **±76** (baseline) or **±96** (optimistic), based on the SEM 2 to 5+ calculation.
- ✓ Performance will be dependent on, inter alia, appropriate tenant composition.
- ✓ Ample parking should be provided at a ratio of **4 bays per 100m²** retail GLA.
- ✓ The parking area should be accessible, convenient, paved and well-lit in the evenings.

Main Tenants (Small Convenience Centre):

- ✓ Small café / superette
- ✓ Restaurant(s)
- ✓ Few small convenience stores.

❑ SHOPPING CENTRE SIZE AND RECOMMENDATIONS

Two scenarios were modelled:
1. Both scenarios consider a 5-minute drive time,
2. The **optimistic scenario** is based on a *higher market share*. Over and above, the site stands to benefit from daily transient trade due to its favourable location - in close proximity to **Baden Powell Drive.**

.

Retail Demand Potential (Baseline Scenario)

The demand calculations indicate an optimum size of **±2 278m² GLA** over the ***short to medium term***.

The optimum point of market entry would be **2029+** *(Short to medium term).*

The proposed shopping centre should be able to attain an **annual sales potential** of approximately **R60 million** (short term to medium term) based on benchmark trading densities.

Permanent on-site job creation of **±76** (short to medium term) based on the SEM 2 to 5+ calculations.

Ample parking should be provided at a ratio of **4 bays per 100m²** retail GLA.

Retail Demand Potential (Optimistic Scenario)

The demand calculations indicate an optimum size of **±2 869m² GLA** over the ***medium to longer term***.

The optimum point of market entry would be **2029+** (*Medium to longer term*).

The proposed shopping centre should be able to attain an **annual sales potential** of approximately **R75 million** (medium to long term) based on benchmark trading densities.

Permanent on-site job creation of **±96** (medium to long term) based on the SEM 2 to 5+ calculations.

Ample parking should be provided at a ratio of **4 bays per 100m²** retail GLA.

An opportunity exists for a **Small Convenience Centre.**

AUTOMOTIVE MARKET POTENTIAL

8

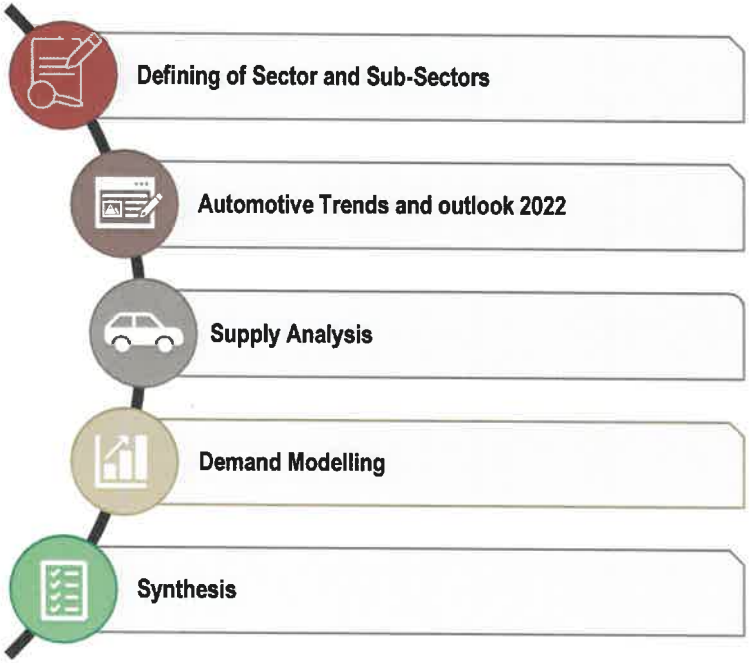
CHAPTER

8. AUTOMOTIVE MARKET POTENTIAL

8.1 INTRODUCTION

This section of the report focuses on the trade market, to determine automotive demand, potential of fitment centres and workshops etc. In order to reach this objective, the supply and demand for trade development within the market area should be identified and assessed in light of current trends.

Subsequent sub-sections provide a concise overview of the market in terms of the following aspects:



8.2 DEFINING OF SECTOR AND SUBSECTOR

The formal definition of the wholesale and retail trade sector according to the Stats SA SIC (Standard Industrial Classification and all Economic Activities (SIC)) is:

MAJOR DIVISION 6: Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods, hotels, and restaurants. The formal definitions of the sub-sectors according to the Stats SIC are:

MAJOR DIVISION 6: Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods, hotels and restaurants. The formal definitions of the sub-sectors according to the Stats SIC are:	
SIC 61 - Wholesale and commission trade, except of motor vehicles and motorcycles	This sector (61) includes the following activities: 611 wholesale trade on a fee or contract basis 612 wholesale trade in agricultural raw materials, livestock, food, beverages, and tobacco 613 wholesale trade in household goods 614 wholesale trade in non-agricultural intermediate products, waste, and scrap 615 wholesale trade in machinery, equipment, and supplies 616 other wholesale trade
SIC 62 - Retail trade, except of motor vehicle and motorcycles; repair of personal household goods	This sector (62) includes the following activities: 617 non-specialised retail trade in stores 618 retail trade in food, beverages, and tobacco in specialised stores 619 other retail trade in new goods in specialised stores 620 retail trade in second-hand goods in stores 621 retail trade not in stores 622 retail trade of personal and household goods
SIC 63 - Sale, maintenance and repair of motor vehicles and motorcycles;	This sector (63) includes the following activities: 623 sale of motor vehicles 624 maintenance and repair of motor vehicles 625 sale of motor vehicle parts and accessories

trade in automotive fuel	626	sale, maintenance and repair of motorcycles and related parts and accessories
	627	retail sale of automotive fuel
SIC 64 - Hotels and restaurants	This sector (64) includes the following activities:	
	628	hotels, camping sites and other provision of short-stay accommodation
	629	restaurants, bars and canteens

8.3 AUTOMOTIVE TRENDS AND OUTLOOK 2023

VEHICLE STATISTICS – July 2023

The Automotive Business Council said that the upbeat new vehicle market performance was encouraging given the multiplicity of negative considerations which still outweighs positive ones during the month of June 2023. Aggregate domestic new vehicle sales in June, at 46,810 units reflected an increase of 5,758 units, or 14,0%, from the 41,052 vehicles sold in June 2022.

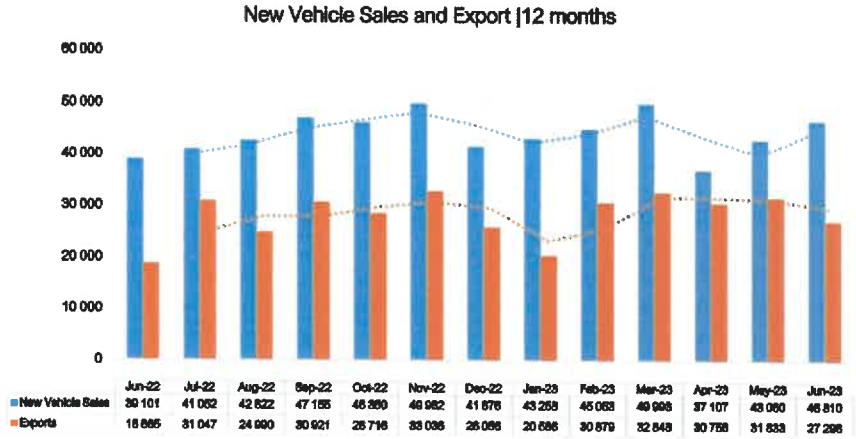
Export sales recorded a decline of 3,920 units, or 12,6%, to 27,296 units in June 2023 compared to the 31,216 vehicles exported in June 2022. Overall, out of the total reported industry sales of 46,810 vehicles, an estimated 39,086 units, or 83,5%, represented dealer sales, an estimated 10,0% represented sales to the vehicle rental industry, 3,5% sales to government, and 3,0% to industry corporate fleets.

The June 2023 new passenger car market at 29,795 units had registered an increase of 251 cars, or a gain of 0,8%, compared to the 29,544 new cars sold in June 2022. The car rental industry supported the new passenger car market during the month and accounted for a sound 13,4% of sales in June 2023. Domestic sales of new light commercial vehicles, bakkies and mini-buses at 13,945 units during June 2023 had recorded a substantial increase of 5,070 units, or a gain of 57,1%, from the 8,875 light commercial vehicles sold during June 2022.

Sales for medium and heavy truck segments of the industry reflected a positive performance during the month and at 743 units and 2,327 units, respectively, showed an increase of 56 units, or 8,2% in the case of medium commercial vehicles, and, in the case of heavy trucks and buses an increase of 381 vehicles, or a gain of 19,6%, compared to the corresponding month last year.

The June 2023 exports sales number at 27,296 units reflected a decline of 3,920 vehicles, or 12,6%, compared to the 31,216 vehicles exported in June 2022.

For the first half of the year the new vehicle market was now 12,284 units or 4,8% ahead of the corresponding period 2022 while vehicle exports were 7,857 units or 4,7% ahead of the first half of 2022. The knock-on effects of the devastating KZN floods impacting on vehicle production and exports during May 2022 were visible in the June 2023/June 2022 monthly comparisons, especially in the case of the light commercial vehicle segment



The unexpected extent of the upswing in the new vehicle market during June 2023, for the second month in a row, exceeded expectations, despite ongoing increases in the total cost of ownership. Challenges confronting the economy and the automotive industry such as high interest rates, high inflation, and currency depreciation continue to strain consumers' budgets and affordability appears to be driving new vehicle sales, underlined by the top selling models in the market. In addition to an easing in inflation by more than expected as well as an improvement in significantly less daytime loadshedding during the month, another welcome development was the renewed collaboration between business and government to urgently tackle key current challenges relating to energy, infrastructure and transport logistics, as well as combating crime. If successful, the collaboration efforts could assist to reduce policy uncertainty and promote a more predictable economic environment which would enable

much higher levels of investment, growth and job creation and to break out of the current low economic growth trap.

Vehicle exports performed weaker in June 2023 compared to the corresponding month 2022 but the export momentum remains upward on the back of further new model introductions by major exporters in the domestic market. Growing concerns about global stagflation, the economic impact and disruption of supply chains resulting from the protracted geopolitical conflict, and the pace of tighter monetary policy in major markets potentially posing the risk of a potential global recession, remain.

Source: Naamsa Report, July 2023

8.4 MARKET POTENTIAL ASSESSMENT

The demand-side dynamics within the market have been concisely described in preceding chapters, supported by a retail market growth assessment. An assessment of the net effective demand for additional retail floor space will be made in this chapter. A growth forecast, respectively for a five and ten-year horizon are provided based on economic, population and income growth prevalent in the market.

Demand modelling has become increasingly specialised over the past decade. One particular aspect that has changed is a notable shift away from broad based supply-demand estimations to multivariate, differentiated models. Contemporary models focus on specific expenditure patterns of selected LSM market segments.

The market potential estimations will be addressed under the following headings:

- ✓ Trade Supply
- ✓ Development Potential
- ✓ Trade Space Demand

8.4.1 MARKET SUPPLY

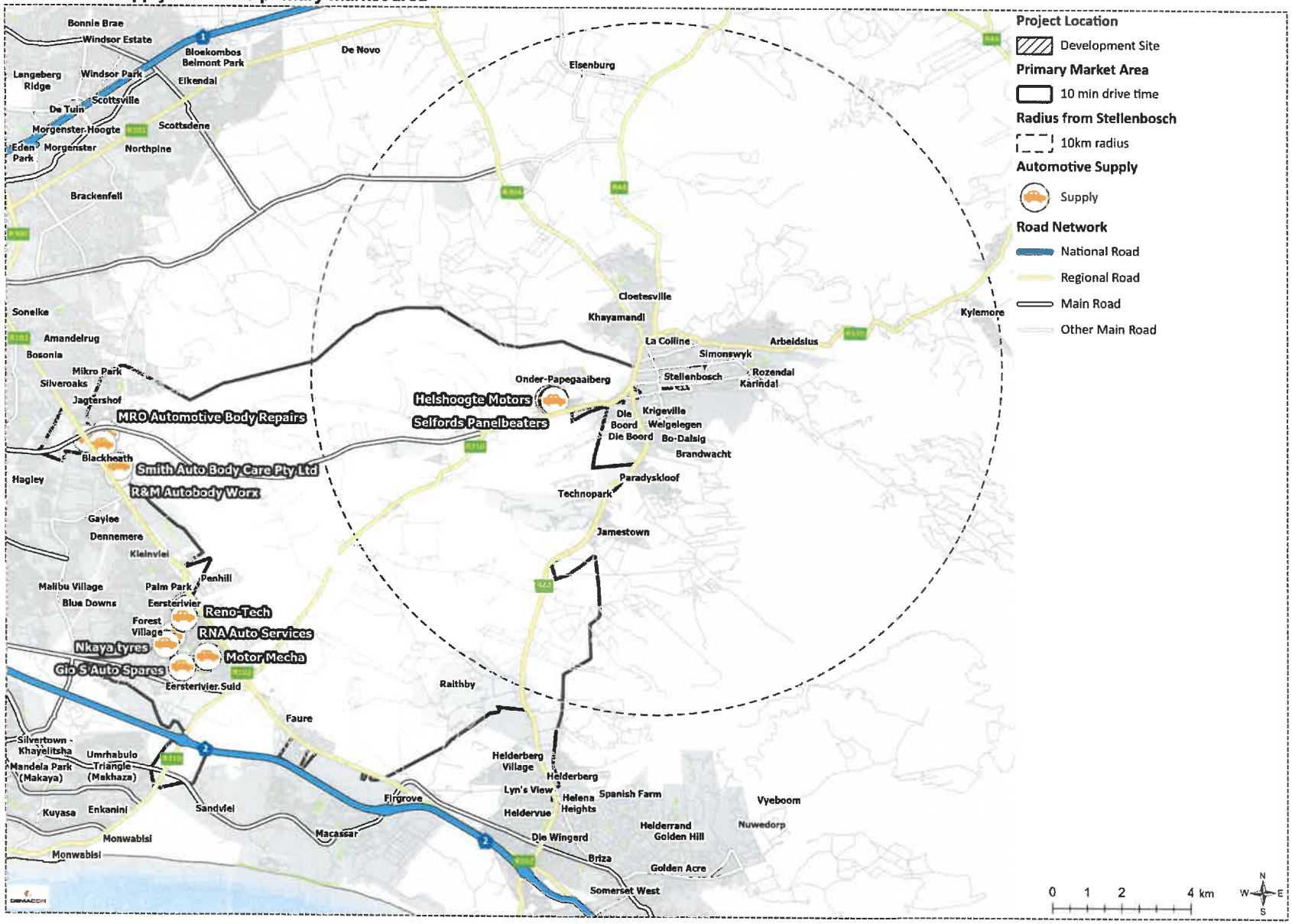
Subsequent table summarises competitive supply within the primary market area in terms of auto parts stores, car repair and maintenance, tire shops and related ancillary services.

Table 8.1: Automotive supply within the primary market area

Name	Physical Address	Automotive Category
Automax Service & Fitment Centre	62 Muscat Rd, Blackheath	Auto repair shop
Helshoogte Motors	10 Devon Valley Rd, Devonvallei, Stellenbosch	Auto repair shop
Motor Mecha	72 Stratford Ave, Beverly Park, Cape Town	Auto body shop
MRO Automotive Body Repairs	13 Cincaut Road Unit 1A Iris Park Saxenburg Park 1, Blackheath, Cape Town	Car repair and maintenance service
Chikomo Panel Beaters	82 Stratford Ave, High Places, Cape Town	Auto body shop
Selfords Panelbeaters	Devon Valley Rd	Auto dent removal service
Eersteriver Midas	Cnr Gordon Street and Forest Dr, Eerste River, Cape Town	Auto parts store
Reno-Tech	9 Gordon St, Eerste River, Cape Town	Auto repair shop
RNA Auto Services	26 Rodney Street Russels Rest, Eerste River	Auto repair shop
R&M Autobody Worx	Zinfandal St, Kuils River, Cape Town	Car repair and maintenance service
Smith Auto Body Care Pty Ltd	unit 2, Saxenburg park 2, 34 zinfandel road, Kuils River, Cape Town	Car repair and maintenance service
Dretec mechanical workshop and fitment center	9 Mediterranean Ave, Eerste River, Cape Town	Engine rebuilding service
Gio S Auto Spares	141 Stratford Ave, Sillwood Heights, Cape Town	Motor vehicle dealer
Novel Ford Stellenbosch	Devon Valley Rd	Motor vehicle dealer
Nkaya tyres	149 Bobs Way, Eesteriver, Cape Town	Tire shop
Oliver Tyre Group	Unit 5 & 6, Saxenburg Park 1, Cabernet Rd, Blackheath, Cape Town	Tire shop
Dunlop Zone Blackheath	Cnr Van Riebeeck & Muscat Rd, Rustdal, Cape Town	Tire shop

Source: Demacon, 2023

Map 8.1: Automotive supply within the primary market area



The following section provides the space demand estimations for the trade sector (automotive and related services).

8.4.2 DEMAND MODELLING

Space demand modelling has become increasingly specialised. One particular aspect that has changed is a notable shift away from broad based supply-demand estimations to multivariate, differentiated models. In the context of preceding chapters, the trade development potential in the market is subsequently determined, based on a specialist econometric model. It is known that the demand of space depends on the production function of a market area.

Defining Demand
Retail demand depends on a variety of customer-related aspects. It can be conceptualised as follows:

$$D_{ret} = f\{P_o; P_{\%}; Q; Y; R_e; C_p; S_f\}$$

Where:

P_o	=	Population size
$P_{\%}$	=	Population growth
Q	=	Existing quality of retail space
Y	=	Household income
R_e	=	Household expenditure patterns
C_p	=	Consumer preferences
S_f	=	Seasonality factors

Defining Supply
The supply of the markets entails the following:

$$S_{ret} = f\{D_{ret}; GLA_{ret}; R; S_c; C_c; L_u; I_a; S_p; V_{ret}\}$$

Where:

D_{ret}	=	Demand
GLA_{ret}	=	Current rentable/useable area
R	=	Rent/m²
S_c	=	Competition
C_c	=	Construction cost
L_u	=	Surrounding land uses
I_a	=	Infrastructure availability
S_p	=	Speculative climate
V_{ret}	=	Vacancy

Trade demand modelling has become increasingly specialised. One particular aspect that has changed is a notable shift away from broad based supply-demand estimations to multivariate, differentiated models. In the context of preceding chapters, the development potential for trade in the market is subsequently determined, based on a specialist econometric model. To develop a model, *inter alia* three data sets are required in time series format.

They are:
- ✓ Total employment of the market area,
- ✓ Trade sector employment,
- ✓ Trade sector productivity indicator.

Related property market indicators, together with the four data series were used in the following formula.

FORMULA:

The following equation is used to determine office space absorption:

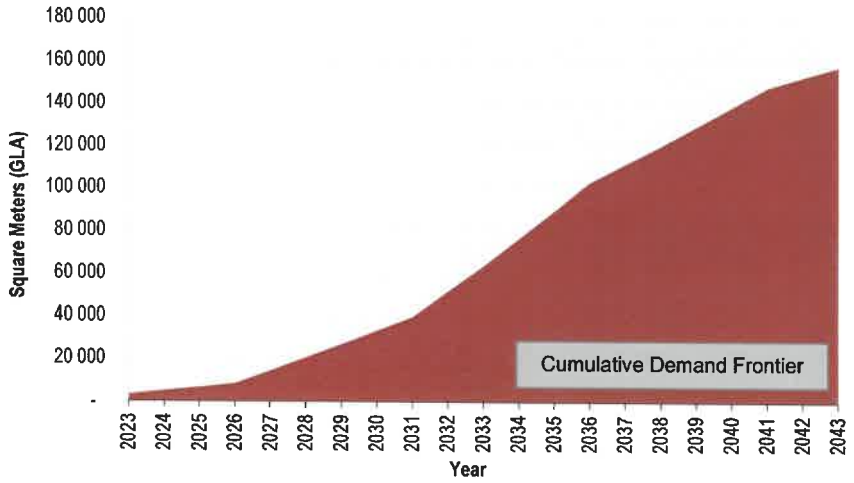
$$AB_t = {}^*CO)\tilde{\iota}_t - OC_{t-1})$$
$$= \tilde{\iota}(\alpha_0 + \alpha_1 EM_1 + \alpha_2 EW_t + \alpha_3 Q_t - \alpha_4 R_{t-2}) - \tilde{\iota}_1 OC_{t-1}$$

Key:

AB = Net absorption of space
OC = Occupied Space
EM = Employment in Wholesale & Retail sector
EW = Employment in Catering & Accommodation sector
Q = Trade Sector Output per Worker
R = Rental Rate for Retail Space

It is known that the demand for trade space depends on the level of activity in terms of wholesale and retail trade, (including automotive and fuel retail sales), as well as catering and accommodation within **Stellenbosch Local Economy**. The figure below illustrates cumulative additional trade space demand for the area.

Figure 8.1: Cumulative Additional Trade Space Demand - Stellenbosch Local Economy



Source: Demacon Demand Modelling, 2023

The following table summarised the space demand modelling results for wholesale & retail trade, catering & accommodation as well as automotive sales.

❑ Demand Modelling

The following tables indicate the space demand modelling result of the trade sector.

Table 8.2: Synthesis of Space Demand Modelling Results (nodal potential) – m² GLA (constant values)

Cumulative Additional Space Demand	Up to 2028	2033	2038	2043
Wholesale & Retail Trade (sqm GLA)	49 267	61 292	115 812	149 499
Catering & Accommodation (sqm GLA)	1 403	2 435	4 786	8 439
TOTAL: Stellenbosch Local Region	**50 670**	**63 727**	**120 598**	**157 938**

Cumulative Additional Space Demand	Up to 2028	2033	2038	2043
Automotive Share (28.5%)	14 481	18 213	34 467	45 139
Min Share	290	364	689	903
Max Share	434	546	1 034	1 354
Site Share	**362**	**455**	**862**	**1 128**

Source: Demacon Demand Model, 2023

Table 8.3: Synthesis Recommended Sizes (short term take-up forecast)

Recommended Sizes	Initial Phase (5-10yrs) Rand per annum / m²	Medium to long term Rand per annum / m²
Capital investment (2023 constant values)	R8 651 201	R16 371 804
Employment opportunities	15	29
Parking	18	34
Parking infrastructure & landscaping cost (2023 constant values)	R433 471	R820 314
Point of market entry	2028+	2033+
Size of development (sqm) (up to 2028 & 2038)	**±455m²**	**±862m²**

Source: Demacon Demand Model, 2023

8.5 SYNTHESIS

The findings of the preceding Chapter are integrated into an empirical assessment of the market potential.

GAP ANALYSIS

DEVELOPMENT TYPE	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Automotive	✓	Moderate

MARKET DEMAND POTENTIAL

Demacon's Demand Modelling results illustrate that the consumer market can, optimistically, sustain trade and automotive space with the initial phase (5 to 10 years) of approximately **455m²** and over the medium to long term of approximately **862m²**.

Table 8.4Recommended Sizes (Take-up forecast)

	Recommended Sizes	Initial Phase (5-10yrs) Rand per annum / m²	Medium to long term Rand per annum / m²
	Capital investment (2023 constant values)	R8 651 201	R16 371 804
	Employment opportunities	15	29
	Parking	18	34
	Parking infrastructure & landscaping cost (2023 constant values)	R433 471	R820 314
	Point of market entry	2028+	2033+
	Size of development (sqm) (up to 2028 & 2038)	**±455m²**	**±862m²**

Source: Demacon Demand Model, 2023

The following is evident from the above:

- ✓ Trade sector market demand of **Stellenbosch Local Region** increases cumulatively from 50 670m² GLA in 2028 to 157 938m² GLA in 2043.
- ✓ Viable market-based take-up for the proposed development over the next 5 to 10 years is approximately **455m² GLA** and **862m² GLA** over the medium to long term.
- ✓ This floor space could include either a motor dealership, automotive workshop, or any other automotive related activities.
- ✓ Optimum point of market entry: **2028+** for the initial phase and **2033+** for the medium to long term.
- ✓ This floor space could include one of the following automotive services:
  - **Car service centre, fitment and repair centre** e.g., Bosch Car Services, Tyres & More, Car Care Clinic, Car Service City etc.
  - **Commercial servicing and repairs**
  - Selected **automotive ancillary services** such as a car wash performing not only washing but cosmetic repair services, valet services. e.g. Sparkling Car Care, AutoZone, Car Wash Worx

361

OFFICE MARKET POTENTIAL

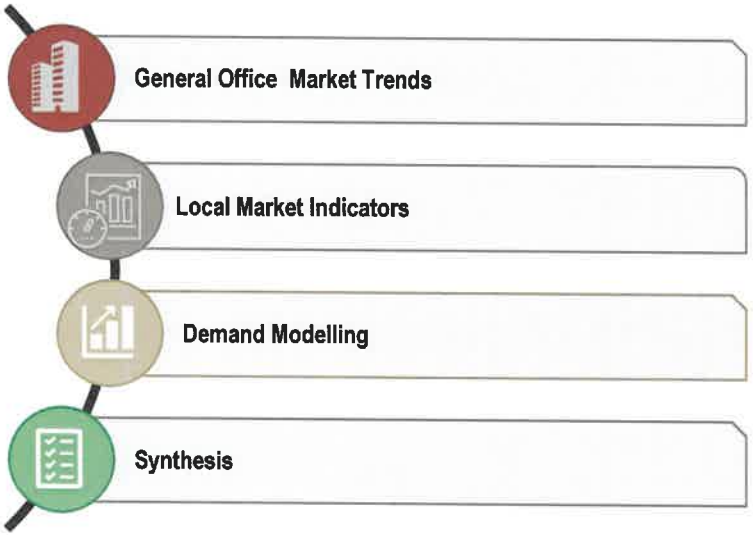
9

CHAPTER

9. OFFICE MARKET POTENTIAL

9.1 INTRODUCTION

This section of the report focuses on the office market, with the objective of estimating the development potential within the designated area. In order to reach this objective, the supply and demand for offices within the market area should be identified and assessed in light of current trends. Subsequent sub-sections provide a concise overview of the office market in terms of the following aspects:



9.2 GENERAL OFFICE MARKET TRENDS

9.2.1 OFFICE SPACE GRADING

Offices are defined by the functions performed in them, the type of premises occupied, and the occupational sector accommodated within them. The function of offices can be described as personal services, administration, and the management of social and economic systems. The office market in general is divided into different office categories. These categories relate to the quality of the office space provided. The market generally distinguishes between:

Office Space Grading

Grade P 	Top quality office with modern space that is generally a pacesetter in establishing rentals and which includes the latest or recent generation of building services, ample parking, a prestige lobby fishing and good view or a good environment. To be considered Prime-grade, an office should be 4-star Green Certified or equivalent environmental initiatives.
Grade A 	Generally new and not older than 10 years unless renovated. These offices are in prime locations and provide high quality finishes, on-site parking and air conditioning. Grade A offices typically accommodate financial service activities and rely on agglomeration provided by large retail node.
Grade B 	Generally older buildings, 10 to 20 years old, unless renovated. Accommodation is modern, situated in good locations and provides on-site parking and air-conditioning. B grade offices typically accommodate government institutions and small businesses. These offices are usually located in the vicinity of smaller retail centres and in CBD's
Grade C & D 	Generally, 20 to 30 years old. Buildings are in fairly good condition, although finishes are not to modern standards. These offices generally accommodate government institutions, small businesses and activities related to industrial uses, and are typically located in older CBD's. It is important to acknowledge the fact that specific location requirements underline the development of offices in a specific area.

9.2.2 LOCATION CONSIDERATIONS

Location is by far the most important consideration in the development of an office park. Location is, in the first instance, linked to the accessibility to

freeways and highways, which in turn improves the accessibility to major nodes, other residential areas and airports. A series of locational requirements are considered during office development considerations – see graphic below.

OFFICE LOCATION FACTORS

	Accessibility		Established address / monitored node
	Functional & complementary uses		Visibility
	Address Value		Emerging commercial node
	Proximity to educated labour force		Directional growth of the area
	Moderate to Higher SEM Profile		Availability of land
	Perceived level of security		Proximity to freeways / major provincial routes

9.2.3 OFFICE MARKET TRENDS

This section of the report provides insight into general office market trends. The overview includes a few quick facts as introduction, followed by the impact of the Covid pandemic, the concept of flexible offices and the future of office space.

9.2.4 QUICK FACTS

Office Market & Covid	✓ Commercial property sector was the hardest hit by the Covid -19 pandemic. ✓ Retail and office space was most affected with industrial & warehousing space being the only exception. ✓ Office market is still navigating the aftermath of hard-lockdown, social distancing and other Covid related regulations. ✓ Significant change in doing business. ✓ Office market was already affected by challenging economic conditions pre-covid and pandemic implication compounded the detrimental effects on the market. ✓ Increasingly higher vacancy rates.
Business Impact	✓ Downscaling of office space ✓ Increased need for affordable office space options ✓ Change in the way of doing business. ✓ Change in the traditional workplace set-up. ✓ Increased reliance on digital technology
Market Outlook	✓ Low office construction levels expected to persist. ✓ Increased conversion of office stock – especially more dated B and lower grade office stock. ✓ Conversion into residential, mixed-uses, educational and medical space – among other uses. ✓ Despite negative market sentiment, office space will always have a function. ✓ Office space will not disappear entirely, but the look and function of traditional office space is set to change significantly. ✓ New office space place significant focus on quality work environments and the health and wellbeing of employees. ✓ Increase move toward offering offices as a service as opposed to space. Also referred to as the "hotelling" of offices which essentially rents furnished and serviced offices space together with complementary facilities and amenities to individuals or companies.

9.2.5 COVID AND THE IMPACT ON THE OFFICE MARKET

MARKET TRENDS

Office transactions down by **60%** on an annual basis by the end of 2020.

Nationally, **rentals** for decentralised **A Grade** office space **decreased by 5%** (2021:Q1) – the third consecutive quarter of decline.

Cape Town (-8%) and Johannesburg (-7%) nodes recorded the **highest rates of decline.**

Low construction rates of office space expected.

High conversion rate of office space into other uses

IMPACT ON DOING BUSINESS

- Change in the traditional way of doing business – companies are embracing new business models and new flexible office options.
- Globally, it is predicted that by 2023, a third of staff will still be working from home.
- Rise in the presence of flexible office space – shared offices, co-working centres, private offices etc.
- Increased focus on cost-efficient and more affordable office space options.
- Increased reliance on digital technology – high speed internet, virtual meetings, digital equipment etc.
- Staggered working – employees work at the office during different times and / or days of the week to reduce concentration of people in one building.

BUSINESS RESPONSE TO COVID

The COVID pandemic has resulted in a significant **change in the way of doing business** given the implications of lockdown, social distancing and new occupational health and safety requirements. Businesses have been observed to respond to the challenges and opportunities brought about by COVID in various ways. In terms of business and office space needs, the market has revealed **four primary responses or models** – work from home, flex, core and flex and business as usual.

Work from Home	Various businesses have embraced the work from home model. In this model, businesses typically do not have a physical office address or headquarters and all staff work separately and remotely from their homes.
Flex	Many businesses have chosen to cancel their leases or dispose of their offices to opt for flexible office space alternatives including coworking space, shared offices, private office suites etc. Businesses make use of one or more flexible office options and does not own the building but leases space from a flexible office space operator.
Core & Flex	This model is characterised by a combination of remote working – either from home or flexible office space – as well as having a physical office building accommodating the core activities of the business. This model also manifests either as a permanent arrangement or as staggered work-days - employees work from home a few days during the week and go into the office for the remaining days of the week
Business as Usual	For some companies, given the nature of their core business activity, are bound to have a physical address and requires workers to come to a central place to perform their duties. There is, however, an implication for the traditional office space layout given health and safety precautions associated with Covid.

The particular response will depend on the organisation type and structure with no one model fitting the needs of all business requirements. The type of response will depend on:

- ✓ Type of business and nature of services delivered.
- ✓ Size of the business
- ✓ Degree of flexibility required

9.2.6 FLEXIBLE OFFICE SPACE

DEFINITION



Flexible office space refers to a variety of office space options aimed at providing **adaptive and affordable office options**. These options are usually based on the concept of space **sharing** and **flexible leasing options**.

CHARACTERISTICS OF FLEXIBLE OFFICE SPACE

- Mostly associated with being a shared space – shared among different organisations or different people
- Flexible spatial options – lease entire floor, leasing of one desk, coworking space etc.
- Flexible rental and lease agreements – hourly, daily, weekly, monthly options.
- Various types of flexible office space - co-working space, serviced offices, shared offices, hot-desk, hybrid etc.
- Facility can be characterised as either serviced or not serviced but will at minimum include furniture and access to internet.
- Access to high-speed internet, meeting rooms, boardrooms, soundproof pods, restaurant, coffee tea, business services (printing), reception etc. – depending on the level of service offered by the centre.
- Operated by co-working or flexible office space operators or landlords operate flexible space on their own. Partnerships – landlord and operator also often an option for property owners.

BENEFIT TO BUSINESS OWNERS

- Lower business operating costs
- Scalability – easily accommodate growth and decline within the business and the associated need for workspace
- Furnished
- Sense of community
- Amenities, facilities and services to choose from
- Minimises start-up capital required
- Custom offices pace with not or little cost to the tenant
- Affordable business address for small businesses and start-ups



TYPES OF FLEXIBLE OFFICE SPACE

	**Co-working space**	Open plan workspace with desks or pods to rent. Clients rent a desk, pod or meeting room and those who make use of the facility are not necessarily from the same organisation. Includes options like dedicated desk or hot-desk (shared desks)
	**Serviced Office Spaces**	Open plan workstations with the majority of the floor utilised a private office space by a particular organisation. Ready to use workspace – furnished and cabled. Flexible contracts
	**Shared Offices**	Renting a desk within another organisation's building. An affordable option with access to a good address and serviced building.
	**Virtual Offices**	Provides businesses with a physical address without owning property. Typically includes a phone number and access to meeting rooms when required.
	**Hybrid Centres**	Combination of different types of flexible and adaptive office space

Typical services and amenities offered include:

- Reception
- Concierge
- Access to fast and reliable internet
- Meeting rooms
- Conferencing facilities
- Sound-proof booths / pods
- IT support
- Printing services
- Courier services
- Restaurant, cafeteria, canteen, coffee shops etc.
- Cleaning services
- Lounges, relaxation and pause areas.

The extent of services offered at flexible office centres range significantly between facilities. At the most basic, coworking centres offer access to internet and office furniture.

9.3 LOCAL MARKET INDICATORS

9.3.1 OFFICE SPACE CONVERSION

DEFINITION

Conversion of dated office stock into:

- ✓ Residential apartments
- ✓ Student accommodation
- ✓ Short-stay accommodation
- ✓ New shared & flexible office space



Increasingly popular among commercial property owners given rising **vacancies** as well as **dated** and **underperforming** commercial **stock**

CONVERSION TRENDS

- ✓ Increased tendency for dated, underperforming and vacant B-grade office space to be converted for alternative uses including short-stay accommodation, residential, healthcare etc.
- ✓ Trend emerged due to increased pressure on the commercial property market and increasing vacancy rates.
- ✓ This trend has experienced great success in the City of Johannesburg and several cased are already evident in the Pretoria CBD
- ✓ Conversion of defunct office space addresses a demand in the market among young professionals looking for residential options close to work and amenities.
- ✓ Mid-market residential apartments in well-located areas are gaining favour among young professionals.
- ✓ Unit offering differs depending on target market -could range from luxury apartments, mid-range apartments for the working professional to lower income options for those wishing to move closer to work.
- ✓ Builds on the work-live-play concept.
- ✓ Selected markets have shown success in converting offices into apartment-style hotels.
- ✓ Conversion of existing office stock into flexible office types – coworking space, serviced office space, hybrid office models etc.
- ✓ Contributes toward urban renewal and investment attraction.



9.3.2 THE FUTURE OF OFFICE SPACE

The Covid 19 pandemic undoubtedly had a major impact on the office market. The performance of traditional office space is struggling as demand patterns change and vacancy rises. Office space will, however, always form an integral part of the urban fabric in cities, fulfilling a vital function for government and other institutions in need of a physical presence in the market.

Despite the challenges experienced by the commercial property sector, the office market is responding well to new opportunities presented by the change of doing business. Office space conversion, alternative uses and flexible office space present unique opportunities for office space to fulfil an adapted purpose in the built environment.

It is anticipated that flexible working arrangements will continue to grow in popularity and with it, the demand for flexible working space. The market has also reflected a definite shift towards office design that is employee focused – address new health and safety requirements, incorporating considerations for employee well-being and eco-friend, green architectural design.

The only exception to prevailing office market conditions is the government sector. Most government departments operate on a rotational basis with building occupation not exceeding 50% at any time. Vacancy rates are comparatively lower in the Pretoria Node given the concentration of government offices in the Pretoria CBD. Given the mandate of government, it is anticipated that employees with return to office over the longer term and the need for adequate office space among government departments will be continued to exist.

Key Concepts Driving the Future of Office Space:

- ✓ Adaptability
- ✓ Flexibility
- ✓ Hotelling – offices as services vs. space
- ✓ Affordability
- ✓ Green building
- ✓ Hybrid-office space
- ✓ Office space conversion
- ✓ Greater focus on employee well-being and health at the workplace.

9.3.3 OFFICE MARKET INDICATORS, 2023:Q2[2]

❖ OFFICE RENTALS

Office rentals remain low due to huge oversupply.

The office market remains in the worst position of the three major non-residential property types due to its significant oversupply. Encouragingly, Rode's second quarter data continues to point to an improvement in vacancy rates, while nominal market rental growth remains in positive territory.

However, REITs are still generally reporting large negative office rental reversion rates as contractual rentals have escalated by much more than market rentals.

contractual rental escalation rates have averaged between 7% and 8% over the past few years and we all know that market rentals have not kept up. The office market has been boosted by the return of workers to offices since 2022, albeit in many instances in a hybrid way. The hot-desking and hotelling of office space seem to be growing. Let us remember that the end of the National State of Disaster was announced on 4 April 2022, which meant that the coronavirus Alert Levels were no longer applied. Unfortunately, not much data is available on how many workers have returned to offices locally, but anecdotal evidence, such as increased traffic in major nodes, suggests an improvement from pandemic levels.

Locally, the return to offices has also been boosted to some extent by people who would rather work in an office with power than at home where load shedding is more of a problem. The cost to keep the lights on during load shedding is enormous. This means occupation costs have grown for tenants, which affects affordability, which may inhibit the growth of achievable rentals in the future.

It is worthwhile also to look at global trends with regard to working from home. Rode's research shows that Americans are also returning to offices, but occupancy levels remain low. It is noteworthy that several of the big tech names, like Google, are pushing workers back to the office and even getting stricter on the management of this. A three day workweek remains the popular hybrid working policy.

The important aspect is that although more people have returned to offices, demand for space is still below pre-Covid levels. Rode believes vacancy rates could become under more pressure in the short term due to the weakening economy, largely due to the electricity crisis, which will put downward pressure on the demand for office space as more businesses close.

Looking further ahead, humans need face-to face interaction to build a company culture and morale; the work-from-home trend has its limits. We already see this in the US. Nationally, weighted market gross rentals for decentralized grade-A space increased by 3,5% in nominal terms in the second quarter of 2023 compared to the second quarter of 2022. This comes after growth of 3,2% year on year in the first quarter of 2023, which shows that nominal rentals have bottomed out after falling by 5,2% in 2021 and by 1,2% in 2020. But to give perspective, the second-quarter nominal rental rate on a national level was still 3% below 2019 levels (that is, before the Covid pandemic).

However, as we discuss later, these are nominal rentals that do not incorporate the below-the-horizon incentives like more generous subsidised tenant installation (TI) expenses, rent-free months, and free parking. The practical implication is that our nominal market rentals reported below are on the optimistic side because they exclude these leasing incentives, which do change in tandem with the rental cycle.

In real terms, second-quarter decentralized rentals fell further into negative territory after deducting the BER's roughly 10% estimate of building-cost inflation. In fact, real rentals have not been this low since the start of Rode's national index in 1992. And there is every chance it will sink even further.

Below we provide an update on work from- home trends in the USA and recent South African rental data. Note that all changes in rentals are calculated using a two quarter weighted moving average (that is, we smoothed the data slightly). Source: Kastle Systems More workers returned to offices in America since pandemic with hybrid models popular Workers are slowly migrating back to the office in the US, with office occupancy rates of the 10 largest cities reaching 49,8% in the week ended 28 June, as shown on the chart. This is according to data from Kastle Systems, which measures office activity through entry swipes at 2 600 buildings and 41 000 businesses across America. During the height of the Covid pandemic, Kastle's data showed occupancy in the 10 cities had

[2] *Source: DEMACON ex SAPOA et al, 2023*

plunged as low as 15%. By late 2022, it steadily rebounded to nearly 50%, but it has remained stuck in the 45-50% range in the first half of 2023.

National rentals

Before we deal with market rentals, a word about our survey method. The question put to the same panel every quarter includes the following instruction: □ "Nominal" rental assumes no leasing incentives like a rent-free period or short-term discounts. It also excludes amortization of tenant installation costs."

The practical implication is that with the current granting of incentives, our nominal market rentals reported below are on the optimistic side because they exclude these leasing incentives.

As noted above, nationally, nominal market rentals for grade-A office space in decentralized nodes in South Africa (outside the CBDs) increased by 3,5% in the second quarter of 2023 compared to a year ago, according to Rode's office market survey. In real terms, rentals fell by about 6% after deducting building-cost inflation (BER BCI).

Rentals in the major decentralized nodes

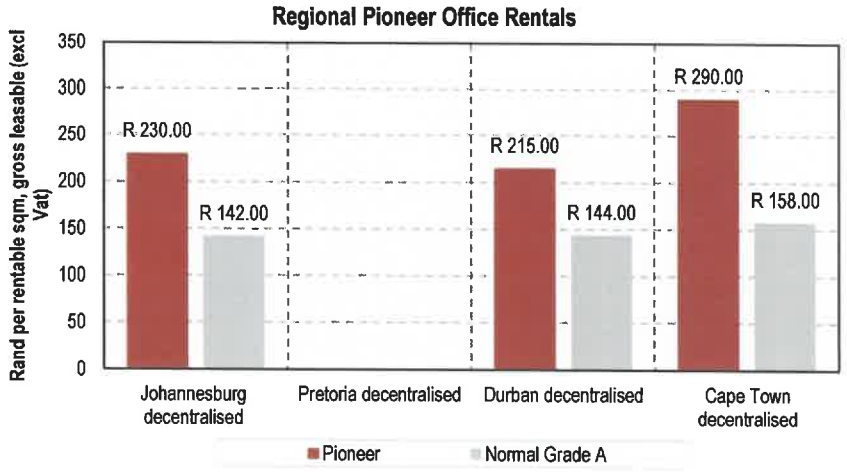
Westville and Berea rentals fell by 3,5% and 10% respectively. Berea's average vacancy rate worsened to 18% in the second quarter from 15% in the first quarter of 2023. This implies that real rentals in Durban remain in negative territory. In the second quarter of 2023, nominal Cape Town decentralized office rentals increased by 13,1% year on year. The Mother City's rentals have recovered strongly after a sharp fall during Covid, with the average rental now 6% above pre-Covid levels. We believe office demand is being boosted by Cape Town's perceived better governance and lifestyle, and better electricity supply outlook. Based on anecdotal evidence, these factors have contributed to several companies relocating (or "semi grating") from other parts of the country.

Rode data shows a strong rental rebound in most Cape Town nodes, with Century City, Claremont, and Tyger Valley shining with double-digit growth compared to the second quarter of 2022. But note on the chart the low base from which these increases are coming.

Pioneer rentals

The following table shows the difference between pioneer rentals and grade-A market rentals as in the second quarter of 2023. This the reader can use as a rough indicator of prospects for eventual market-rental growth should the deus ex machina come down from the skies and generate sustainable growth in the SA economy. Pioneer rental levels often represent leases signed on newly erected on-demand buildings like leaseback developments, and these rentals inevitably reflect today's or recent building and land acquisition costs as developers naturally expect a fair initial yield on their development costs. Typically, the lease is signed before construction starts.

Figure 9.1: Pioneer office rentals



Note: Highest nominal market gross rental rate achieved Quarter 2023:2
Rands per rentable m², gross leases (excl. VAT)

❖ OFFICE DEMAND AND VACANCIES

Office vacancies decline further, but remain elevated.

The results of Rode's office vacancy survey show that vacancy rates in South Africa improved further during the second quarter of 2023. We found that the average vacancy rate of grades A+, A and B space combined was 14,5% in the second quarter of 2023, lower than the 14,9% in the first quarter of 2023, largely

thanks to less vacant space in Cape Town and to a lesser extent in Johannesburg.

The latest national vacancy rate is also better than 2022's average of about 16%, which indicates somewhat better demand. But this is not the case everywhere in the country, as we explain later. Looking at the bigger picture, current vacancy rates are still well above the pre-Covid level of 10,5% in 2019 and the long-term average of about 9%, as per SAPOA data. Office demand over the past year or so was boosted by the return of more workers to the office as Covid has become less of a factor.

However, a proportion of those companies requiring their employees to return to the office favour flexible or hybrid working and more collaboration areas, implying less demand for space compared to before the pandemic. Two to three days a week at an office remains a popular policy. This, together with renewed weakening in economic activity, notably pulled down by the power crisis, makes a return to normal vacancies over the next few years unlikely. In May, the South African Reserve Bank (SARB) said it expects the economy to grow by only 0,3% in real terms in 2023 compared to the 2% growth rate of 2022. The SARB said that load shedding alone reduces growth by about 2% points for the year.

Therefore, a likely scenario is that the national office vacancy rate could head north again. It is important to grasp how Rode's survey is constructed before digesting the data provided in this chapter. Rode asks panel lists across the country to fill in a vacancy factor for the different office grades, using a scale of 1 to 9, as shown in the first table. For instance, if a broker is of the opinion that the vacancy rate in a given node is between 0% and 10% (low), a 1, 2 or 3 must be filled in, with 1 representing fully let or almost fully let and 3 indicating close to 10%. If vacancy rates are between 10% and 20% or medium, a 4, 5 or 6 must be filled in, with 6 representing close to 20%. The scale of 7 to 9 indicates vacancy rates are very high, between 20% and 30%. Like SAPOA, Rode defines vacancies as the available floor area for leasing at any given time, irrespective of whether there is still a valid lease over the space.

The reader may wonder why we use a scale of 1 to 9 and not 1 to 10. The reason is that 1-9 has a whole-number median – 5. When you use a scale of 1 to 10, the median is an uncomfortable 5,5 – which is not a whole number. We use the same logic for the industrial vacancy scale. To convert these vacancy factors to a percentage, the factor must be multiplied by 3,333. The percentages that correspond with each vacancy factor are shown in the second table.

Importantly, Rode weighted the national decentralized vacancy rate by using SAPOA's office stock data per grade for the five major cities, namely Johannesburg, Pretoria, Durban, Cape Town and Gqeberha. The decentralized vacancy rates of these cities are also weighted based on the stock level per node.

Vacancy Scale

	Vacancy factors for office nodes		
Rode scale	1 2 3 Low to medium	4 5 6 Medium to high	7 8 9 Very high
Percentage interpretation	0% - 10%	10% - 20%	20% - 30%

Scale Factor	1	2	3	4	5	6	7	8	9
Percentage	3,3%	6,7%	10,0%	13,3%	16,7%	20%	23,3%	26,7%	30,0%

Vacancy rates on a national level

Vacancy rates on a national level Turning to the results of the Rode survey for the second quarter of 2023, the national weighted decentralized vacancy factor for grades A+, A and B combined stood at 4,4 points, slightly better than the first-quarter 2023 factor of 4,5 points. The latest vacancy factor equates to an average vacancy rate of 14,5%, as shown on the chart. This is still well above the long-term average of 9%, calculated since 2000, as per Rode's calculations of SAPOA data.

A mind-blowing statistic from the SAPOA data is that about 2 million m2 grades A+, A and B office space is still standing empty in the major decentralized nodes in South Africa. If you add the CBDs and grade-C space, this number rises to 3 million m^2. A long-term vacancy rate of 9% has an important implication when valuing prime office buildings. It is dead wrong to assume that even if an office building is near fully let at the time of valuation, this will persist in perpetuity. The rule is that the older the building (the lower the grade), the higher the typical vacancy factor. This is especially a problem at present as tenants in grades C and B tend to upgrade to A or A+ office space because the market rentals of the newer space are exceedingly low in real terms.

Apart from the cost factor, some tenants are relocating to newer offices because of their excellent amenities. In practice, this flight to quality means landlords generally see higher vacancies in older buildings and lower vacancies in newer

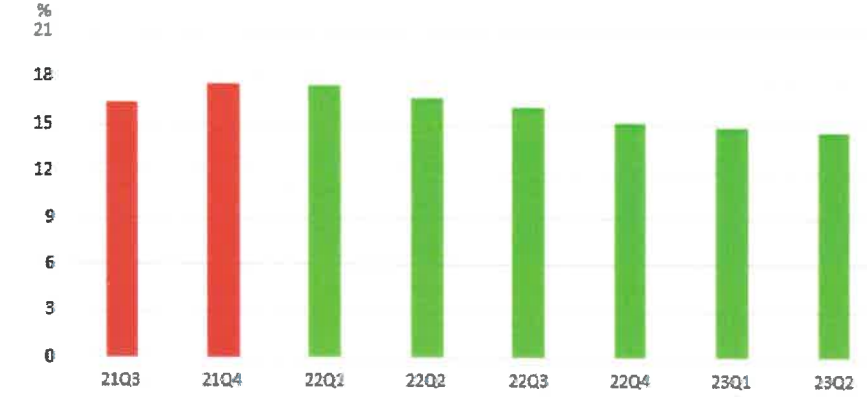
buildings, albeit with negative rental reversions. To illustrate this, look at the comparatively lower vacancy rates for newer space based on Rode's second-quarter data.

Thus, you do not want to own old office buildings – unless you can buy them at a bargain-basement price with a view to conversion.

Office construction activity remains at very low levels.

A positive for landlords is that the office market is looking better from a new-supply perspective. Office space completed fell by 24% in the 12 months to April 2023, despite lifting in the first few months of 2023. Activity has been on a clear downtrend over the past few years (see chart) as Covid-19 and a decelerating economy reduced the feasibility of building new offices.

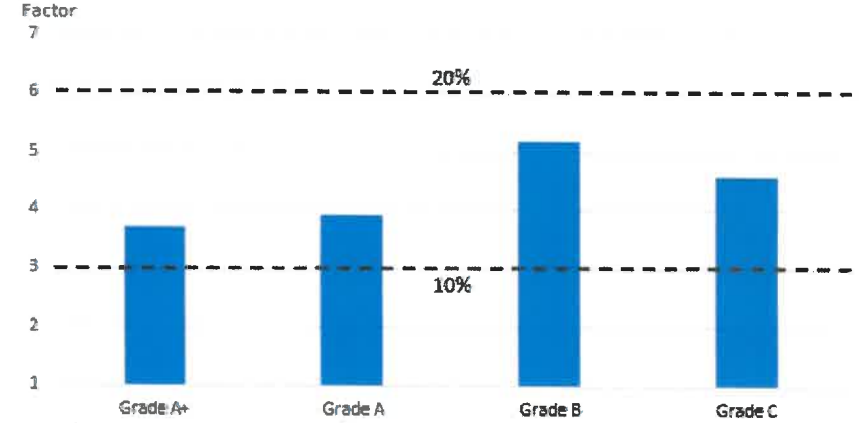
Figure 9.2: National weighted decentralized office vacancy rate combined grades A+, A & B



Source of data: Demacon ex, Rode's office market survey; SAPOA

Data from SAPOA shows that the amount of office space under construction in South Africa totalled 124 000 m² in the second quarter of 2023–a quarter of the long-term average measured since 2000. Perhaps surprising is that 57% of the construction activity is occurring in Cape Town. Delving deeper into the data reveals that Amazon's African headquarters of 58 000 m2 dominates this figure.

Figure 9.3: SA decentralized vacancy factors in 23Q2 (smoothed)



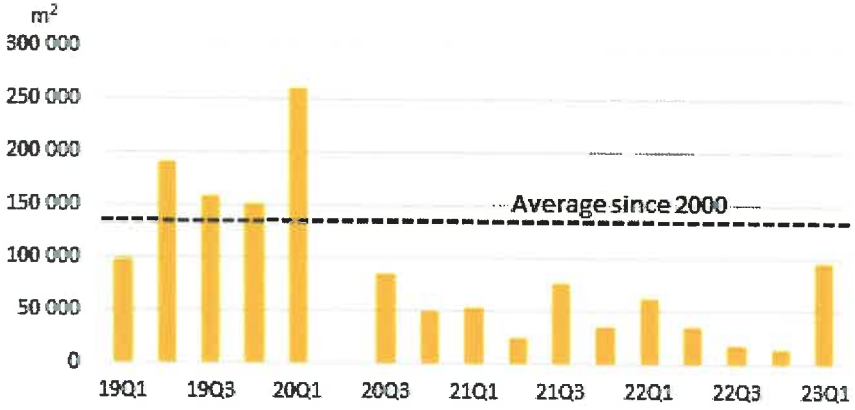
Source of data: Demacon ex, Rode's office market survey

In the current poor economic environment, landlords are either looking to sell older offices or to convert them to another use, such as residential or storage space. Conversion projects are not significant in numbers at this stage due to the sharp rise in building costs, as well as increased interest rates.

The interest rate constraint goes two ways:
1) It raises the funding cost of such conversion projects and
2) It reduces the feasibility of conversions to other property types, such as for housing.

SAPOA reports the volume of residential conversions appears to be declining as many assets are held at valuations which would make such projects unfeasible.

Figure 9.4: Office Properties Completed



Source of data: Demacon ex Stats SA

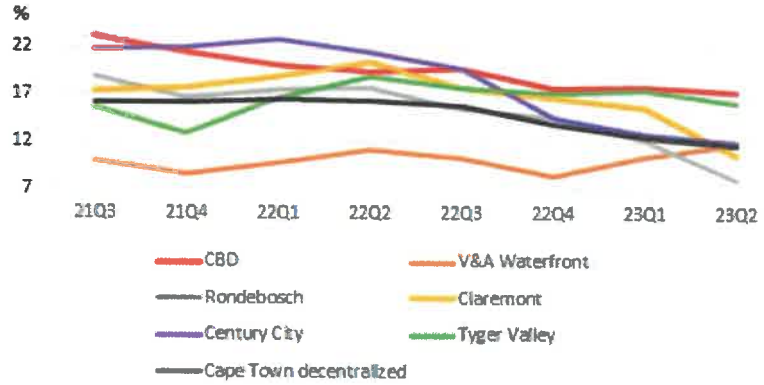
Poor business confidence does not bode well for office demand.

In the second quarter of 2023, only 27% of respondents in business surveyed by the BER were satisfied with prevailing business conditions – down sharply from 36% in the first quarter of 2023. The latest decline was the fifth in a row. This is well below the neutral level of 50%, where the number of respondents satisfied and dissatisfied with business conditions are equal. The weaker data makes sense given slower global and local economic growth amid elevated inflation and higher interest rates. Eskom's woes no doubt also played a role in the weaker confidence figure. In this uncertain and poor economic environment, companies will generally remain hesitant to expand their premises or hire new employees. In fact, this could mean more businesses could close. In the text that follows, we delve deeper into the latest vacancy rates on a city level.

Vacancy rates in the major cities

Vacancy rates across the major decentralized nodes in South Africa have generally improved after peaking close to the end of 2021. Looking at the performance over the past 12 months to June 2023, Cape Town saw the largest improvement, reaching 11,7% in the second quarter of 2023 compared to 16,4% a year ago. Johannesburg decentralized also saw its vacancy rate improve to 16% in the second quarter but note on the chart that it is still the only major city with a vacancy rate above the national average (black line).

Figure 9.5: Vacancy rates in Cape Town nodes since 21Q3 grades A+, A and B combined (smoothed; weighted)



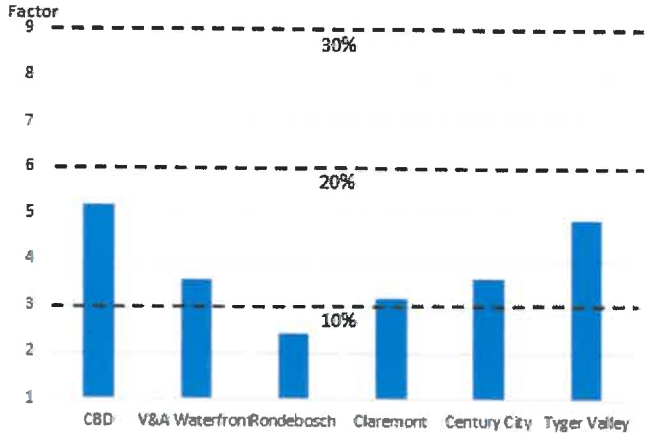
Source of data: Demacon ex, Rode's office market survey

The Cape Town weighted decentralized vacancy rate for grades A+, A and B office space combined in the second quarter of 2023 decreased further to an average of 11,7% from 12,7% in the first quarter of 2023. This was the fifth consecutive improvement after a peak of 16,6% was hit in the first quarter of 2022.

Almost all the major decentralized nodes saw vacancies decline in the second quarter. Rode has noted a sharp improvement in the vacancy rates of Rondebosch, Claremont and Century City to levels of around 10% over the past 12 months or so (see chart). Century City represents about a quarter of decentralized office space in Cape Town and has been a significant contributor to the overall vacancy rate decline seen in the city. The vacancy rate of Cape Town CBD also improved but remains high at 17%.

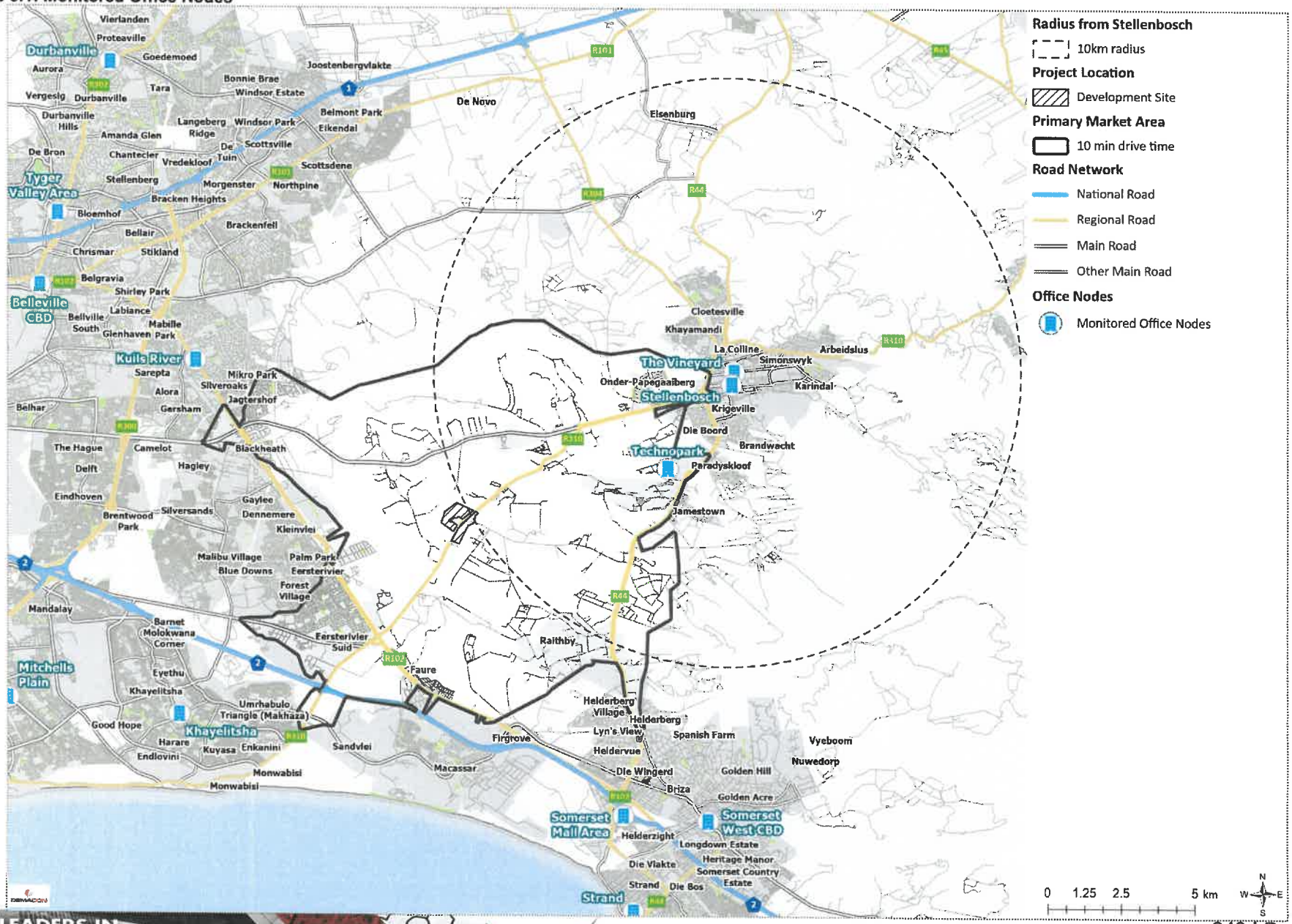
Rode has noted a sharp improvement in the vacancy rates of Rondebosch, Claremont and Century City to levels of around 10% over the past 12 months or so (see chart). Century City represents about a quarter of decentralized office space in Cape Town and has been a significant contributor to the overall vacancy rate decline seen in the city. The vacancy rate of Cape Town CBD also improved but remains high at 17%.

Figure 9.6: Cape Town weighted vacancy factors of major nodes in 23Q2 grades A+, A and B combined (smoothed) – to convert a scale factor to a vacancy %, multiply by 3,333



Source of data: Demacon ex, Rode's office market survey

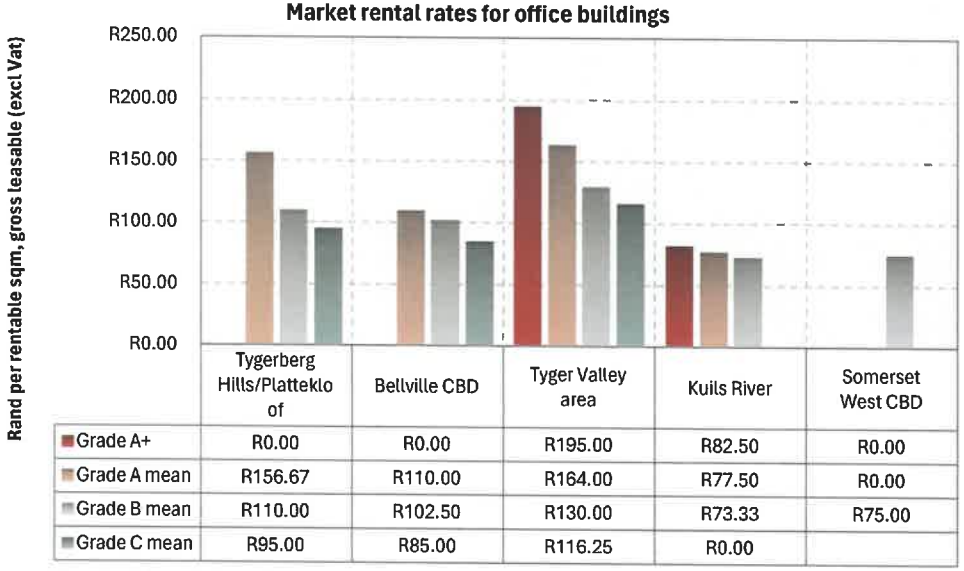
Map 9.1: Monitored Office Nodes



LOCAL OFFICE MARKET INDICATORS

The development site is in Lynedoch, which is not a recognized monitored office node. Technopark is the only monitored office node within the primary market area, close to Stellenbosch and The Vineyard which are two monitored office nodes in Stellenbosch. There is **no recorded data** for the **abovementioned nodes**. Somerset West CBD and Kuils River are analysed below as they are situated in the immediate surrounding market area.

Office Market Rental Rates

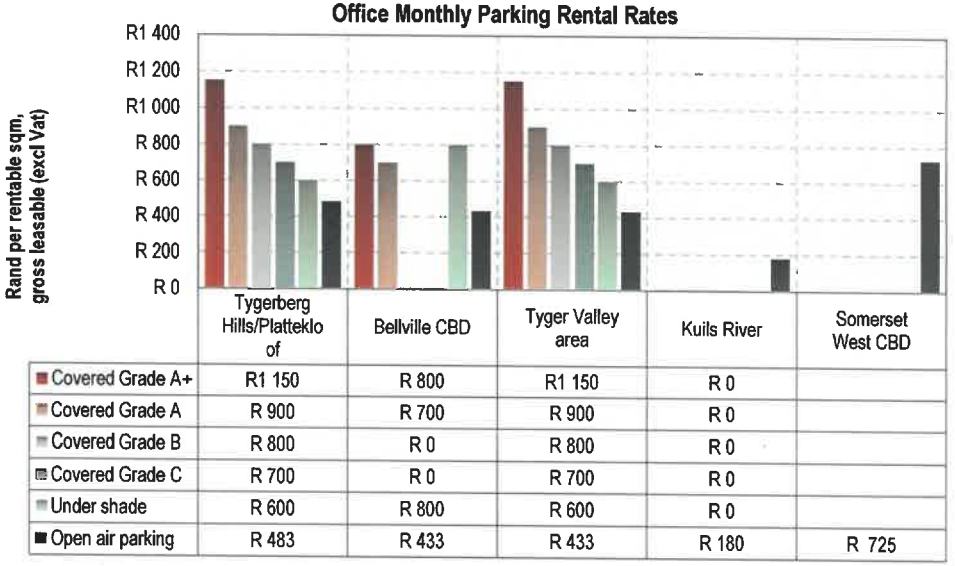


	Tygerberg Hills/Platteklo of	Bellville CBD	Tyger Valley area	Kuils River	Somerset West CBD
Grade A+	R0.00	R0.00	R195.00	R82.50	R0.00
Grade A mean	R156.67	R110.00	R164.00	R77.50	R0.00
Grade B mean	R110.00	R102.50	R130.00	R73.33	R75.00
Grade C mean	R95.00	R85.00	R116.25	R0.00	

- Grade A and A+ office rentals commanded in the **Tyger Valley area** range between R164 and R195 per m² (gross rent ex VAT) and between R77.50 and R82.50 in Kuilsriver.
- Grade A office rentals in Tygerberg Hills / Plattekloof are in the region of R156 and R110 in Belville CBD.
- Grade B and C offices represents the older stock of offices in the areas.

In terms of the **latest office listings**, office space ranges from 132m² to 1 000m² in size, with a rental range between R101 and R189 per m². Most listed office properties are located within Techno Park, Stellenbosch, and a few in Devonvallei. The average rental rate for the listed office properties is ±136m² and the average office unit size is ±366m².

Office Monthly Parking Rental Rates



	Tygerberg Hills/Platteklo of	Bellville CBD	Tyger Valley area	Kuils River	Somerset West CBD
Covered Grade A+	R1 150	R 800	R1 150	R 0	
Covered Grade A	R 900	R 700	R 900	R 0	
Covered Grade B	R 800	R 0	R 800	R 0	
Covered Grade C	R 700	R 0	R 700	R 0	
Under shade	R 600	R 800	R 600	R 0	
Open air parking	R 483	R 433	R 433	R 180	R 725

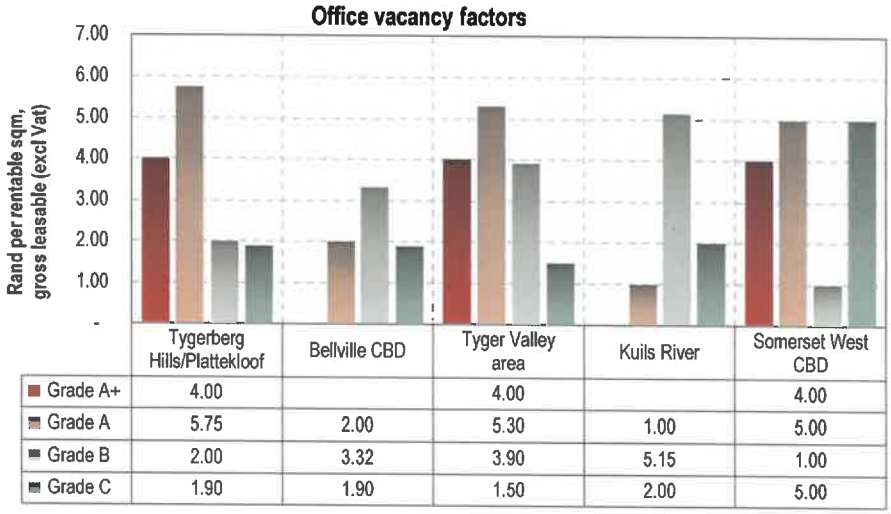
- Office parking rentals for Grade A+ and Grade A in Tygerberg Hills / Plattekloof range between R900 and R1 150, with under-shade net parking costing R600 and open-air parking costing R483. Office parking rentals for Bellville CBD range between R700 and R800 and in Tyger Valley between R900 and R1150
- There are no recorded office parking rental rates for Kuilsriver and Somerset West CBD.

Office Vacancy

Suburbs	Grade A+	Grade A mean	Grade B	Grade C
Tygerberg Hills/Plattekloof	4.00	5.75	2.00	1.90
Bellville CBD		2.00	3.32	1.90
Tyger Valley area	4.00	5.30	3.90	1.50
Kuils River		1.00	5.15	2.00
Somerset West CBD	4.00	5.00	1.00	5.00
Tygerberg Hills/Plattekloof	4.00	5.75	2.00	1.90

Note: office vacancy factors (on a scale of 1 to 9; smoothed)
To convert a vacancy factor to a %, multiply by 3,333

- The vacancy rate for Grade A+ offices in the areas above reflect a vacancy factor of 4 which can be interpreted as ±10%.
- The vacancy rate for Grade A offices varies between 1 and 5.57, which can be interpreted as 3.3% to 18%.

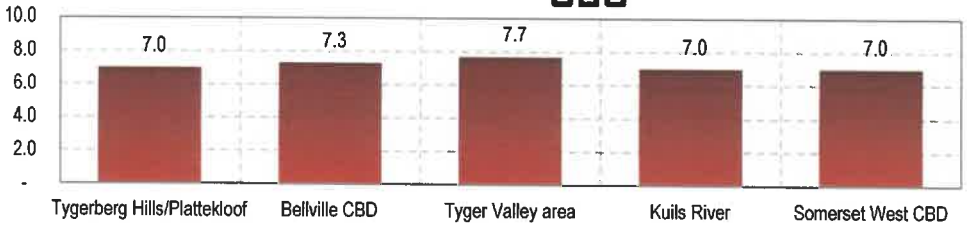


Vacancy Scale

	Vacancy factors for office nodes		
Rode scale	1 2 3 Low to medium	4 5 6 Medium to high	7 8 9 Very high
Percentage interpretation	0% - 10%	10% - 20%	20% - 30%

Scale Factor	1	2	3	4	5	6	7	8	9
Percentage	3,3%	6,7%	10,0%	13,3%	16,7%	20%	23,3%	26,7%	30,0%

Office Rental Escalation on New Leases



Office rental escalation on new leases vary between 7.0% and 7.7%

9.3.4 OFFICES SUPPLY WITHIN THE PRIMARY MARKET AREA

The following section provides office supply within the primary market area in terms of property listings.

Table 9.1: Commercial Property Listings

Suburb	Address	Price	Erf Size	Floor Size	Details
De Werf	89 Simons Way, De Werf, Stellenbosch	R750 000	5 390		Commercial Property in Aan De Wijnlanden in De Werf Office Block
Techno Park	Techno Park, Stellenbosch	R1 600 000		100	Office in TechnoPark - Stellenbosch
Raithby	13 Watson Way, Raithby, Stellenbosch	R3 000 000	4 115		Vacant Land
Vlottenburg	Vlottenburg, Stellenbosch	R6 500 000	7 170	378	Farmland for sale - main building 378m²
Croydon	Croydon, Somerset West	R7 250 000	6 760		Development Opportunity, 3 erven for sale
Kuilsrivier Industria	1 Wenlock Street, Kuilsrivier, Kuilsrivier Industria, Kuils River	R8 500 000	2 500	2 100	2500m² retail building with yard for sale, multiple uses
Saxenburg Park 1	1-3 Muscat Road, Saxenburg Park 1, Blackheath	R10 860 000	3 903		GB1 Zoned Vacant Land in Blackheath
Onder Papegaaiberg	27 Tarentaal Road, Onder Papegaaiberg, Stellenbosch	R22 837 500		1 887	Commercial Property for Sale
Digteby Estate	39 Digteby Estate, Digteby Estate, Stellenbosch	R26 000 000		2 500	Commercial Property for Sale

Source: Demacon ex Property24

Findings:

- There are 9 commercial listings currently within the primary market area.
- The selling price ranges from R750 000 to R26 million, with an average of R9.6 million.
- The floor size ranges from a 100m² to a 2 500m² unit (average 1 393m²), with erf sizes between 2 500m² to 7 170m² (average 4 636m²)

Figure 9.7: Commercial Sales Prices

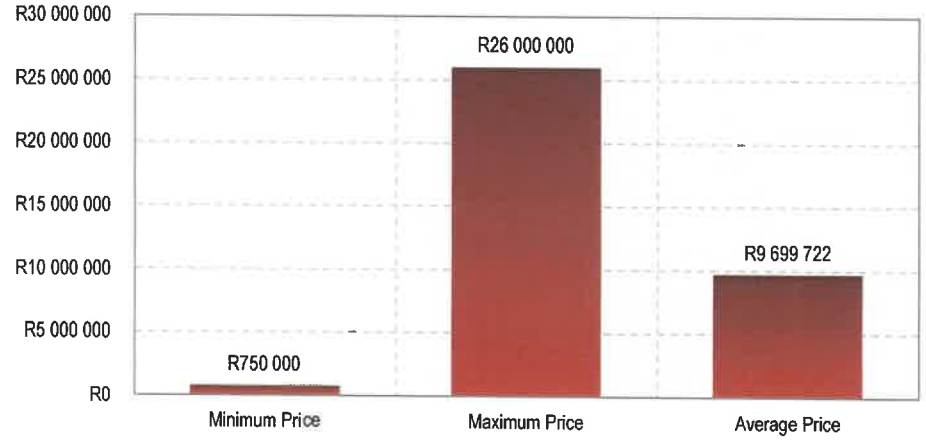
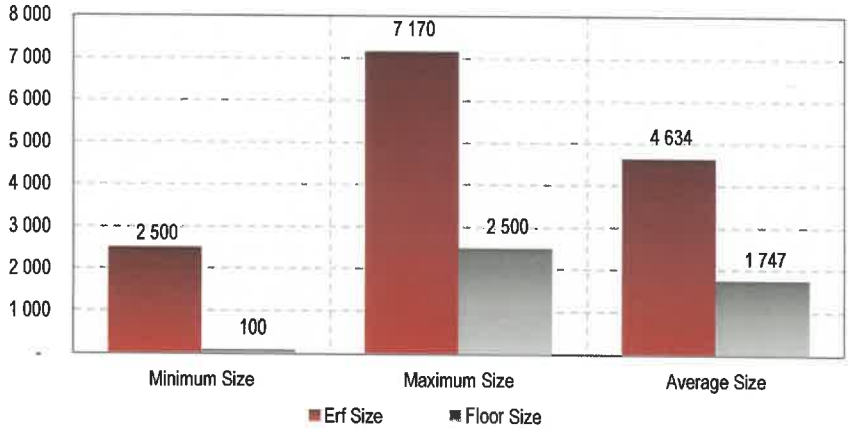


Figure 9.8: Commercial Sales Erf & Unit Sizes

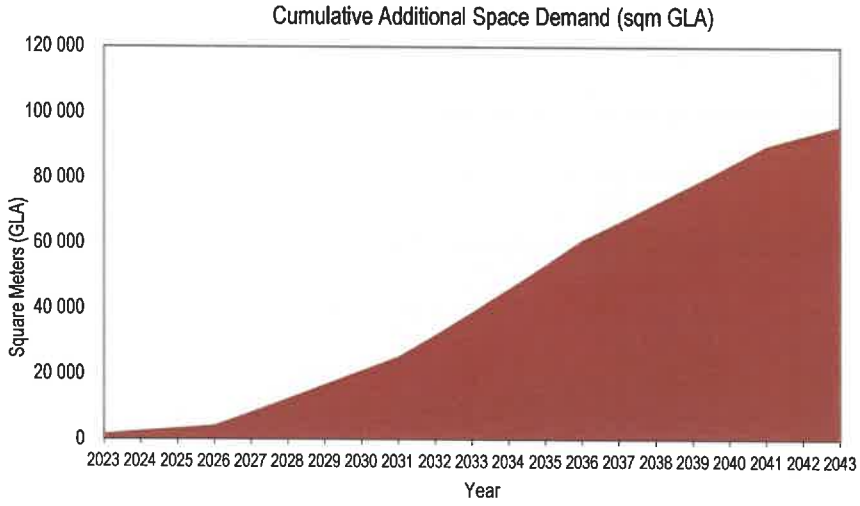


9.4 MARKET POTENTIAL ASSESSMENT

Office Demand Modelling

Figure 9.9 illustrates cumulative additional trade space demand for the area.

Figure 9.9: Cumulative Additional Business Space Demand (Stellenbosch Local Economy)



Source: Demacon Demand Modelling, 2023
Cumulative Demand

The following table summarises the space demand modelling results for the office sector.

Table 9.2: Synthesis of Space Demand Modelling Results – m² GLA (cumulative)

Cumulative Additional Space Demand	Up to 2028	2033	2038	2043
Finance & Insurance (sqm GLA)	939	1 563	4 785	8 659
Business services (sqm GLA)	7 455	30 472	61 765	87 085
TOTAL: Stellenbosch Local Economy	**8 394**	**32 036**	**66 549**	**95 744**
Nodal Share - Min	**420**	**1 602**	**3 327**	**4 787**
Nodal Share - Max	**672**	**2 563**	**5 324**	**7 660**
Site Share	**546**	**2 082**	**4 326**	**6 223**

** Note: the nodal shares and the average figures are cumulative*
Source: Demacon, 2023

Table 9.3 provides the recommended office options.

Table 9.3: Recommended office space options (10-year demand and take-up forecast)

Variables	Rand per annum / m²
Capital Investment (2023 constant values)	R37 481 572
Optimum size (GLA – 2033)	**±2 082m²**
Employment (on-site)	104
Parking bays	83
Parking infrastructure & landscaping cost (2023 constant values)	R1 982 359
Point of market entry	2029+

Source: Demacon, 2023

9.5 SYNTHESIS

The findings of the preceding Chapter are integrated into an empirical assessment of the market potential.

GAP ANALYSIS

DEVELOPMENT TYPE	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Offices	✓	Moderate

MARKET DEMAND POTENTIAL

- ✓ The office market has rebounded much quicker than anticipated with an accelerated "return-to-office" that has less than 5% of office workers still working from home.
- ✓ Market demand for office floor space in the sub-regional economy, increases cumulatively from 8 394m² GLA in 2028 to 95 744m² GLA in 2043.
- ✓ Over the medium to long term, the project could attract office take-up of approximately **2 082m² GLA (2033).**
- ✓ This space includes GLA for offices and related facilities, but excludes parking, storage and basements.
- ✓ It is recommended that low- to medium-density office development could be supported as part of the proposed mixed-use development.
- ✓ Take-up will predominantly be from small enterprises and SMMEs:
  - **Service-orientated occupants**: dentist offices, medical practitioners, local surgeons, attorneys, financial services etc.
  - **Local government service functions, administrative functions, and/or institutional functions**
  - Targeting these tenants could strengthen the demand for and the take-up of office space demand in the mixed-use node.

PRIVATE HEALTHCARE MARKET POTENTIAL

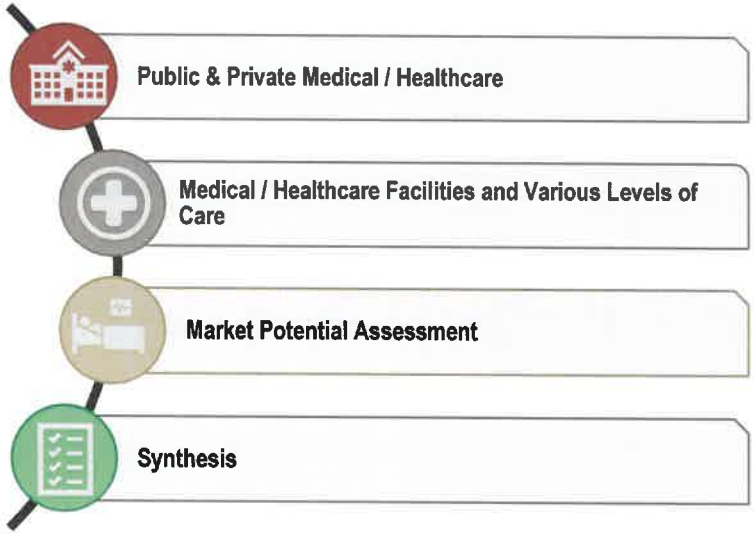
10

CHAPTER

10. PRIVATE HEALTHCARE MARKET ANALYSIS

10.1 INTRODUCTION

This chapter investigates the medical/healthcare market, with specific focus on the private healthcare sector of the trade area. The objective of this chapter is to provide greater insight into the healthcare market in general as well as the local healthcare market to ultimately determine potential demand for private healthcare in the trade area. Subsequent sub-sections provide a concise overview of the private hospital market in terms of the following aspects:

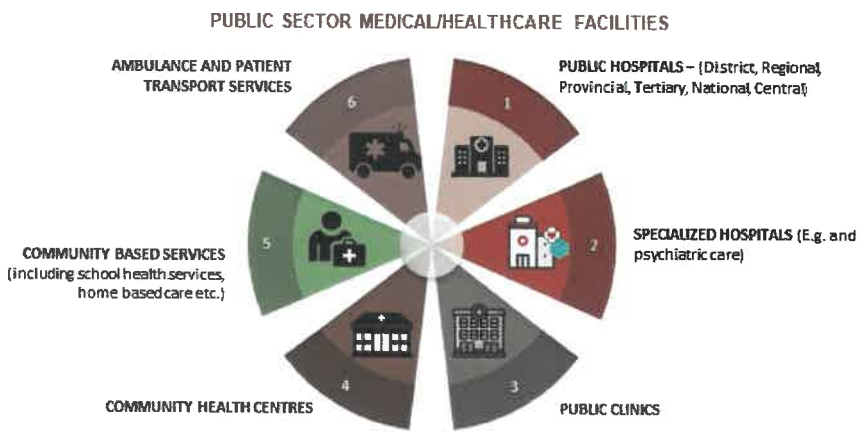


10.2 PUBLIC AND PRIVATE MEDICAL HEALTHCARE

10.2.1 PUBLIC HEALTHCARE SECTOR

The public sector is primarily funded by national and provincial government and struggle with capacity, funding and acquiring adequate staff. Recruiting doctors and nurses for the public sector is often difficult since public healthcare facilities generally pay lower wages than the private sector and working conditions are often poor.

Public Sector medical/healthcare facilities include:



10.2.2 PRIVATE HEALTHCARE SECTOR

Private healthcare is provided by a large "for profit" sector and a small, but significant workplace-based healthcare system. Private "for profit" hospitals are predominantly located in urban areas and has expanded rapidly over the past ten years. Private doctors are generally not employed by hospitals but operate as independent contractors with relatively loose affiliations to hospitals. Approximately 56% of doctors work in the private sector and is generally better qualified and more experienced (on average) than doctors in the public sector. A wave of mergers between health insurers, pharmaceuticals, manufacturers, and hospital groups have resulted in a significantly smaller group of companies controlling the majority of the private healthcare industry.

Private sector medical/healthcare facilities include:

- ✓ Private hospitals
- ✓ Private ambulances
- ✓ Private laboratories
- ✓ Radiologists
- ✓ Private medical and dental specialists
- ✓ Private general practitioners
- ✓ Private dentists
- ✓ Retail pharmacies
- ✓ Supplementary and allied health professionals (including dieticians, psychologists, optometrists, physiotherapist etc.)
- ✓ Complementary medicine practitioners (including homeopaths and chiropractors etc.)
- ✓ Services such as drug rehabilitation and hospice care

Private Medical / Healthcare Facility

"A unit delivering health services where the staff delivering the service is employed by any organisation that is not part of Government. Private medical / healthcare facilities may be for profit or not-for-profit in nature".

Private medical/healthcare facilities can be categorised as for profit or not-for-profit facilities. Private for profit are facilities where the staff delivering health services are employed by the trade, partnership or registered business and the cost of the service are recovered from fees charged for the services rendered. Private not-for-profit includes facilities where the staff delivering health services is employed by a charitable or non-profit institute or organisation registered under Section 21 of the Companies Act.

10.3 HEALTHCARE FACILITIES, LEVELS OF CARE AND SPECIALTY

Healthcare facilities are classified according to the various types of services provides. Certain facilities provide basic care and others offer more specialised services. This section provides a brief overview of the various types of healthcare facilities, the various levels of care as well as the different services offered by medical/healthcare facilities.

10.3.1 HEALTHCARE FACILITIES

Table 10.1 provides a summary of the various healthcare facilities and a brief description of their facilities and services.

Table 10.1: Healthcare Facility Classification and Description

Facilities Providing Inpatient Services	
Facility	**Description**
HOSPITALS	
Level 1 Hospital	A facility at which a range of outpatient and inpatient services are offered mostly within the scope of general medical practitioners. It has a functional operating theatre in which operations are performed regularly under general anaesthesia
Level 2 Hospital	A facility that provides care requiring the intervention of specialists as well as general medical practitioner services. A hospital providing a single specialist service would be classified as a specialised level 2 hospital. A general level 2 hospital should provide and the staffed permanently in the following 6 basic specialties of surgery: • Medicine • Orthopaedics • Paediatrics • Obstetrics • Gynaecology • Psychiatry • Diagnostic radiology and anaesthetics
Level 3 hospital	Provides specialist and sub-specialist care as defined for level 3 services. A specialised level 3 hospital will only have one or two specialties from group 1, 2 or 3 represented (e.g. cardiology and respiratory medicine plus associated anaesthetics and diagnostic facilities). A general level 3 hospital will have subspecialty representation in at least 50% of the range of the group 1 specialities listed in Table
Specialised hospitals	There are a wide range of possible specialties that could be focused "in-hospital, the two most common being TB and Psychiatry, but they also include spinal injuries, maternity, heart, infectious diseases etc. These units may also provide either acute, sub-acute or chronic care for all of those levels of care.
Convalescent unit	Cater for patients who need ongoing treatment requiring supervision or respite care. They will be staffed either by professions allied to medicine (physical rehab) or specialist nurses (psychiatric rehab) These specialised units may be on or off hospital site. Patients may be discharged from hospital into off site units.
Hospice Unit	These cater for terminally ill patients requiring palliative care or respite care. They will be staffed by allied professions and specialist nurses. These specialised units may often be on or off hospital site. Patients may be discharged from hospital into off site units
Transit Units	These units cater for patients who are awaiting treatment from a hospital but do not require admission. They may also cater for

Facilities Providing Inpatient Services	
Facility	Description
	patients who have been discharged from hospital but for social reasons cannot go home.
Health Post	Room in a house or other structure in a community from which a range of elementary PHC services are provided
Mobile	Temporary service from which a range of PHC services are provided and where a mobile unit/bus/car provides the resources of the services. This service is provided on fixed routes and at a number of strategic points which are visited on a regular basis. Some visiting points may involve the use of a room in a building, but the resources (equipment, stock etc.) are provided from the mobile when the service is available and are not maintained at the visiting point.
Satellite Clinic	A facility that is a fixed building where one or more rooms are permanently equipped and from which a range of PHC services are provided. It is open for up to 8 hours per day and less than 4 days per week.
Clinic	An appropriately permanently equipped facility at which a range of primary healthcare services are provided. It is open at least 8 hours a day and at least 4 days a week
Community day centre	A facility which is not open 24 hours a day, 7 days a week but at which a broad range of primary healthcare services are provided. It also offers accident and emergency but not midwifery services or surgery under general anaesthesia
Community health centre	A facility which is open 24 hours a day, 7 days a week at which a broad range of primary healthcare services are provided. It also offers accident and emergency and midwifery services but not surgery under general anaesthesia
Specialised health centre	A facility that provides specialised care to particular groups of patients usually for less than 24 hours at a time. There are many possibilities for such units, but the most common are obstetric units and renal dialysis units
Independent consulting rooms	A facility that is not part of a hospital or clinic and is used by one or more independent practitioners to see ambulatory patients for consultation, examination, investigation, and treatment General practitioner consulting rooms – one or more professionals registered as medical practitioners and who are not registered as specialist deliver health services Specialist consulting rooms – one or more professionals register as medical practitioners and who are registered as specialists deliver health services
	Registered practitioner consulting rooms – where one or more professionals registered in any of the allied health professions deliver health services.
Traditional Health practitioners consulting rooms	Where one or more professionals are registered as traditional health practitioners and deliver health services

➢ VARIOUS LEVELS OF CARE

This section provides a brief overview of the various levels of care offered by different medical/healthcare facilities. The various levels of medical care are listed in the table below together with a brief description.

Table 10.2: Level of Care and Description

Level of Care	Description
Ambulatory Care	Non-Admitted care, generally includes consultations, interventions or tests
Primary Healthcare	A set of prescribed services, generally falling within the skill base of professional nurse, technician, mid-level worker, counsellor, community health worker, midwife and emergency medical practitioner. These services may be first point of contact or for follow-up care
Referred outpatient care	Services provided by the requiring the skills of a general medical practitioner, a medical specialist or an allied health professional to which patients are referred, usually by appointment, for more specialised opinions or care. These will include referrals to general medical or surgical outpatients as well as the referrals to specialist clinics. They will also include referrals within a primary health care facility with or without appointment where their professionals deliver outreach services and/or where they provide services from private rooms or surgeries.
Day care	Treatment, observation or assessment that requires an extended stay, usually beyond the treatment or consultation as an outpatient, but less than 1 day. Day care patients do not get counted in midnight bed count.
Inpatient Care	Patients are admitted to hospital for at least one night for diagnosis, investigation or treatment. Level 1 care

Level of Care	Description
	Services which are within the skill base of a general medical practitioner and do not require the intervention of a specialist. Includes simple surgery requiring general anaesthetics. Level 2 care (secondary) Services which at some time during the intervention are beyond the normal scope of a generalist and required the input of a registered specialist. Level 3 care (tertiary) Services which at some time during the intervention are beyond the normal scope of a specialist and requires the input of a registered sub-specialist
Acute care	Care of conditions that may change within a few hours or days and that require prompt investigations, diagnosis, and treatment
Step-down or Sub-acute	Inpatient care that follows or forms the latter part of an acute episode in which the patient has been investigated, diagnosed, is in a stable condition and has a treatment plan but require ongoing inpatient nursing or rehabilitation care for less than 90 days
Chronic Care	Long term inpatient care and or treatment of patients relating to chronic conditions that require extended care over 90 days

➢ SERVICES AND SPECIALTIES

The table below provides an overview of various services classified as Group 1, Group 2 and Group 3 specialties. Specialty services are usually only offered by selective healthcare/medical facilities due to cost and availability of skilled and experienced individuals.

Table 10.3: Services and Specialties

Group 1 Specialties	Group 2 Specialties	Group 3 Specialties
Burns	**N/A**	**N/A**
N/A	**Cardiology** ✓ Echocardiography ✓ Ultrasound ✓ Electrocardiography ✓ Stress testing ✓ ECH Holter ✓ Pacemakers follow up ✓ Catch lab. ✓ Electrophysiology ablation	**Cardiology** ✓ Cardioverter defibrillator ✓ LV assist devices
Critical Care	**N/A**	**N/A**
Dermatology	**N/A**	**N/A**
Diagnostic Radiology ✓ Multi-slice CT scan ✓ Fluoroscope ✓ Mammography ✓ Colour Doppler US ✓ Interventional radiology ✓ Angiography	**Diagnostic Radiology** ✓ MRI ✓ Interventional neuroradiology	**Diagnostic Radiology** ✓ PET scan ✓ Cardiac imaging
Ear, Nose and Throat ✓ General Surgery	**Ear Nose and Throat** ✓ Specialised services	**Ear, Nose and Throat** ✓ Skull base surgery ✓ Cochlear implants
Gastroenterology ✓ Angiography ✓ AT scan ✓ Coronary care ✓ Echocardiography ✓ Stress ECG ✓ Endoscopy ✓ Proctoscopy ✓ Colonoscopy	**N/A**	**N/A**
N/A	**Endocrinology**	**N/A**
General Surgery ✓ Complex and high acuity care	**N/A**	**General Surgery** ✓ Liver and pancreatic resections ✓ TME
N/A	**Geriatrics**	**N/A**
N/A	**Haematology**	**Haematology** ✓ Bone marrow transplant
N/A	**N/A**	**Hepatology** ✓ Specialist liver unit ✓ Liver transplant
N/A	**Human Genetics**	**N/A**
Infectious Diseases ✓ Tertiary infectious diseases ✓ Pathology ✓ Infection control	**Infectious Diseases** ✓ Clinical research	**Infectious Diseases** ✓ National institute for communicable diseases
Dietician ✓ Counselling services ✓ Social worker	**N/A**	**N/A**
N/A	**Medical Radiation Oncology**	**Medical Radiation Oncology** ✓ Bone marrow transplant

Group 1 Specialties	Group 2 Specialties	Group 3 Specialties
		✓ IMRT ✓ Intra-operative radiation ✓ Stereotactic radiation ✓ PET scan planning ✓ Laminar flow ✓ Cryopreservation ✓ Stem cell harvesting ✓ T-cell depletion facilities
Mental Health ✓ Old age psychiatry ✓ Forensic psychiatry ✓ Substance abuse ✓ Liaison psychiatry ✓ Eating disorders ✓ Inpatient psychotherapy ✓ Social psychiatry ✓ Acute psychotic ✓ Acute non-psychotic	**N/A**	**N/A**
Neo-Nathology ✓ Neo-natal intensive care	**N/A**	**N/A**
Nephrology	**N/A**	**Nephrology** ✓ Pancreas ✓ Kidney ✓ Liver ✓ Transplants
N/A	**Neurosurgery**	**N/A**
N/A	**Nuclear Medicine**	**Nuclear Medicine** ✓ PET or gamma PET
Obstetrics and Gynaecology ✓ Foetal and maternal medicine	**Obstetrics and Gynaecology** ✓ Oncology ✓ Urogynaecology ✓ Reproductive medicine	**N/A**
Ophthalmology	**Ophthalmology** ✓ **Specialised**	**Ophthalmology** ✓ **Super specialised**
Paediatrics ✓ Specialist paediatric medicine	**Paediatrics** ✓ Paediatric cardiology ✓ Endocrinology	**Paediatrics** ✓ Organ transplant ✓ Epilepsy surgery

Group 1 Specialties	Group 2 Specialties	Group 3 Specialties
✓ Surgery service ✓ Paediatric ICU	✓ Gastroenterology ✓ Haematology ✓ Oncology ✓ Nephrology ✓ Neurology	✓ Craniofacial surgery ✓ High cost/complex medical interventions ✓ Metabolic laboratory ✓ Bone marrow transplants
N/A	**Respiratory Medicine**	**N/A**
Plastic and Reconstructive Surgery ✓ General	**Plastic and Reconstructive Surgery** ✓ Specialised	**N/A**
Rehabilitation Centre	**Rehabilitation Centre** ✓ Audiology ✓ Spinal injuries ✓ Stroke units	

10.4 CAPE WINELANDS HOSPITAL STAY

INPATIENT UTILISATION RATE

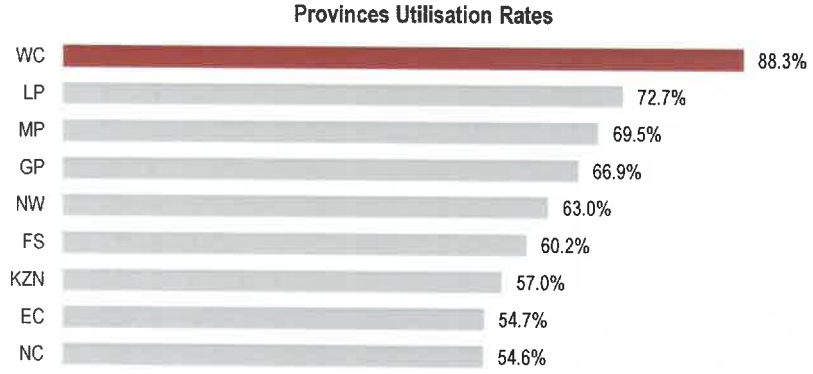
82.8%
IN THE CAPE WINELANDS DM



64.1%
National average

Compared to the national average, the district municipality maintains, on average, a **HIGHER** inpatient utilisation rate

This indicator measures the occupancy of the beds available for use in district hospitals and therefore measures how efficiently a hospital is using its available capacity. It is calculated by dividing the number of inpatient days plus half the number of day patients by the usable bed days and expressing this as a percentage.



AVERAGE LENGTH OF STAY

2.8 days
IN THE CAPE WINELANDS DM



4.3 days
National average

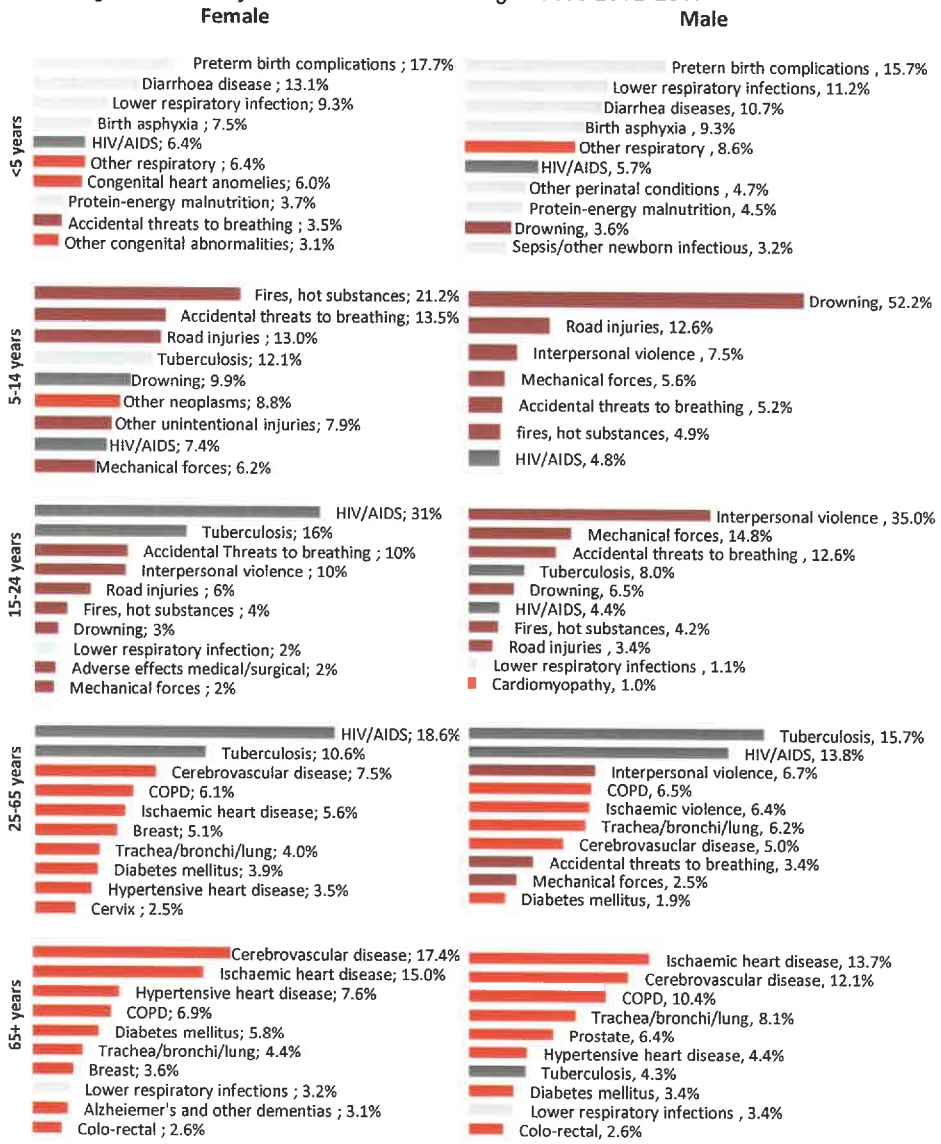
The average length of stay in the Cape Winelands DM is 2.8 days. Average length of stay for the Cape Winelands DM is much less than the national average.

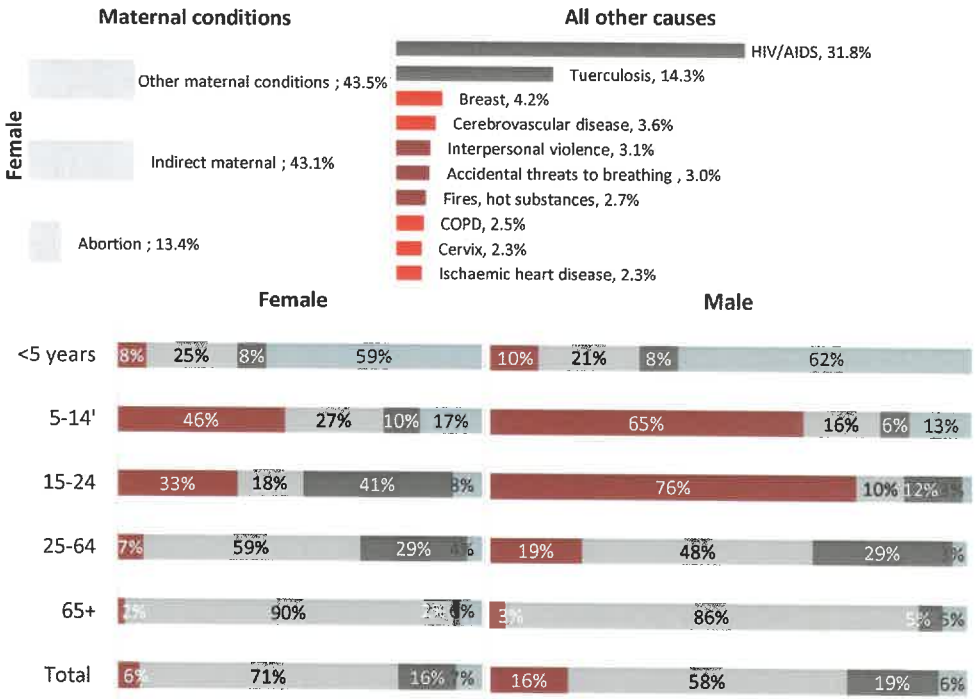
The average length of stay for trauma discharges within South Africa is approximately 5.1 days, with a median length of stay of 3 days. For severely injured discharges, the average length of stay is approximately 7.5 days, with a median stay of 4 days.

The average length of stay for an organ transplant varies according to the type of organ and level of complications. The overall length of stay is approximately 13.2 days with kidney transplants being the least at 6.4 days.

10.5 BURDEN OF DISEASE PROFILE

Percentage of deaths by broad cause and leading causes 2012-2017





Percentages are shown according to all the deaths within the age/gender category of each box, although only the leading 10 causes are displayed.

Broadcause

- Injury
- NCD
- HIV & TB
- Comm_mat_peri_nut

10.6 SUPPLY POTENTIAL ASSESSMENT

10.6.1 EXISTING PRIVATE HOSPITALS / CLINICS

The following assessments provide the supply side input into the market potential model. Within the market area, there are no private or public hospitals. The tables below list the ***competing private and public healthcare facilities (hospitals)*** within the immediate surrounding area.

Table 10.4: Competing private hospitals within the immediate surrounding area

Name of Hospital	Physical Address	Number of beds	Distance from Site
Mediclinic Winelands Orthopaedic Hospital	Cnr Saffraan Avenue & Rokewood Road, 16 Saffraan Ave, Die Boord, Stellenbosch	33	10.2
Mediclinic Stellenbosch	1 Elsie du Toit Dr, Stellenbosch	102	11.2
Netcare Kuils River Hospital	Suite 3e, 33 Van Riebeeck Rd, Kuils River, Cape Town	151	16.0
Mediclinic Vergelegen	Main Rd, Somerset West, Cape Town	237	17.5
Busamed Paardevlei Private Hospital	Paardevlei Estate, 4 Gardner Williams Ave, Paardevlei, Cape Town	100	17.8
Mediclinic Strand	Strand, Cape Town	24	20.1
Melomed Bellville	Cnr Voortrekker Rd &, A J W St, Bellville, Cape Town	123	20.5
M-Care Optima@Rustenvrede	Helshoogte (R310) Banhoek Vallei Kylemore Stellenbosch 7599 Kylemore, Stellenbosch	48	21.1
Melomed Mitchells Plain	Fourth Ave, Mitchells Plain Town Centre, Cape Town	148	21.1
Louis Leipoldt Mediclinic Private Hospital	Broadway St, Bellville West A, Cape Town	186	22.2
Cape Eye Hospital	Oosterzee St, Bellville West, Cape Town	30	22.7
Mediclinic Cape Gate	Tanner St, Cape Gate, Cape Town	140	23.5
Mediclinic Durbanville	Wellington Rd, Durbanville, Cape Town	205	27.2
TOTAL BEDS		1 527	

Source: Demacon, 2023

Table 10.5: Public hospitals within the immediate surrounding area

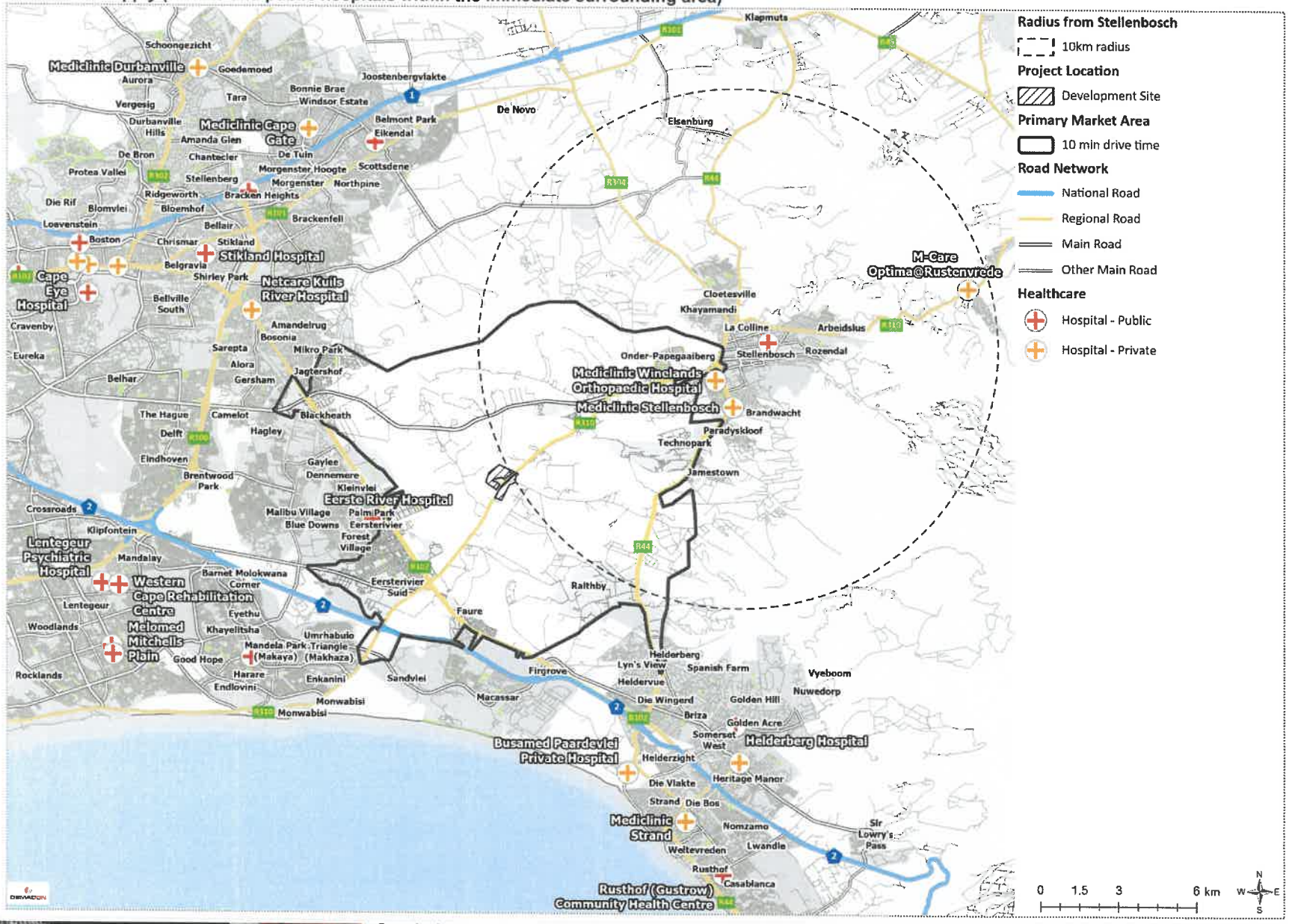
Name of Hospital	Physical Address
Stellenbosch Provincial Hospital	Universiteits Oord, Stellenbosch
Karl Bremer Hospital	Frans Conradie Dr, Bellville West, Cape Town
Stikland Hospital	Cape Town 37 Fourie Street, Heidelberg
Mitchells Plain Community Health Centre	Mitchells Plain, Cape Town
Eerste River Hospital	10 Humbolt Ave, Perm Gardens, Cape Town
Kraaifontein Community Health Centre	203 6th Ave, Cape Town
Khayelitsha District Hospital	Walter Sisulu Drive & Steve Biko Drive, Mandela Park, Khayelitsha
Lentegeur Psychiatric Hospital	Highlands Dr, Lentegeur, Cape Town
Mitchells Plain District Hospital	8 A Z Berman Dr, Lentegeur, Cape Town
Western Cape Rehabilitation Centre	Lentegeur Hospital, 103 Highlands Drive, Lentegeur, Cape Town
Mitchells Plain Oral Health Centre	43, Mitchells Plain Medical Centre, Mitchells Plain, Cape Town
Parow Community Health Centre	22 Smith St, Glenlily, Cape Town
Tygerberg Hospital	Francie Van Zijl Dr, Avenue, Cape Town
Rusthof (Gustrow) Community Health Centre	69 Hassan Khan Ave, Gustrow, Cape Town
Helderberg Hospital	Lourensford Rd, Golden Acre, Cape Town

Source: Demacon, 2023

Findings:

- There are no public or private hospitals within the primary market area of the project.
- The nearest private hospitals are in Mediclinic Winelands Orthopaedic Hospital and Mediclinic Stellenbosch (10.2 and 11.2 kilometres away).
- In the immediate surrounding area, there are 13 private hospitals consisting of 1 527 medical beds.
- The private medical groups in the surrounding area include Mediclinic, Netcare and Melomed.

Map 10.1: Medical Supply (Private and public hospitals within the immediate surrounding area)



10.6.2 MEDICAL DISCIPLINES

Table 10.6: Medical disciplines of private hospitals in the immediate surrounding area

Medical Facilities	Mediclinic Winelands Orthopaedic Hospital	Mediclinic Stellenbosch	Netcare Kuils River Hospital	Mediclinic Vergelegen	Busamed Paardevlei Private Hospital
Physical Address	Cnr Saffraan Avenue & Rokewood Road, 16 Saffraan Ave, Die Boord, Stellenbosch	1 Elsie du Toit Dr, Stellenbosch	Suite 3e, 33 Van Riebeeck Rd, Kuils River, Cape Town	Main Rd, Somerset West, Cape Town	Paardevlei Estate, 4 Gardner Williams Ave, Paardevlei, Cape Town
Number of beds	33	102	151	237	100
Distance from Site	10.2	11.2	16.0	17.5	17.8
24-hr Emergency	✓	✓	✓	✓	✓
Audiology & Speech Therapy	✓	✓	✓	✓	
Brachytherapy					
Biokinetics	✓				
Cardiology	✓		✓	✓	✓
Dental Procedures	✓			✓	
Dermalogica	✓		✓	✓	
Ear, Nose & Throat Surgeon	✓	✓	✓	✓	
Endocrinology	✓				
Gastroenterology	✓			✓	✓ v
General Practitioners	✓	✓	✓	✓	✓
Gynaecology & Obstetrics	✓	✓	✓	✓	✓
Haematology	✓		✓	✓	
Maxillofacial & Oral Surgery	✓	✓		✓	
Nephrology			✓	✓	

Medical Facilities	Mediclinic Winelands Orthopaedic Hospital	Mediclinic Stellenbosch	Netcare Kuils River Hospital	Mediclinic Vergelegen	Busamed Paardevlei Private Hospital
Neurology	✓	✓	✓	✓	
Occupational Therapy	✓		✓	✓	
Oncology	✓	✓	✓	✓	✓
Ophthalmology	✓	✓	✓	✓	
Orthodontics	✓	✓	✓	✓	
Orthopaedic Surgery	✓	✓	✓	✓	✓
Paediatric Specialist (Cardiologist, Neurologist etc)			✓		
Paediatrics	✓	✓	✓	✓	
Pathology		✓	✓	✓	
Physiotherapy	✓		✓	✓	
Plastic & Reconstructive Surgery	✓	✓	✓	✓	✓
Psychiatry	✓	✓	✓	✓	
Psychology	✓	✓	✓	✓	
Pulmonology			✓		
Podiatrist	✓	✓		✓	
Radiology	✓	✓	✓	✓	
Renal dialysis					
Rheumatology	✓	✓			
Thoracic surgery			✓	✓	
Urology	✓	✓	✓	✓	

Source: Demacon, 2023

10.7 MARKET POTENTIAL ESTIMATIONS

10.7.1 PRIVATE HEALTHCARE DEMAND MODELLING

The Demacon market potential model is based on the 2023 medically insured population and annual growth rates over a ten-year forecast period.

The ***residual / net demand technique*** provides an indication of overall market capacity, whereas the ***share technique*** provides a more accurate estimation of the number of sustainable / viable beds in demand for the particular private hospital under consideration. The table below indicates the market potential for a private medical facility.

Table 10.7: Market Potential & Growth Forecast Model (Private Facility)

MARKET POTENTIAL ASSESSMENT			
DEMAND	**2023**	**2028**	**2033**
PRIMARY DEMAND			
2023 Medically insured population (people)	29 785	30 099	30 416
Additional insured lives per annum		63	63
Population growth rate (% / annum - compound growth)		0.21%	0.21%
Beds / 1000 population medically insured (private beds)	4.8	4.8	4.8
Private beds in demand	143	144	146
SECONDARY DEMAND			
Injection	15%	15%	15%
Secondary demand (Medically Insured population)	5 257	5 312	5 368
Private beds in demand	25	25	26
TOTAL MARKET DEMAND	**35 042**	**35 411**	**35 785**
Number of beds (private beds)	168	170	172

Table 10.8: Market Supply of Healthcare Facilities – 2023

MARKET SUPPLY (Trade Area Apportioned Effective Competitive Supply)			
SUPPLY	**2023**	**2028**	**2033**
Mediclinic Winelands Orthopaedic Hospital	21	21	21
Mediclinic Stellenbosch	46	46	46
Netcare Kuils River Hospital	53	53	53
Busamed Paardevlei Private Hospital	10	10	10
Mediclinic Vergelegen	12	12	12
EFFECTIVE COMPETITIVE SUPPLY			
Total competing beds in primary market	**142**	**142**	**142**

Source: DEMACON, Private Healthcare Demand Modelling, 2023

Table 10.9: Market Potential for a New Healthcare Facility

MARKET POTENTIAL	2023	2028	2033
Net effective demand (residual market capacity - additional beds)	26	28	30
Market share (% market share of total beds per medical discipline)			
Cardio - Thoracic surgery	0	0	0
Cardiology	0	0	0
Clinica Haematology	1	1	1
Dermalogical	**1**	**1**	**1**
Ear, Nose & Throat Surgeon	**0**	**0**	**0**
Endocrinology	0	0	0
Fertility Specialist	0	0	0
Gastroenterology	1	1	1
General Physician / Family Medicine	0	0	0
General Surgery	**1**	**1**	**1**
Gynaecology & Obstetrics	**0**	**0**	**0**
Maxillofacial & Oral Surgery	**1**	**1**	**1**
Medical Oncology	0	0	0
Nephrology & Renal Dialysis / unit	0	0	0
Neurology & Spinal Surgery	0	0	0
Occupational Therapy	0	0	0
Ophtalmology	**1**	**1**	**1**
Orthopaedic Surgery	1	1	1
Orthotist & Prosthetist	0	0	0
Paediatric Specialist (Cardiologist, Neurologist etc)	0	0	0
Periodontology / Dentistry	**0**	**0**	**0**
Physiotherapy	0	0	0
Plastic & Reconstructive Surgery	0	0	0
Podiatrist	0	0	0
Psychiatry	0	0	0
Psychology	0	0	0
Pulmonology	0	0	0
Rehabilitation Unit	0	0	0
Rheumatology	0	0	0

MARKET POTENTIAL	2023	2028	2033
Urology	0	0	0
Vascular Surgery	0	0	0
Market potential (total number of viable beds for facility)	**5**	**6**	**7**
Number of Theatres	**0.48**	**0.57**	**0.65**
Total additional area requirement (sqm hospital floor space)	**357**	**425**	**488**
Model Calibration & Sensitivity			
Beds / 1000 total population as benchmark:			
Population ('000)	35.0	35.4	35.8
National Average (Private beds per 1000 population)	4.80	4.80	4.80
Study area private beds per 1000 total population (as per DEMACON Model)	4.19	4.17	4.15
Model accuracy (under / over estimation)	87.3%	86.9%	86.5%

Interpretation:
<100% = Conservative market potential estimation
>100% = Liberal market potential estimation (likely to produce oversupply in market)

Findings:

- ✓ There is approximately 29 785 medically insured persons in the primary market area, from a total estimate population of **74 510** - a total of 40.0% of the market population.
- ✓ For demand modelling purposes, the number of private beds catering required to the needs of the medically insured segment of the market is 4.8 private beds per 1 000 medically insured persons.
- ✓ The above yields a total demand for 168 private beds in the market area (2023), increasing to 170 in 2028 and 172 in 2033.
- ✓ Potential exists for a **private day clinic** with approximately **5 - 7 beds** over the next 5 to 10 years.
- ✓ The optimum point of market entry: **2028+.**

10.8 SYNTHESIS

The purpose of this chapter was to provide an overview of the supply of private hospitals in the market area. This contributed to the identification of gaps in the market area that will stimulate the demand for the development of a private medical facilty.

PRIVATE HEALTHCARE SUPPLY

- There are no public or private hospitals within the primary market area of the project.
- The nearest private hospitals are in Mediclinic Winelands Orthopaedic Hospital and Mediclinic Stellenbosch (10.2 and 11.2 kilometres away).
- In the immediate surrounding area, there are 13 private hospitals consisting of 1 527 medical beds.
- The private medical groups in the surrounding area include Mediclinic, Netcare and Melomed.

GAP ANALYSIS

DEVELOPMENT TYPE	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Private Day Clinic	✓	Moderate

PRIVATE DAY CLINIC DEVELOPMENT RECOMMENDATIONS

It is recommended that the proposed facility could include facilities and services offered at a private clinic - carry out procedures that do not require an overnight hospital stay. Surgical services offered should prioritise patient safety and comfort, utilising the latest techniques and technology.

Day clinics represent a cost-effective alternative to surgery conducted in acute settings. The proportion of eligible surgeries performed as same-day cases in South Africa is very low, sometimes two to three times lower than in other countries.

In addition, the body points out that day hospitals favour cash-paying patients and offer state patients surgical services more cost effectively than other private service providers.

Medical & Surgical Disciplines to consider:

- ✓ Dermalogica
- ✓ Ear, Nose & Throat Surgery
- ✓ Gastroenterology
- ✓ Gynaecology
- ✓ Maxillofacial & Oral Surgery
- ✓ Ophthalmology
- ✓ Periodontology / Dentistry
- ✓ Orthopaedic Surgery
- ✓ Plastic & Reconstructive Surgery
- ✓ Urology
- ✓ General Surgery.

The benefits of choosing a day clinic/hospital lie within the major characteristics of such facilities, as listed below:

✓ **Lower costs**

The cost for procedures performed in a day clinic is substantially lower when compared to a general hospital. This is mainly due to the difference in the **infrastructure and staffing requirements.** General hospitals generally offer a wide variety of disciplines that similarly requires a wider variety of technology and equipment. **Theatre** complexes are equipped for more complex types of surgery (e.g., heart surgery, orthopaedic surgery) compared to day clinic theatres.

✓ **No overnight stay**

Same day procedures do not require overnight stay. Patients are admitted, operated and discharged on the same day. This provides more predictability in the planning. It is specifically very convenient where children are concerned as they do not have to sleep in an unfamiliar environment.

✓ **Shorter recovery**

Due to the modern technology and the types of procedures performed, recovery is generally faster. The highest quality care is maintained with the benefit of being discharged on the same day. Usually, a faster return to work and a reduced chance of cross infection. Families can assist in the later stages of recovery and by sharing in the care of the patient at home. Recovery is faster and costs are reduced.

✓ **Reduces anxiety**

Day surgery effectively reduces anxiety normally associated with undergoing surgical procedures and it is the ideal way to avoid disruption at your work or home. It is especially beneficial to children as their parents can remain with them virtually throughout the day of the procedure.

✓ **Convenience**

Planned and guaranteed admissions as well as a planned time of discharge contribute to the convenience for patients as well as their loved ones. Fixed costs and minimum disruption to home life is a great advantage of a day clinic.

✓ **Benefits to specialists**

Surgeons are able to improve their productivity because of planned operating times. Likewise, anaesthetists can achieve greater efficiency because of the planned caseload.

✓ **Benefits for nursing staff**

Nursing staff are able to work regular hours with no overnight duties. This is particularly attractive to nursing staff with the added advantage of flexible work schedules.

MARKET DEMAND POTENTIAL

Potential exists for a **private day clinic** with approximately **5 - 7 beds** over the next 5 to 10 years.

Optimum point of market entry would be 2028+ once the development has gained traction.

PRIVATE SCHOOL MARKET POTENTIAL

11

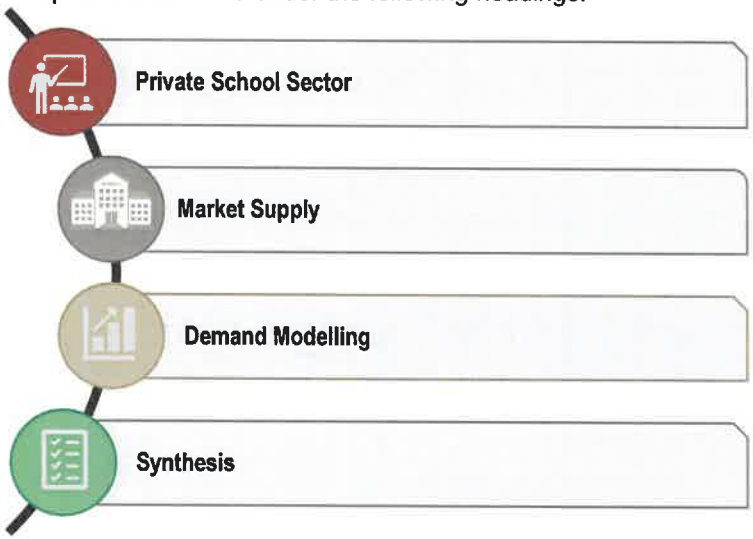
CHAPTER

11. PRIVATE SCHOOL MARKET ANALYSIS

11.1 INTRODUCTION

This chapter focuses on the private school market with the objective of estimating the development potential within the designated area. In order to reach this objective, the supply and demand within the market area should be identified and assessed in light of current trends.

This chapter is addressed under the following headings:



11.2 PRIVATE SCHOOL SECTOR

11.2.1 DEFINING & BACKGROUND INFORMATION TO PRIVATE SCHOOLS

❖ **Defining Private / Independent Schools**

In terms of the South African Schools Act (SASA) in 1996 a national schooling system was introduced and recognised two categories of schools: public and independent. Public schools are state controlled and independent schools are privately governed.

Within the public-school category, SASA created a sub-category of "public schools on private property" comprising state schools on private land owned by religious bodies, farmers, mines and forestry companies.

All private schools were included in the independent school category. The South African definition of independent (private) schools is a narrow one compared to other developing countries, especially as it does not include the "public schools on private property".

In terms of Section 29 of the Constitution of South Africa, everyone has the right to establish, at his or her own expense, independent educational institutions. These institutions may not discriminate on the basis of race, must be registered with the state, and must maintain standards not inferior to those of comparable public institutions. State subsidies to independent institutions are permitted, but not guaranteed.

Most independent schools are community schools. Another large category is not-for-profit religious schools: Christian, Muslim, Hindu and Jewish. There is a growing category of secular independent schools, which may be either not-for-profit or for-profit.

❖ **The South African Independent School Sector**

Since the collapse of the apartheid state and the advent of democracy in South Africa, dramatic changes have occurred in the independent (private) school sector. In 1990, there were approximately 550 registered independent schools in the country. The dominant public perception of independent schools at that time was "white, affluent and exclusive".

This perception was largely true. According to a recent HSRC Quantitative Survey there are now at least 1290 independent schools in South Africa – more if primary and secondary schools are counted separately. Over 60% of all independent schools have therefore been established since 1990. The sector now educates more than 400,000 learners, of which 70% are black (58% are

African). The majority of schools charge fees below R8 500 per annum. Only 14% of schools charge fees of more than R27 000 per annum.

What has caused this dramatic change? Research has confirmed that both excess (unmet) and differentiated (different or better) demand for education are found in South Africa. Historically, excess demand was found in black communities and differentiated demand in white communities. A new demand from black communities for differentiated education is largely responsible for the growth of the independent school sector since 1990.

Despite an increase in the number of for-profit independent schools, the sector remains overwhelmingly not-for-profit. Most independent schools are also small schools, with 350 learners per school or less. This is partly because so many of them are newly established.

The sector serves a wide range of different religions, philosophies and educational approaches across the full socio-economic spectrum. Religious schools, at 43% of sector, are the largest subcategory of independent school.

Most independent schools arise out of a community need and have strong links to their community of origin. Over 64% of independent schools, both well- and poorly resourced, have community development programmes. These programmes reach more learners than the total number educated in all independent schools.

❖ **ISASA Governance Structures**

ISASA's General Council, which includes its office-bearers and delegates from its five regions, determines the Association's policy. The Executive Committee expedites policy decisions of the Council. Each region also has a Regional Committee, as well as a Chair and a Regional Director.

When ISASA was established in 1999, the heads' and the bursars' associations changed their names and constitutions to become constituent members of ISASA, as the Southern African Heads of Independent Schools Association (SAHISA) and the Southern African Bursars of Independent Schools Association (SABISA) respectively.

Prior to 2001, a national consultative body for all the independent school associations, known as the National Joint Liaison Committee (JLC) existed. At the end of 2000, the JLC drew up a constitution to cement the good working relationships between these associations and to facilitate interaction with government.

The new body is known as the National Alliance of Independent School Associations of Southern Africa (NAISA).

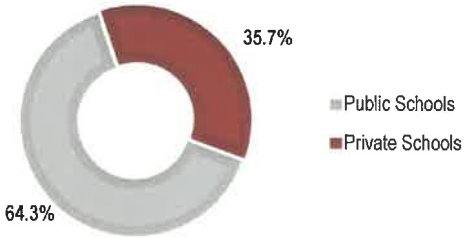
11.3 MARKET POTENTIAL ASSESSMENT

11.3.1 SCHOOL SUPPLY IN THE PRIMARY MARKET AREA

NUMBER OF SCHOOLS IN THE PRIMARY MARKET AREA

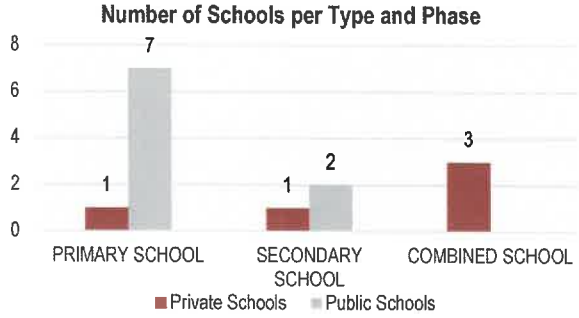
PRIVATE School	**5** schools	**35.7%** of schools
PUBLIC School	**9** schools	**64.3%** of schools

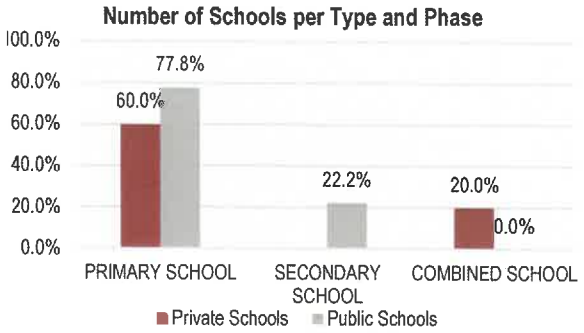
14 Schools in the **PRIMARY MARKET**



NUMBER OF SCHOOLS PER TYPE AND PHASE

	PRIVATE	PUBLIC
Combined School	3	-
Primary School	1	7
Secondary School	1	2
Other Schools		
	5	9





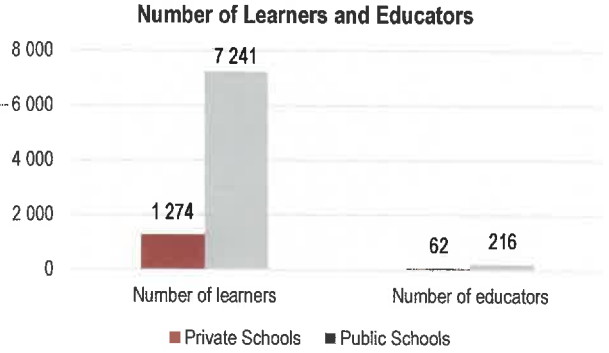
TOTAL NUMBER OF LEARNERS PER SCHOOL TYPE AND PHASE

		PRIVATE		PUBLIC	
		Learners	Educators	Learners	Educators
	Combined Schools	371	33		
	Primary Schools	733	21	5 315	153
	Secondary Schools	170	8	1 926	63
		1 274	62	7 241	216

Number of Learners per Educator

Private School **21**

Public School **34**



The tables below provide the school supply within the primary market area including public and private.

Table 11.1: Private School Supply in the Immediate Catchment Area

Institution Name	Physical Address	Suburb Name	Phase Ped	Learners	Educators
The Sustainability Institute Trust	Lynedoch Ecovillage, R310 Baden Powell Drive, Stellenbosch, 7600	Stellenbosch	Primary School	733	21
Calling Education NPC Trading as Calling Academy	Cnr Of Vlaeberg and Polkadraai, Stellenbosch, Stellenbosch Farms, 7600	Stellenbosch Farms	Secondary School	170	8
Mount View Education Centre	Cnr Polkadraai & Vlaeberg Rd, Stellenbosch, Outside A Town, 7600	Outside A Town	Combined School	31	4
Renaissance Private School	14 Breezand Street, Stratford, City Of Cape Town, 7100	Eersterivier	Combined School	41	4
Stellenbosch Waldorf School	Spier Winefarm, Annandale Road, Stellenbosch, 7600	Stellenbosch Nu	Combined School	299	25
TOTAL				1 274	62

Source: DEMACON EX Department of Basic Education 2023

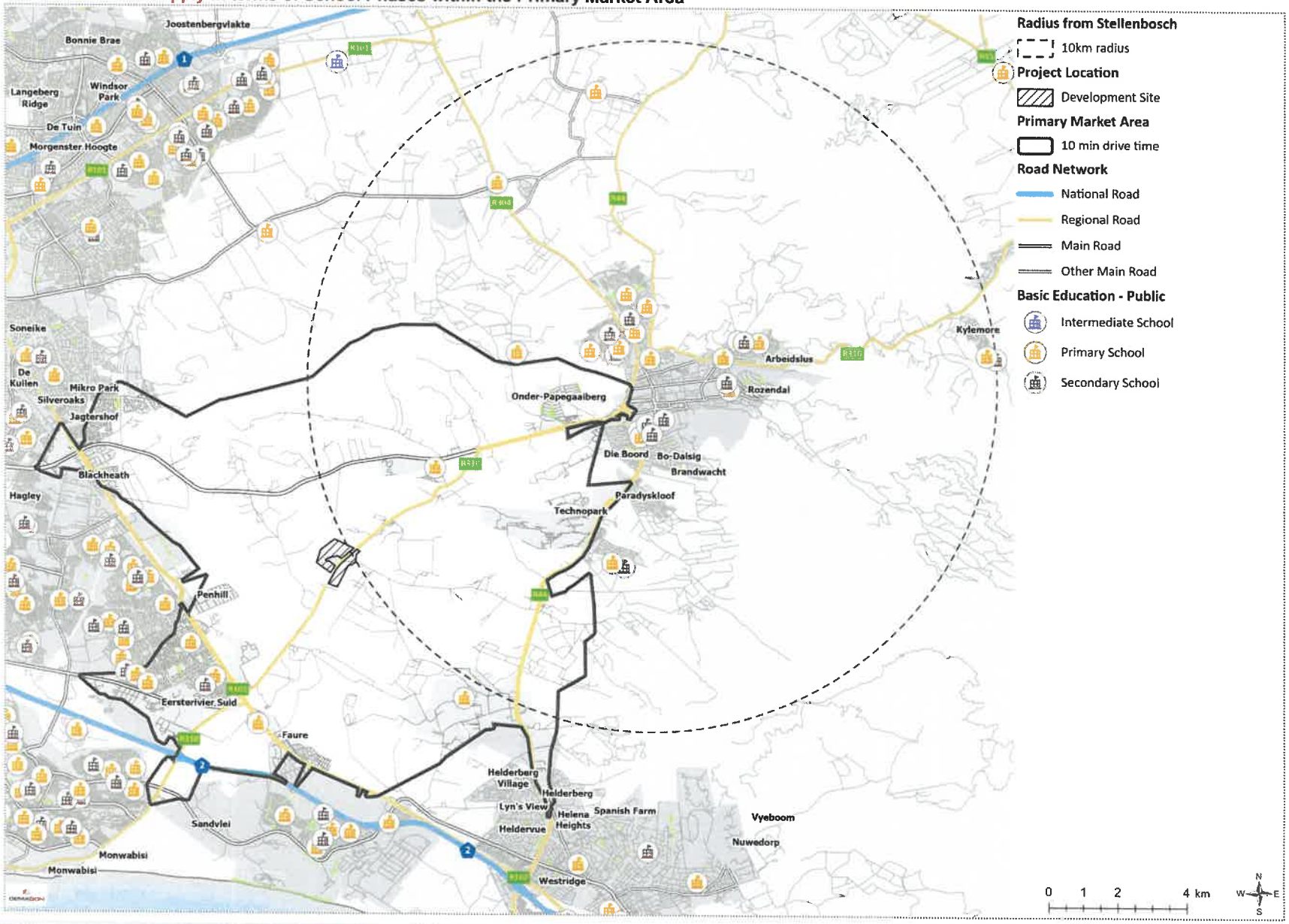
Table 11.2: Public School Supply in the Immediate Catchment Area

Institution Name	Physical Address	Suburb Name	Phase Ped	Learners	Educators
Apex Primary School	264 Bob's Way, Electric City, City of Cape Town	Blue Downs CBD	Primary School	595	18
Stratford Primary School	80 Spurwing Drive, Blue Downs CBD, City of Cape Town	Blue Downs CBD	Primary School	1 527	39
Beverley Park Primary School	20 Wuppertal Street, Devon Park, City of Cape Town	Eersterivier	Primary School	1 030	29
Spurwing Primary School	Flambojantstraat,, Eerste River, City of Cape Town	Eersterivier South	Primary School	1 291	35
Vlottenburg Primêre Skool	Spurwingrylaan, Electric City, City of Cape Town	Electric City	Primary School	519	18
St. Paul's Primêre Skool	Beverleystraat, High Places, City of Cape Town	Eersterivier South	Primary School	129	6
Raithby Primêre Skool	Vlottenburg Rd, Vlottenburg, Outside A Town	Outside A Town	Primary School	224	8
Apex High School	Ou Hoofweg, Faure, City of Cape Town	Faure	Secondary School	927	30
Eersterivier Sekondêr	C/O Shaw Street & Watsonway, Raithby, Stellenbosch Rural	Raithby	Secondary School	999	33
Total				7 241	216

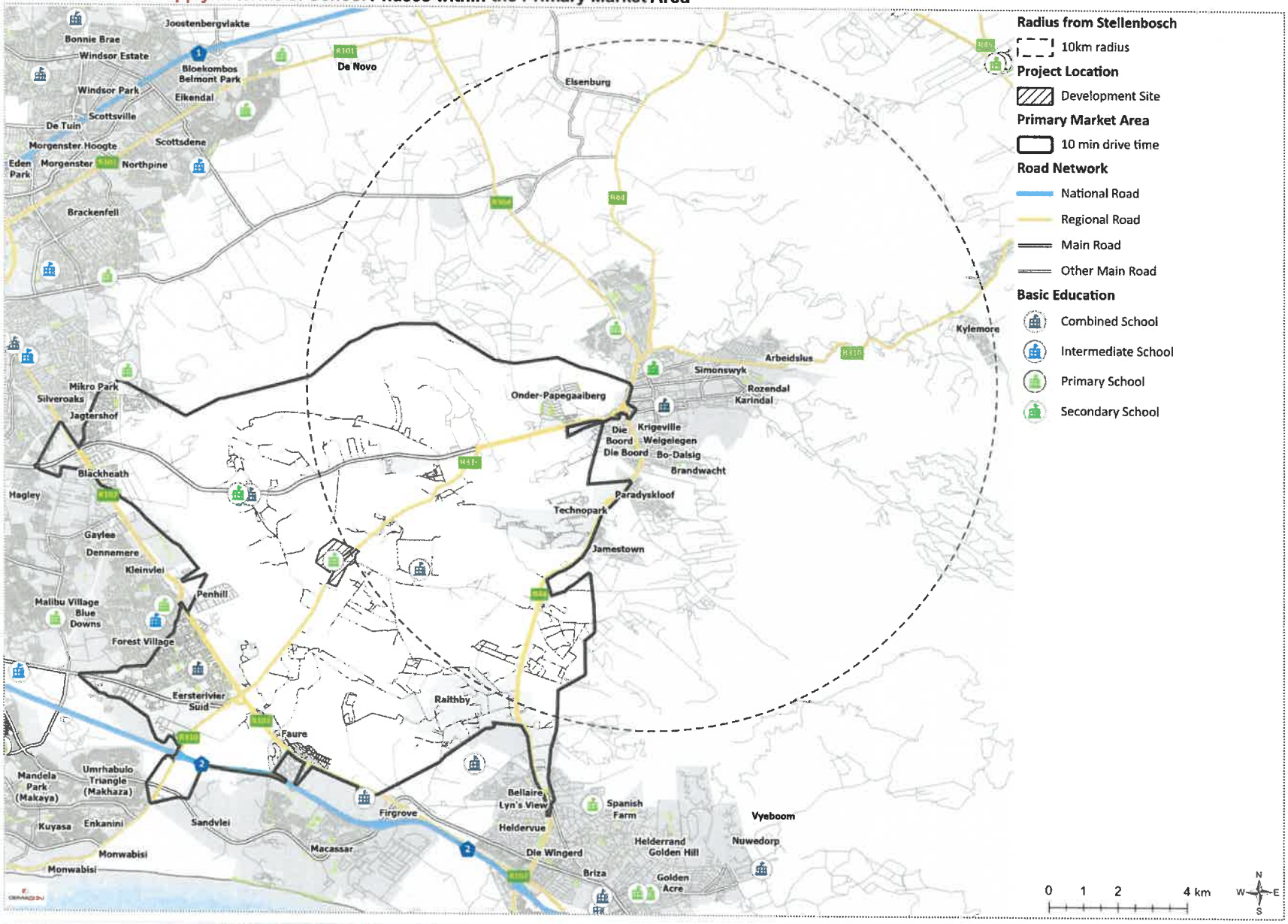
Source: DEMACON EX Department of Basic Education 2022

Refer to Map 11.1 and Map 11.2 for the education supply within the primary market area.

Map 11.1: Public School Supply in terms of School Phases within the Primary Market Area



Map 11.2: Private School Supply in terms of School Phases within the Primary Market Area



11.3.2 PRIVATE SCHOOL DEMAND POTENTIAL

DEMACON's Demand Modelling results illustrate that the market can sustain an integrated private school consisting of the following:

Table 11.3: Private School Demand

	2023	2028	2033	2038
Total number of people	48 729	49 761	50 815	51 891
• Ages 5 – 9 (10.6%)	581	593	606	619
• Ages 10 – 14 (10.3%)	588	600	613	626
• Ages 15 – 19 (11.4%)	639	652	666	680
Target Age Segment	12 050	12 305	12 566	12 832
Private School Attendance	1 808	1 846	1 885	1 925
• Ages 5 - 9	271	277	283	289
• Ages 10 - 14	362	369	377	385
• Ages 15 - 19	**316**	**323**	**330**	**337**
Minimum	271	277	283	289
Maximum	362	369	377	385
Average	**316**	**323**	**330**	**337**
Secondary Injection	40	41	42	43
Total Demand	48 729	49 761	50 815	51 891

Source: Demacon, 2023

Development Implications

- ✓ It can be concluded that there is a moderate demand for a private school as part of the larger development.
- ✓ Potential exists for the development of a facility catering to approximately **350 to 365 pupils** over the short term to medium term, increasing to **370 to 400 pupils** over the medium to long term (2038) at full capacity.
- ✓ Optimum point of market entry: **2028+**
- ✓ Potential exists for say **350 to 400 learners.**
- ✓ Based on the anticipated nature of the proposed facility and the facilities to be provided it is anticipated that it could attract larger shares from the secondary market provided if the project is effectively branded. In view of the socio-economic profile of the consumer base, the *affordable private school model* is recommended.

11.4 SYNTHESIS

PRIVATE HEALTHCARE SUPPLY

- ✓ There are 5 private schools and 9 public schools within the primary market area, in total 14 schools.
- ✓ The private schools are located within Stellenbosch, Eersteriver and Stellenbosch NU.
- ✓ There are approximately 1 274 learners and 62 teachers at the private schools and 7 241 learners and 216 educators at the public schools.
- ✓ The number of learners per educator at private schools is 21 and 34 at the public schools.

GAP ANALYSIS

DEVELOPMENT TYPE	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Private School	✓	Moderate

404

MARKET DEMAND POTENTIAL

Potential exists for the development of a facility catering to approximately **350 to 365 pupils** over the short term to medium term, increasing to **370 to 400 pupils** over the medium to long term (2038) at full capacity.

Based on the anticipated nature of the proposed facility and the facilities to be provided it is anticipated that it could attract larger shares from the secondary market provided if the project is effectively branded. In view of the socio-economic profile of the consumer base, the affordable private school model is recommended.

STUDENT ACCOMMODATION MARKET POTENTIAL

12

CHAPTER

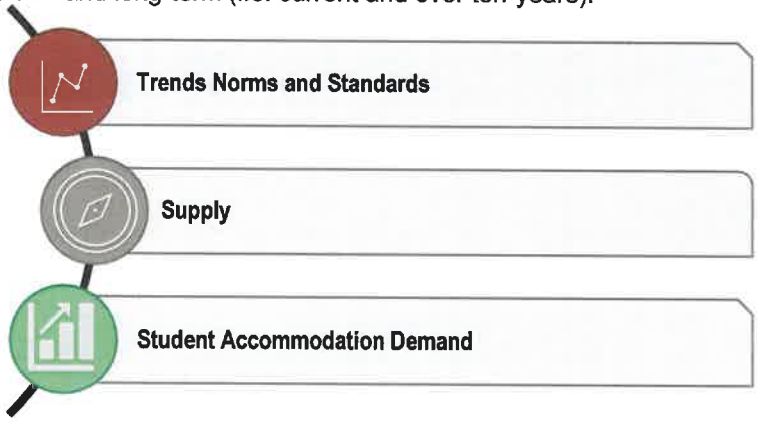
12. STUDENT ACCOMMODATION MARKET ANALYSIS

12.1 INTRODUCTION

To fully determine the extent of the potential market gap that may exist for student accommodation in **Lynedoch**, the demand for student accommodation must be explored. An evaluation of demand and supply side factors are done to determine the potential size of market demand over the short-, medium- and long-term (i.e. current and over ten years).

The following section provides an analysis of the supply and demand side dynamics.

To fully determine the extent of the potential market gap that may exist for student accommodation in the primary market area, the demand for student accommodation must be explored. An evaluation of demand and supply side factors are done to determine the potential size of market demand over the short-, medium- and long-term (i.e. current and over ten-years).



12.2 STUDENT ACCOMMODATION IN SOUTH AFRICA

The following section of the Addendum provides a concise overview of student accommodation in South Africa. The purpose of the information is to provide an overarching perspective of the state of student accommodation in the country and to provide a baseline overview of the potential that the student accommodation market provides.

12.2.1 STUDENT HOUSING AT SOUTH AFRICAN HIGHER EDUCATION INSTITUTIONS

The case for student accommodation, especially institutionally provided student accommodation at South African universities and TVET colleges, has been at the forefront of discussion for the Department of Higher Education and Training (DHET), the Development Bank of Southern Africa (DBSA) and National Treasury.

A study conducted in 2011 regarding institutional student accommodation in South Africa, identified a clear gap in the number of students accommodated in institutional student accommodation and as a result set forth a target of achieving 50% to 80% of students accommodated in institutionally related student accommodation. The SHIP builds upon the preceding and targets the implementation of 300 000 student accommodation beds at universities (200 000 beds) and TVET Colleges (100 000 beds) over a 10-year period.

According to 2016 information, institutionally related student accommodation at universities in South Africa was roughly 115 040 beds. According to the university student housing survey reported in 2020, approximately 287 507 beds are provided for university students (approximately 184 973 NSFAS students take up institutional accommodation). NSFAS qualifying students use university residences (managed and/or accredited) or off-campus accommodation (students living at home, with relatives or friends or making own arrangements – receives a R2 250 accommodation and travel allowance). In addition, accredited off-campus accommodation can be accessed on the basis that a lease agreement is submitted to the institution and that the accommodation is registered and verified in accordance with the institutions systems.

According to data presented by the DHET in 2020, approximately 18 574 student accommodation beds are provided at TVET Colleges. NSFAS data shows that more than 101 000 students receive an accommodation allowance which entitles qualifying students to find accommodation in either college funded residences or private accommodation. The data also suggests that 35% of bursary beneficiaries qualify for accommodation allowance, as opposed to 65% who qualify for travel allowances. College supplied accommodation is afforded a R33 000 (meals inclusive) rate whilst private accommodation is measured based

on its locality, i.e. rural accommodation (R15 750), peri-urban accommodation (R18 900) and urban accommodation (R25 200).

The preceding data indicates that a sizeable gap between institutional accommodation and student enrolments exist throughout the country.

12.2.2 STUDENT ACCOMMODATION TYPOLOGIES AND ALLOWANCES

According to the DHET student housing infrastructure programme student accommodation and related NSFAS qualification criteria, the following student accommodation typologies are considered:

✓ **Universities:**
- University residences – includes both residences managed and/or leased by the institution.
  - Allocation of all student housing is managed by universities in terms of their housing policies.
  - Housing allowances are paid according to university policies.
  - Universities are encouraged to ensure that first year students and NSFAS qualifying students are accommodated in university managed residences.
- **Off-campus accommodation** – includes students that are living at home, with relatives or friends or are making their own arrangements.
  - Living and transport allowance of R2 250 per month is paid via universities.
- **Private accredited off-campus student accommodation**
  - Students can receive single use, private accommodation allowances on condition they submit a lease agreement to the university.
  - However, lease agreements are not adequate to prevent fraud, to protect students from exploitation and over-pricing, or to ensure that private accommodation allowances are being effectively utilised.
  - Universities are required to put in place a system to register and verify all private accommodation.

✓ **TVET Colleges**
- College residences – are residences managed by colleges.
  - R33 000 (inclusive of meals) per annum per student is a standard rate for all students residing in college accommodation.
- Private accommodation – includes accommodation that is not owned or managed by a college and is reviewed in terms of three categories.
  - Rural accommodation – R15 750 per student per annum
  - Peri-urban accommodation – R18 900 per student per annum
  - Urban accommodation – R22 500 per student per annum

Student accommodation can further be branded in accordance to the following categories:

- Residence halls: These are blocks with large numbers of individual or twin rooms, with shared bathrooms on each floor. In self-catering residences, there is usually a shared kitchenette.
- Flats: These are units of between 2 and 10 single or twin rooms, with bathrooms in each unit
- Student villages: These resemble townhouse or apartment complexes. Generally, eight to ten students in single or double rooms within a self-contained unit share a kitchen and bathroom facilities.

The minimum norms and standards in accordance with which student accommodation must adhere are prescribed by the DHET. The norms and standards are in the process of revision and is a key consideration of the overall feasibility study project outcome. The scope of this report is not focused on norms and standards and therefore is not necessarily included as part of this analysis.

Recommendations in terms of minimum norms and standards are pursued by the design team of the study and will be addressed as part of the design and implementation strategy of the project.

12.3 HIGHER EDUCATION INSTITUTION SUPPLY AND TARGET INSTITUTION IDENTIFICATION

Target institutions are institutions that the proposed project could target as student feeder locations. It is important to define the potential feeder locations, or sources, from which students could be attracted. The dynamics of student populations, growth trends and student accommodation supply are dependent on the institutions that could be targeted. The target institutions ultimately assist with constructing and calibrating the market demand model for student accommodation in the defined market area and therefore is an essential consideration.

Target institutions are identified by considering the spatial relationship between the location of the proposed development, the location of higher education institutions and student travel and accessibility considerations.

Recent market research of student travel and access preferences reveal that students typically prefer residing within a **30-minute walking time** (a 30-minute walk time generally represents a **2 km travel distance**) from a higher education institution campus. Furthermore, the Department of Higher Education and Training's Minimum Norms and Standards for the Supply of Student Accommodation at Public Universities identifies that student accommodation should preferably be located within **5 kilometres** of a targeted campus.

By considering the preceding, a 5 km radius from the proposed development was used to inform the area within which target institutions can be identified. Higher education institutions within a 5 km radius of the proposed development have been identified as the primary feeder/target institutions for the project.

With regard to public higher education institutions, due cognisance must be taken of the requirements pertaining to students sponsored by the National Student Financial Aid Scheme (NSFAS). NSFAS students can only attend public universities and colleges. Therefore, incorporating students sponsored by NSFAS as a student source would require the proposed development to take note of the requirements for student accommodation as set out by the Draft Minimum Norms and Standards (MNS) for Student Accommodation (2021).

Various public higher education institutions are located within a 5km radius from the proposed development site. Institutions that fall within the primary target area of the proposed development (as described above) include:

Universities:

- University of Stellenbosch

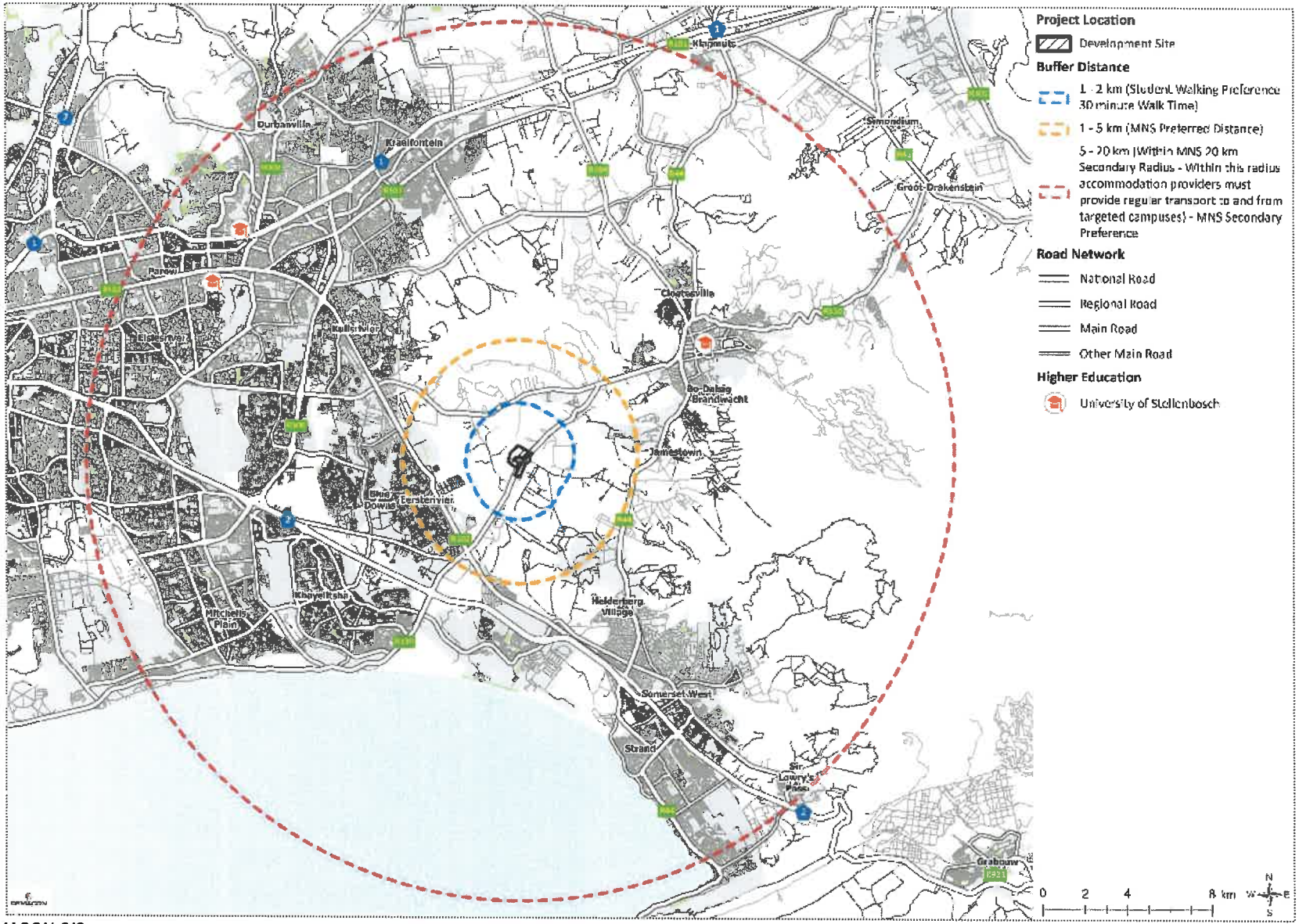
The following table provides an overview of the HEI's surrounding the proposed development site (within a 5km radius).

Table 12.1: Targeted Institutions

University	Campus	Distance from Proposed Site	Student Enrolment (2023)
PUBLIC UNIVERSITY			
University of Stellenbosch	Stellenbosch	10.7km 14 minutes	33 656

Source: Demacon 2023

Map 12.1: Spatial Distribution of Institutional Student Accommodation



Source: DEMACON GIS

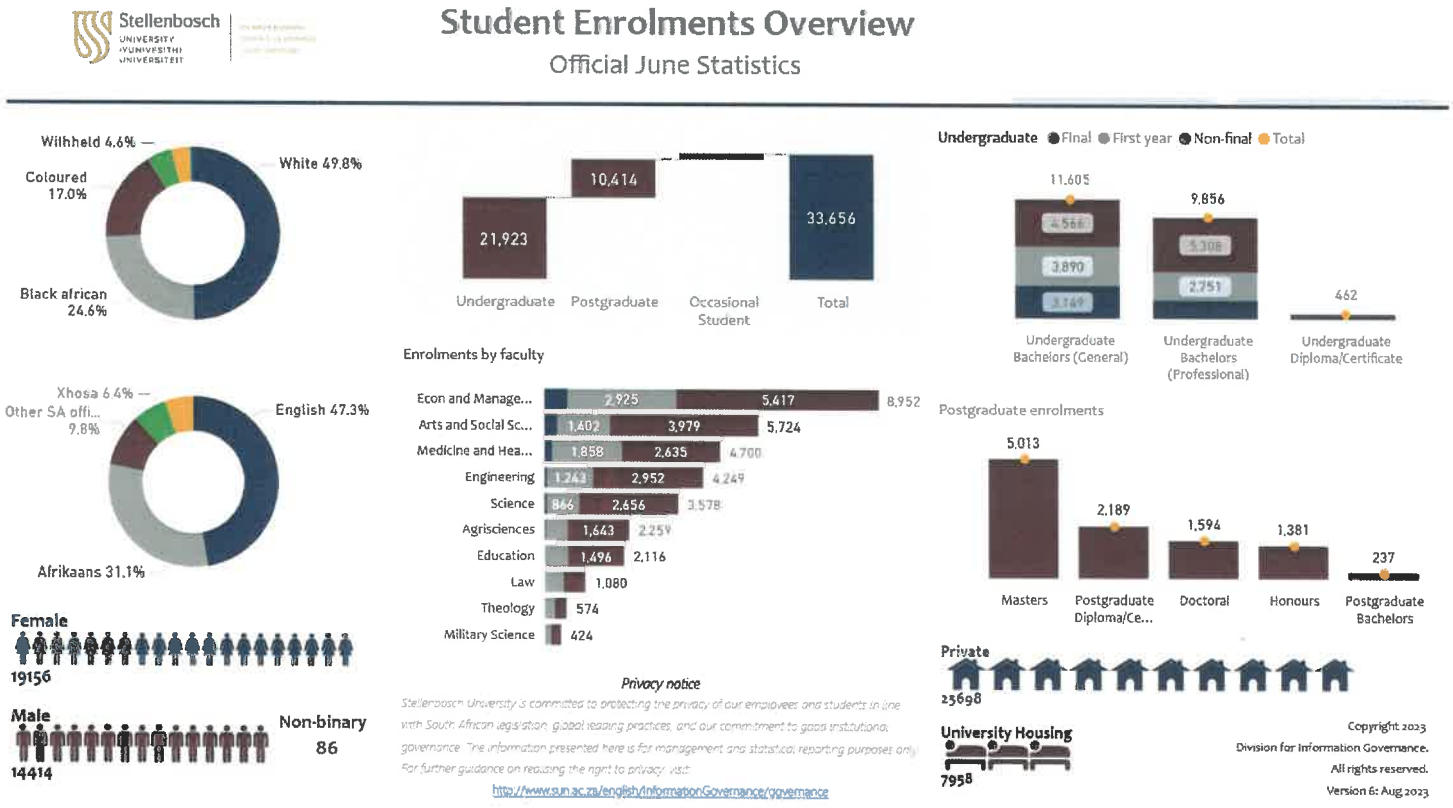
12.3.1 STELLENBOSCH ENROLMENT OVERVIEW FOR 2023

The section below provides the student enrolment figures for Stellenbosch University from 2014 to 2023

Table 12.2: Student enrolment figures from 2014 to 2023

	2 014	2 015	2 016	2 017	2 018	2 019	2 020	2 021	2 022	2 023
Undergraduate	18 138	19 042	19 582	19 844	20 168	20 130	20 272	20 870	21 258	21 923
Postgraduate	10 119	10 051	10 154	10 440	10 506	10 412	10 456	10 577	10 381	10 414
Occasional Students	1 136	1 057	1 118	1 355	1 091	1 139	812	808	896	1 319
Total	**29 393**	**30 150**	**30 854**	**31 639**	**31 765**	**31 681**	**31 540**	**32 255**	**32 535**	**33 656**

Source: Demacon ex Stellenbosch University Statistics 2023



12.4 STUDENT ACCOMMODATION SUPPLY

In order to understand the extent to which a gap for a certain land use product exists within a local market area, an identification of the supply of said product or land use is required.

Given the preceding, the following section seeks to identify the supply of student accommodation in the immediate environment of the target institution of the proposed project. Student accommodation supply focuses on both on-campus (institutional) and off-campus (private) accommodation.

12.4.1 STUDENT HOUSING AT SOUTH AFRICAN HIGHER EDUCATION INSTITUTIONS

More than 900 000 students at universities and TVET colleges will be sponsored via the NSFAS bursary model, representing approximately 53% of the total number of students expected to enrol in public universities and colleges throughout the country. Historic growth trends indicate that the number of NSFAS students have increased by more than 10% per year since 2010.

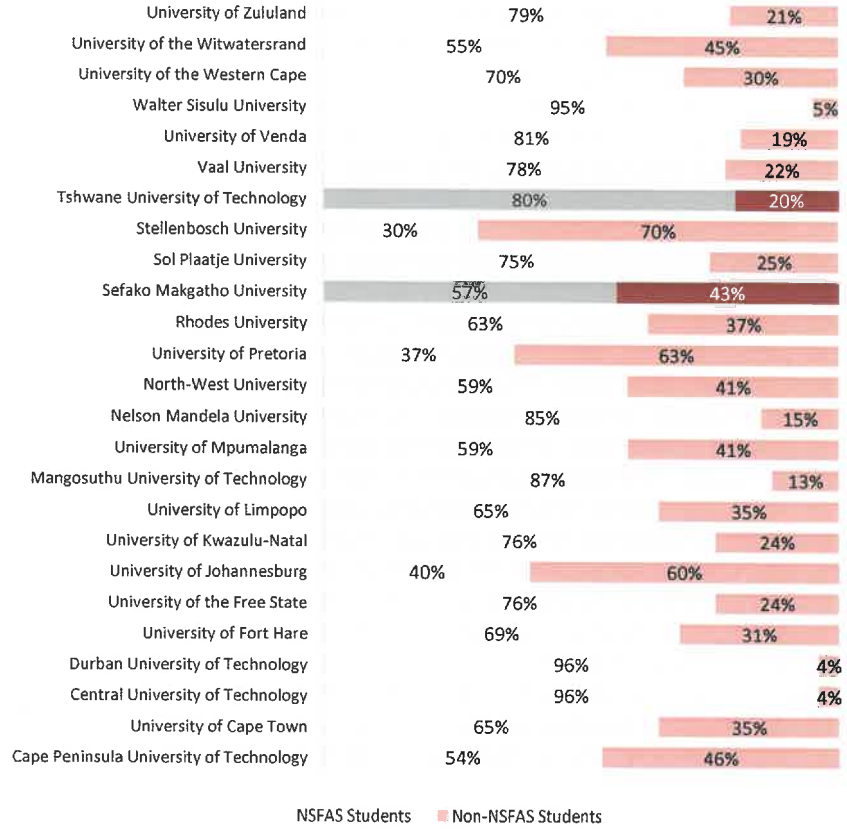
The data suggests that demand from the NSFAS cohort of students for accommodation will remain a driving factor should the scope of the NSFAS scheme continuously expand.

Recent data from universities show that institutional accommodation (includes accommodation owned and/or rented by a university) primarily accommodate NSFAS students (represents approximately 69% of students housed in institutional accommodation). At the Tshwane University of Technology, approximately 80% of students residing in institutional accommodation are NSFAS students and 57% of Sefako Makgatho University are NSFAS Students. Compared to other universities in the Gauteng Province, the TUT and Sefako have of the highest ratios of NSFAS to non-NSAFS students in institutional accommodation in the province.

Given the data shown in Figure 9.1, institutions are functionally moving to a combination market that accommodates both NSFAS and non-NSFAS students in institutional accommodation (institutional accommodation includes owned and rented accommodation). The data suggests a structural market shift whereby NSFAS students are moving from other non-institutional and related accommodation arrangements to institutional related accommodation.

NSFAS students that cannot gain access to institutional accommodation are housed in private sector accredited suppliers. Although private sector suppliers do act as a core supplier of accommodation to non-NSFAS students, the quantity of NSFAS students that require accommodation is substantial. Private sector providers therefore typically opt for a hybrid model that accommodates both NSFAS and non-NSFAS students.

Figure 12.1: Percentage of Institutional Accommodation Occupied by NSFAS and Non-NSFAS Students in South Africa



Source: DEMACON ex Careersportal, 2023

12.4.2 INSTITUTIONAL STUDENT ACCOMMODATION

On-campus institutional accommodation refers to accommodation owned and operated by a target university or private HEI, or accommodation leased by a university from private sector providers. Accommodation leased from the private sector differs in the sense that the accommodation is then operated by the institution and not the private sector owner, unless otherwise specified.

The following sections provide an overview of the distribution of on-campus accommodation and the quantification thereof.

❑ Quantification of Institutional Accommodation Supply (On-Campus University Residences)

Stellenbosch University can accommodate about **7 958 students** in approximately 31 university residences and other university accommodation on the Stellenbosch Campus. The five residences on the Tygerberg Campus, where the Faculty of Health Sciences is situated, house a further 1 000 students. Most Maties studying on these two campuses (there are more than 30 000 students in total) make use of private accommodation in Stellenbosch and its environs.

Students who are placed in any one of these residences are under the supervision of a Residential Head. The Residential Head, in turn, is assisted by a house committee. In each residence, there are also mentors. Mentors are senior students who are appointed in residences and Private Student Organizations (students who live privately) to assist new students with their adjustment to university life. Each new student should have access to a mentor. The mentor already plays an important role during the welcoming period with general assistance regarding university life queries and psychosocial support. Through the mentor, the new students have the opportunity to partake in the Wellness programme of the University, which aims to enhance the wellness of students throughout the year.

Table 12.3: Total Existing Institutional Accommodation Beds

Institution	Campus	Beds
University of Stellenbosch	Stellenbosch	7 958
Total		**7 958**

Source: DEMACON Research, 2023

Residence facilities:

- Each room has a network point for connecting your own computer to the University's network, electronic information resources, the Internet and web-based e-learning tools.
- Laundry facilities
- A common "living room" area for socialising, watching TV or just "hanging out".
- All the women's residences, and some of the men's, also have a communal and/or private lounge area where visitors can be received and entertained.
- Most of the residences boast courtyards and/or gardens.

Table 12.4: Stellenbosch On-Campus Residences

UNDERGRADUATE		
Women's Residences (Stellenbosch Campus)	**Men's Residences** (Stellenbosch Campus)	**Co-Ed Residences (Mixed-Gender Per Floor)** Stellenbosch Campus)
Erica Harmonie He emstede Huis ten Bosch Irene Lydia Minerva Monica Nemesia Nerina Serruria Sonop	Dagbreek Eendrag Helderberg Helshoogte Huis Marais Huis Visser Majuba Simonsberg Wilgenhof	Goldfields Metanoia Huis Neethling (Maties Sport)
Senior Residences (Stellenbosch Campus)	**Privately Affiliated Residences** (Stellenbosch Campus)	Tygerberg Campus
Lobelia Concordia Huis MacDonald Huis de Villiers Russel Botman House The Village	Academia Nooitgedacht	Huis Francie van Zijl Hippokrates Meerhoff eNkanyini Huis Nkosi Johnson House Huis Ubuntu House
Total students		**6 500**

Source: DEMACON Research, 2023

Table 12.5: Stellenbosch On-Campus Residences

Stellenbosch Campus	Women		Men		
Residences	**Single**	**Double**	**Residences**	**Single**	**Double**
Nemesia Erica Minerva Harmonie Irene Monica Heemstede Lydia Nerina Huis ten Bosch Sonop Serruria	R61 100	R 50 340	Dagbreek Huis Visser Eendrag Majuba Helderberg Simonsberg Helshoogte Wilgenhof Huis Marais	R 62 550	R 51 430
Women and men					
Residences	**Single**	**Double**	**Houses**	**Single**	**Double**
Metanoia	R 62 550		Student houses	R 54 590	R 43 360
Russel Botman House, LLL Village, HUB House Committees	R 62 550				
Goldfields	R 62 550	R 51 430			
Flats	**Single**	**Double**	**Flats**	**Single**	
Huis de Villiers	R 57 590	R 46 750	Lobelia	R 60 530	
Huis MacDonald	R 48 200 - R65 090				
Concordia (local students' p/p/p/yr)	R 60 150				

Residence accommodation fees per student per year (excludes the cost of meals)
Source: DEMACON Research, 2023

12.4.3 PRIVATE STUDENT ACCOMMODATION

Off-campus student accommodation refers to student accommodation that is owned and operated by the owner of said accommodation, or through a management agent specialising in property management or student accommodation.

Private sector accommodation is driven by demand generated by students attending higher education institutions that cannot gain access to on-campus student residences, especially by public universities. Many factors such as NSFAS students, growing institutional capacity and new campus/institution development influence this demand. Private HEIs have historically not played a role in student accommodation and are dependent on the private sector to supply accommodation for its students.

The following section provide an overview of the distribution of off-campus accommodation and the quantification thereof.

Quantification of Private Accredited Student Accommodation

Private accredited student accommodation is primarily located close to, and cluster around, the Stellenbosch University. It is therefore acknowledged that the majority of the private student accommodation mainly target **public higher education institutions**.

The providers located within a 2km radius of the proposed project represent the primary competing providers that the proposed project would need to compete with to obtain and sustain market share.

Unit configuration generally consist of 1-bedroom units that are either occupied by a single person or shared. Shared units are cheaper than single units. The price is also affected by the location of the student accommodation and the proximity to campus.

Student accommodation facilities have access to a range of facilities and amenities. At minimum student residences offer a furnished room that consists of a bed, desk, storage, lighting, and access to internet. Building amenities include laundry rooms, shared bathroom facilities, an entertainment area, kitchen, refrigerator, and kitchen utilities.

❑ Private Accredited & NSFAS Approved Accommodation

The table below provides private student residences, accredited with the University of Stellenbosch and NSFAS approved.

Table 12.6: Private & Accredited Accommodation in Stellenbosch

Name	Services & Facilities	Rates
NOOITGEDACHT A Nooitgedacht A Forms part of the University's Private Student Organisation and is a private provider.  	• Fully Furnished • Laundry & Cleaning Services • Uncapped Wi-Fi • Outdoor Entertainment & Braai Area • 24hr Security & Access Control • Free Shuttle Service • Prepaid Electricity • Communal TV Room • Study/Computer Room • Basement Parking • Entertainment areas, • Individual desks in rooms, • Laundry room, • Parking, • Uncapped Wi-Fi	R6 340 x 10 Months R63 400 Annually *Includes:* • Single bed in a 8 bedroom apartment • 2 bathrooms • Communal lounge • Individual study desks
NOOITGEDACHT BLOCK C BLOCK C NOOITGEDACHT Nooitgedacht Block C is a Stellenbosch University-Accredited Private Student Residence	• Weekday Shuttle • Basement Parking • High-Profile Security • On-Site Kiosk • Secure Biometric Access Control • High-Speed Internet Access • Printing Facilities • Functional Fitness Zone • Self-Catering Options • Laundry Services* • Prepaid Electricity	**8 bed clusters / flats** • Furnished self-catering rooms in 8-bedroom clusters/flats • Shared (semi-private) rooms for R62 332 • Private rooms for R70 887. *Per person* **7 bed clusters / flats**
  • The building consists of 32 clusters • 4, 6 and 8 bed clusters, • each cluster featuring four bathrooms, a kitchen and a lounge. Various facilities are available to students living within Block C to allow for everyday amenities to be taken care of. Block C is accredited by the University of Stellenbosch and as such, still incorporates on-campus rules and benefits such as access via student card and payment of washing facilities via student card.	• Communal Cleaning Services • Hot Water • On-Site Tuckshop • Furnished Rooms • Entertainment Zone • Space Box Storage • Special Rates Storage Facilities	• Furnished self-catering rooms in 7-bedroom clusters/flats • Shared (semi-private) rooms for R64 314 • Private rooms for R72 691. *Per person*
ISA RESIDENCE isa DAMESKOSHUIS 	• Secure limited undercover parking available (at additional cost) • Self-service laundry (at additional cost) with enclosed washing line area • Communal lounge/recreation area/TV room for guest entertainment • 24 Hrs secure access control plus additional control to living areas.	Fees 2023 (2024 Fees not yet finalised) • Non-refundable reservation fee: R7 000 (due 30 days after acceptance) • Accommodation for academic year: R48 048 • Initial compulsory meal fee: R 5 000 • Annual Breakage fee: R1 000 (refundable if no damage occurs)

Name	Services & Facilities	Rates
The Isa Residence is centrally situated close to all amenities and approximately five minute's walk to the Isa Carstens Academy.  • Spacious accommodation living units rather than conventional hostel type rooms with central bathrooms. • Shared rooms with four bathrooms per section (2 showers, 2 baths). ▪ *Units include* Bed (bedding excluded), Mattress and cover, Desk, Chair, Cupboard, Bookshelf, Curtains, Towel rail and Notice board. Students must provide their own bedding and study lamp – colour and style of their choice	• Dining room and catering facilities for our students' specific needs (three meals per day as well as Grab & Go meals are available) • Water and electricity included. • Internet facilities available (one computer per section with an additional access point) • Student personal laptop can be set-up to access internet. • Wi-Fi available • Live-in Residence Head • Next to Stelkor medical centre and pharmacy and close to shopping amenities	• Key fee deposit : R200 (refundable on return) • Other fees payable if applicable: ▪ Parking for the academic year : R10 384 (Scooters R2 674) ▪ Electricity fee for own bar fridge : R1 750 (no bigger than 94L)
STELLIES STUDENT STAY Offers various accommodations options. Flat complexes are managed and owned as an entity, which makes a difference to the tenant profile as composition management is more effective. Certain complexes are more suitable for **pre graduates** and others for **postgraduates**.		
Archimedes Situated on the corner of Banghoek and Bosman Street.	***Archimedes*** • Basement and covered parking available. • CCTV. • Biometric identification at entrance doors. • Alarm System in the apartment. • Rooms: Bed (no bedding provided) (differs on size	***Archimedes*** RENT: from R13 510 pm – R 14 880pm • Bachelors from: R13 960 pm • Two Bedroom units from: R21 940 pm – R 26400 *Included:*

Name	Services & Facilities	Rates
	of the unit single or 3/4 beds). • Some units do have a coffee table, couch and bar stool (depends on the specific owner). • The furniture is included in the rent and CANNOT be removed or stored at Archimedes. • Kitchen: Stove and oven, fridge and microwave. • Electricity: Prepaid metres per unit for lights and plugs. • Aircon and hot water billed separately. • Coin operated washing machine and dryer.	• Electricity in all communal areas. • 20 Gig Wi-Fi internet. • Daily cleaning of communal areas, weekly cleaning of units. • Laundry service twice a month. • 24-hour security services. • Garden maintenance.
Banghoek Complex consisting of 51 bachelors.  Each of the 3 units is equipped with a fridge, gas stove with electric oven, washing machine and blinds and balcony as well as a built-in braai. Prepaid fibre internet is available from Fworx / Frogfoot. Prepaid electricity. Parking is included in rental and there is more than enough parking for visitors available. A 24-hour security guard will keep an eye on the units and all unit doors do have security gates. Suitable for pre and postgraduate students.	***Banghoek*** • Every unit has parking. • 24 Hour security on-premises. • Security bars and gates on all ground units. • Prepaid fibre internet is available from Fworx / Frogfoot. • Units equipped with washing machine. • Mostly blinds – only a few with curtains. • Kitchen: Gas stove (provide own gas), oven, microwave oven and fridge.	***Banghoek*** RENT: R 9 630 – R10 915 *Included:* • Electricity

Name	Services & Facilities	Rates
Boschenpark 2 Bedrooms, 1 basement & 1 deck parking, 1-bathroom, open plan living area, unfurnished, good security, prepaid electricity. Parking included in rent. 	***Boschenpark*** • WiFi • Furniture • Parking • 24h security	***Boschenpark*** RENT: R13 535 *Included:* 2 x Parking bays
Brahmbosch Brand new, modern complex opened its doors in January 2016. 	***Brahmbosch*** • WiFi • Cleaning service • Parking • 24h security • Laundry	***Brahmbosch*** RENT: R7 250 Pm • Parking: Basement: R 450 | Open: R 250
Da Vinci Da Vinci is situated in Die Weides – safe walking distance from campus. 	***Da Vinci*** • WiFi • Cleaning service • Parking • Laundry	***Da Vinci*** RENT: from R12 135 pm • Bachelor's units: from R12 135 pm • Two Bedroom units: from R22 120 pm • Lofts (can sleep 2): R16 220 pm
De Cingel Small complex, neat, ideal for first-year students or postgrad students. 2 Bedrooms, 2 covered parkings, 1 bathroom, open plan living area,	***De Cingel*** • WiFi • Furniture • Parking • 24h security	***De Cingel*** RENT: R16 624 pm • Incl.: 2 Covered Parkings

Name	Services & Facilities	Rates
unfurnished, good security, prepaid electricity. 		
Deo Gloria Brand New, Modern And Upmarket Complex. Modern and upmarket complex which includes state of art features to optimize energy efficiency while creating to conserve water and electricity. 	***Deo Gloria*** • WiFi • Furniture • Parking • 24h security	***Deo Gloria*** RENT: • Bachelor's R11 530 pm – R14 870 • Three Bedroom units from: R29 220 pm • Lofts: R17 280 pm (Sleep 1) • Bachelor from R11 553pm – R 14 870pm incl: parking the building is wired for dstv. Waterpoint in bathroom for washing machine available
Deo Gloria Square Brand new modern and upmarket complex. This is the second phase of the very poplar modern and upmarket deo gloria.It is an upgrade on the first phase and consist out of bachelors and 2 bedroom units 	***Deo Gloria Square*** • WiFi • Furniture • Parking • 24h security	***Deo Gloria Square*** RENT: R12 570 pm • Bachelor's units from: R12 570 pm • Two Bedroom units from: R21 760 pm • *parking included in price*

Name	Services & Facilities	Rates
De Jordaan Ideal for internationals & post graduated students. 	***De Jordaan*** • WiFi • Cleaning service • Parking • 24h security • Laundry	***De Jordaan*** RENT: R11 600 pm • R300 pm parking (tenants). • R700 pm parking for private students if available.
Edge 63 Stylish, Ergonomically Designed Apartments Studio (32m²) & 2-Bed (45-59m²) Apartments with Large Balconies. Rooftop Lounge & Entertainment Areas with Modern Amenities 	***Edge*** • WiFi • Cleaning service • Parking • 24h security • Laundry • Secure Biometric Access Contro • Build-in desk • Smeg oven and stove	***Edge*** RENT: • Bachelors from: R9 900 – R11 560 • Some of the units are semi-furnished • One bed (sleep 2) units from: R15 700 – R16 800. All unfurnished • 2 Bed units from: R18 290 – R21 350 • Rooms in a 2-bed unit available from R9 100 • Some of the units are semi-furnished.
Ivy League 1 Ivy League 1 is accredited by the Stellenbosch University. Walking distance from campus Furnished, modern complex 	***Ivy League 1*** • WiFi • Cleaning service • Furniture • Parking • 24h security • Laundry	***Ivy League 1*** RENT: R8 230 – R9 100 pm • Bachelors units from: R12 570 pm
Ivy League 2 Walking distance from campus Furnished, modern complex	***Ivy League 2*** • WiFi • Cleaning service • Parking	***Ivy League 2*** RENT: R6 850 pm, excluding parking

Name	Services & Facilities	Rates
	• 24h security • Laundry	• Basement: R400 | covered: R300 | open: R170
Labri Manor Only For Senior / Post Graduate Students. 	***Labri Manor*** • WiFi • Parking • Furniture • Laundry	***Labri Manor*** RENT: • Rooms Downstairs: From R8 680 – R9 090 pm • Rooms Upstairs: From R8 500 – R10 550 pm • Bachelor Units: R8 925 – R12 785 pm • Parking: R400 Pm
Nuwerus Ideal for post graduates as well as young working adults. One of the older complexes, but very spacious (84 and 130 sq/m respectively) and modern finishes. 	***Nuwerus*** • Parking • 24h security	***Nuwerus*** RENT: • R12 690 2 bed • R14 000 pm 3 bed Including parking
Oewersig 10 3 bedroom townhouse. walking distance from campus. 	***Oewersig 10*** • WiFi • Furniture • Parking • 24h security	***Oewersig 10*** RENT: • R18 900 (R6 300 per room) Including parking

Name	Services & Facilities	Rates
One On Cluver Modern and perfect accommodation for those who want to be part of a group. 	***One On Cluver*** • Wi-Fi • Cleaning service • Furniture • Parking • 24h security • Laundry	***One On Cluver*** RENT: • Sharing units • Ground floor without balcony: R7 250 • 1st and 2nd Floor with small balcony: R7 350 • 1st and 2nd floor with big balcony: R7 450 • Ground floor with patio: R7 550,00 • *Bachelor units* House bachelor: R9 200 Ground floor Bachelor: R10 250 1st and 2nd-floor Bachelors: R10 650
Two On Cluver Modern and perfect accommodation for those who want to be part of a group. 	***Two On Cluver*** • Wi-Fi • Cleaning service • Parking • Furniture • 24h security	***Two On Cluver*** RENT: • Bachelor: R9 900 – R12 750 • Sharing R7 400 – R 7 750 • Deck parking R350, R450 for basement basement.
Plumbago Plumbago is situated within 800m, (walking distance) from the central campus This complex offers modern and furnished three and four bed units. 	***Plumbago*** • WiFi • Cleaning service • Parking • 24h security • Laundry	***Plumbago*** RENT: R5 950 pm • Parking: basement: R370 | open: R270

Name	Services & Facilities	Rates
Verreweide 14 The complex consists of 41 en suite-rooms, 3 communal living areas with DSTV and 2 kitchens. 	***Verreweide 14*** • Wi-Fi • Cleaning service • Parking • Laundry	***Verreweide 14*** RENT: R7 970 – R9 460 pm • Parking: covered: R200 open: included in rent
Welbedacht One bachelor and 2 bed units Welbedacht – Replaces the appropriately named "The Clinic" digs in Hospital street Stellenbosch. 	***Welbedacht*** • Wi-Fi • Cleaning service • Parking • 24h security • Furniture • Laundry	***Welbedacht*** RENT: • Bachelor: R11 660 pm • Rooms in units: from R7 300 – R7 500 pm • Parking: covered: R275 | open: R175
ACADEMIA Academia is the only affiliated private residence at Stellenbosch University, offering spacious units. The complex comprises 26 blocks totalling 954 beds in a mix of accommodation types, *One bedroom premium* Our one-bedroom unit has its own bathroom with an open-plan kitchen/lounge area Size: ±25 m²	• Wi-Fi • Fully equipped outdoor gym • Cashless laundry system • Lockable cages for safe and secure on-site storage • Onsite deli offers a range of freshly cooked meals	• One Bedroom Premium - R138 195 • One Bedroom Deluxe - R127 195 • Two Bedroom Two Bathroom - R125 454 • Two Bedroom Premium - R123 167 • Two Bedroom Deluxe - R114 998 • One Bedroom Communal - R110 751 • Two Bedroom Communal - R112 058 Water and electricity is included

Name	Services & Facilities	Rates
 *One bedroom deluxe* Our one-bedroom deluxe unit has its own bathroom (shower) with an open-plan kitchen/lounge area. Size: ±25㎡  *Two bedroom two bathroom* The two bedrooms, two bathrooms unit has an open-plan kitchen/living area Size: ±37㎡  *Two bedroom premium* Two bedrooms, one bathroom (shower) with an open-plan kitchen/lounge Size: ±37㎡ 		

Name	Services & Facilities	Rates
Two bedroom deluxe Two bedrooms, one bathroom (shower) with open-plan kitchen/lounge. Size: ±37㎡  *One bedroom communal*  *Two bedroom communal* Two bedrooms, two en-suite bathrooms (shower) and one kitchen. General living area shared by 8 students per floor. 		
LUTZ STUDENT ACCOMMODATION Established in 2001 in the Lutz Building, the property is conveniently located on campus and within close proximity to popular restaurants, shops and business centres. NSFAS Accredited	• Semi-Furnished Rooms • WiFi • Security • Laundry Kitchen and general area include: • Personal Lockable groceries cupboard • Hot plate/Induction cooker • Fridge/freezer • Microwave • Wash-up area • Dining table with chairs	• Apartment 1: R85 914 per annum / R7 500 per month • Apartment 2: R87 054 per annum / R7 600 per month • Apartment 3: R84 774 per annum / R7 400 per month • Apartment 4: R84 774 per annum / R7 400 per month • Apartment 5: R88 194 per annum / R7 700 per month

Name	Services & Facilities	Rates
The 6 apartments each have their own living area, kitchen and bathroom/s. In Apartments 3 & 4 there are separate bathrooms for men and women. In each bedroom, there is basic furniture such as a bed, desk, chair and wardrobe. Students supply their own mattresses. In the kitchen and/or living areas there is a fridge, microwave oven, induction stove, private grocery lockers, table, chairs and couches. 	• Sitting area with comfort chairs. Number of students in each flat: • Apartment 1: 5 students • Apartment 2: 5 students • Apartment 3: 10 students • Apartment 4: 11 students • Apartment 5: 5 students • Apartment 6: 5 students	Price per person include Levies, Water and Electricity and Cleaning of general areas of flat once a week
LA REZ Offering bachelor, 1, 2 and 3 bedroom units • Bachelor: 20 – 30 sqm • 1 bedroom: 28 – 37 sqm • 2 bedroom: 34 – 52 sqm • 3 bedroom: 56 – 64 sqm 	• On-site management • Courtyard and braai facilities • Laundry facilities • Cleaning services • 24-hour security and • Access controlled • Basement parking • Wi-Fi supplied by • Herotel • Gym	• Bachelor: From R4 500 • 1 bedroom: From R5 900 • 2 bedroom: From R6 300 • 3 bedroom: From R9 000 •

Name	Services & Facilities	Rates
STUDENTLIFE		
ARMENTUM STUDENTLIFE Consists of 77 modern bachelor student apartments: • 76 are standard, of which, semi-furnished bachelor apartments and 1 semi-furnished bachelor apartment to accommodate a tenant with physical disabilities. Situated 1.2km from the campus.  	• 3 X Communal Kitchens • 3 X Communal Dining Room • 3 x Communal Lounges • Braai Area • Lockable Bicycle Racks • Secure Parking • CCTV Monitoring • Biometric Access • Communal Area Cleaning • Laundry Facilities • Landscaped Gardens • Apartment Cleaning • DSTV in Lounges • 10 Gig Free Wi-Fi • Semi-Furnished Bedrooms	• Twelve monthly payments of R7 820 per month, plus an additional R680 per month for costs (Wifi, water, electricity, cleaning of rooms) • Starting 1 December 2022 | ending 30 November 2023. • Application processing & contract fee: R2 345 (VAT Incl.) (Non-refundable) • Deposits required: R7 820 (Rental deposit)
HUMANITAS STUDENTLIFE Consists of 22 new modern bachelor Units are semi-furnished with own bathroom and kitchenette with bar fridge and microwave	• 2 X Communal Kitchens • 2 X Communal Dining Room • 2 x Communal Lounges • Braai Area • Lockable Bicycle Racks • Secure Parking • CCTV Monitoring • Biometric Access • Communal Area Cleaning • Laundry Facilities • Landscaped Gardens • Apartment Cleaning	• Twelve monthly payments of R8 000 per month. • Starting 1 December 2022 ending 30 November 2023. • Application processing & contract fee: R2 345 (VAT Incl.) (Non-refundable) • Deposits required: R8 000 (Rental deposit)

Name	Services & Facilities	Rates
	• DSTV in Lounges • 10 Gig Free Wifi • Semi-Furnished Bedrooms	
KROMRIVIER STUDENTLIFE 700 metres from Stellenbosch University's main campus 9 semi-furnished rooms 	• Communal Kitchens • Communal Dining Room • Communal Lounges • Curtains • Patio • Secure Parking • CCTV Cameras • Controlled Access • Communal Area Cleaning • Washing Machine • Pre-paid electricity • Room Cleaning • Free Wifi • Semi-Furnished Bedrooms	• Twelve monthly payments of R3 700 to R 5 500 per month (pre-paid electricity for tenant). • Starting 1 December 2022 | ending 30 November 2023 • Application processing & contract fee: R2 345 (VAT Incl.) (Non-refundable) • Deposits required: X2 Quoted Monthly Rent
MICHAELHOUSE STUDENTLIFE All boys residence that comprises of 3 double and 7 single rooms. Communal areas include a living/dining room, lounge and kitchen. Conveniently located closely to the Coetzenburg sports stadium and University of Stellenbosch campus. 	• Communal Kitchen • Semi-Furnished Bedrooms • Communal Lounges • Braai Area • Laundry facilities • Communal Area Cleaning • DSTV in Lounges • Apartment Cleaning • 10 GIG Free Wifi	• Twelve monthly payments of R5 850 – R7 950 per month. • Starting 1 December 2022 | ending 30 November 2023. • Application processing & contract fee: R2 345 (VAT Incl.) (Non-refundable) • Deposits required: X1 Quoted Monthly Rent

Name	Services & Facilities	Rates
MY SPACE STUDENTLIFE Apartment living Located in three spots around Stellenbosch, our co-living residences for Students and Young Professionals • My Space @ Paradys: 25 Canterbury Lane, Stellenbosch • My Space @ Drostdy: Corner Bird Street & Alexander Street, Stellenbosch • My Space @ Dorpstreet: 97 Dorp Street, Stellenbosch 	• Kitchenette • Deli • Cosy Lounge • Study Area • Chat Booths • Covered Parking • 24h security • Biometric Access • Communal Area Cleaning • Laundry facilities • Gym • Apartment cleaning • Netflix in louges • Uncapped Wifi • Furnished Bedrooms	• Monthly payments of R8 500 to R12 500 per month. • Starting January 2023 | ending 30 November 2023. • Application processing & contract fee: R500 (VAT Incl.) (Non-refundable) • Deposits required: X1 Quoted Monthly Rent
NASSAU STUDENTLIFE Nassau is an affordable student hostel The residence comprises of 54 single and 6 double semi-furnished rooms. Each floor has a kitchenette and shared bathrooms. The main area of the hostel has a communal kitchen, lounge, dining area and recreational areas.	• Communal Kitchen • Communal Dining Room • Communal Lounges • Recreational Area • 10 GIG Free Wifi • Semi-Furnished Bedrooms	• Twelve monthly payments of R5 850 per month, plus an additional R590.00 per month for costs (Wifi, water, electricity, cleaning of rooms). • Starting 1 December 2022 | ending 30 November 2023 • Application processing & contract fee: R2 345 (VAT Incl.) (Non-refundable) • Deposits required: Single: R6 850 (Rental deposit) • Double: R5 850 (Rental deposit)

Name	Services & Facilities	Rates
		
QUIVER TREE STUDENTLIFE Quiver Tree offers students spacious, modern, and semi-furnished apartments 	• Kitchenette • Coffee shop • Undercover parking, • 24-hour security, • laundry facilities, • In-house coffee shop • Lockable bicycle racks • Secure parking • Cctv cameras • 24-hour security • Communal area cleaning • Laundry facilities • Pre-paid electricity • Apartment cleaning • Wifi availability • Furnished bedrooms • Semi-furnished bedrooms	• Monthly payments of R6 000 to R9 000 per month. • Starting December 2022 | ending 30 November 2023. • Application processing & contract fee: • R2 345 (VAT Incl.) (Non-refundable) • Deposits required: • X1 Quoted Monthly Rent
CampusKey CampusKey Stellenbosch with **500 students**, is located within walking distance from the University of Stellenbosch and centrally located to all other amenities. Luxury rooms are modern and come fully furnished. All utilities are included.		
THE INDEPENDENT 1 BEDROOM STANDARD The room is non-sharing, fully furnished with an en-suite bathroom and fully equipped kitchen.	• All Inclusive Utilities • Fast and secure wi-fi • Vibrant connected community with monthly events • -On-site laundry • In room cleaning • Friendly on-site team available 24/7 • Fully furnished private rooms • Multi-tier safety system • Fully equipped gym	• R8 950 Per Person Per Month

Name	Services & Facilities	Rates
THE SOCIALIZER 4 BEDROOM – **Verde** These rooms are modern, fully furnished, private, and non-sharing	• Water and Electricity • Uncapped Wi-Fi • Shared bathroom • ¾ bed with a high-quality mattress • Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	• Starting Price: R7 000
THE INDEPENDENT 1 BEDROOM PLATINUM - **Bordeaux and Banghoek** The room is non-sharing, fully furnished with an en-suite bathroom and fully equipped kitchen.	• Water and Electricity • Uncapped Wi-Fi • Safe Parking • Weekly in-room cleaning • En-suite bathroom • LED TV • Double bed with a high-quality mattress • Wardrobe • Desk and Chair • Panel heater • Curtains	• Starting Price: R11 600
THE SOCIALIZER 2 BEDROOM WITH LOUNGE - **Bordeaux and Verde** Fully furnished socializer rooms are private and non-sharing	• Water and Electricity • Uncapped Wi-Fi • Shared bathroom • ¾ bed with a high quality mattress • Wardrobe • Desk and Chair • Panel heater • Curtains	• Starting Price: R9 250
THE EXPLORER 2 BEDROOM WITH LOUNGE - **Bordeaux** Bedrooms are private, non-sharing bedrooms with an en-suite bathroom	• Water and Electricity • Uncapped Wi-Fi • En-suite bathroom • LED TV • ¾ bed with a high-quality mattress • Wardrobe • Desk and Chair • Panel heater • Curtains	• Starting Price: R9 950
THE SOCIALIZER 3 BEDROOM SILVER – **Verde**	• Water and Electricity • Uncapped Wi-Fi • Shared bathroom • ¾ bed with a high quality mattress	• Starting Price: R5 800

Name	Services & Facilities	Rates
These rooms are fully furnished, private and non-sharing	• Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	
THE EXPLORER 4 BEDROOM WITH LOUNGE PLATINUM - Laranja Private and non-sharing with an en-suite bathroom	• Water and Electricity • Uncapped Wifi • En-suite bathroom • LED TV • ¾ bed with a high-quality mattress • Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	• Starting Price: R11 500
STELLENBOSCH | THE INDEPENDENT 1 BEDROOM STANDARD - **Bordeaux And Banghoek** The room is non-sharing, fully furnished with an en-suite bathroom and fully equipped kitchen.	• Water and Electricity • Uncapped Wifi • Weekly in-room cleaning • En-suite bathroom • LED TV • ¾ bed with a high-quality mattress • Wardrobe • Desk and Chair • Panel heater • Curtains	• Starting Price: R8 950
THE INDEPENDENT 1 BEDROOM SILVER **Bordeaux And Banghoek** Modern, private, non-sharing, fully furnished with an en-suite bathroom and fully equipped kitchen	• Water and Electricity • Uncapped Wifi • Weekly in-room cleaning • En-suite bathroom • LED TV • ¾ bed with a high-quality mattress • Wardrobe • Desk and Chair • Panel heater • Curtains	• Starting Price: R9 500
THE INDEPENDENT 1 BEDROOM GOLD **Bordeaux, Banghoek and Laranja** Non-sharing, fully furnished with an en-suite bathroom and fully equipped kitchen	• Water and Electricity • Uncapped Wifi • Weekly in-room cleaning • En-suite bathroom • LED TV • ¾ bed with a high quality mattress (Banghoek/Laranja)	• Starting Price: R10 600

Name	Services & Facilities	Rates
	• Double bed with a high quality mattress (Bordeaux) • Wardrobe • Desk and Chair • Panel heater • Curtains • Roller Blinds (Bordeaux)	
THE EXPLORER 2 BEDROOM **Banghoek, Laranja and Verde** Private, non-sharing bedrooms with an en-suite bathroom	• Water and Electricity • Uncapped Wi-Fi • En-suite bathroom • LED TV • ¾ bed with a high-quality mattress • Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	• Starting Price: R9 600
THE SOCIALIZER 3 BEDROOM STANDARD **Verde** Spacious and modern non-sharing, private rooms are fully furnished.	• Water and Electricity • Uncapped WiFi • Shared bathroom • ¾ bed with a high-quality mattress • Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	• Starting Price: R5 200
THE EXPLORER 3 BEDROOM WITH LOUNGE **Bordeaux** Bedrooms are private, non-sharing bedrooms with an en-suite bathroom.	• Water and Electricity • Uncapped Wifi • En-suite bathroom • LED TV • ¾ bed with a high-quality mattress • Wardrobe • Desk and Chair • Panel heater • Curtains	• Starting Price: R10 200
THE SOCIALIZER 2 BEDROOM WITH LOUNGE PLATINUM **Verde**	• Water and Electricity • Uncapped Wifi • Safe Parking • Weekly in-room cleaning • Shared bathroom • LED TV in Lounge • ¾ bed with a high-quality mattress	• Starting Price: R9 950

Name	Services & Facilities	Rates
	• Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	
THE SOCIALIZER 3 BEDROOM GOLD **Verde** Spacious and modern non-sharing, private rooms are fully furnished.	• Water and Electricity • Uncapped Wi-Fi • Shared bathroom • Shared Kitchen • ¾ bed with a high-quality mattress • Wardrobe • Desk, Chair and Bookcase • Panel heater • Block-out Curtains	• Starting Price: R10 550
MY SPACE RESIDENCES Consists of 3 campus: @Paradys, @Drostdy and @Dorpstreet		
@PARADYS CAMPUS **The Solo** • 1 Resident • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R12 500 per bed (R137 500 per year)* **The Duo** • 2 Residents • 48m² • 2 Bed, 2 bath, 1 Kitchenette *En-suite: R10 500 per bed (R115,500 per year) Single: R9 500 per bed (R104 500 per year)* **The Twin** • 2 Residents • 24m² • 2 Bed, 1 bath, 1 Kitchenette *R6 500 per bed (R71 500 per year)* **The Trio**	**@DROSTDY** **The Solo** • 1 Resident • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R13 500 per bed (R148 500 per year)* **The Twin** • 2 Residents • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R8 500 per bed (R93 500 per year)* **The Duo** • 2 Residents • 48m² • 2 Bed, 2 bath, 1 Kitchenette *R12 000 per bed (R132 000 per year)* **The Bunker**	**@PARADYS CAMPUS** **The Solo** • 1 Resident • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R12 500 per bed (R137 500 per year)* **The Solo Twin** • 1 Resident • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R12,500 per bed (R137,500 per year)* **The Twin** • 2 Residents • 24m² • 2 Bed, 1 bath, 1 Kitchenette *R8 500 per bed (R93 500 per year)* **The Crew**

Name	Services & Facilities	Rates
• 3 Residents • 74m² • 3 Bed, 3 bath, 1 Kitchenette *R10 500 per bed (R115 500 per year* **The Bunker** • 2 Residents • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R6 500 per bed (R71 500 per year)* *Parking:* *R 150 per dedicated open parking per month* *R 300 per dedicated undercover parking per month*	• 2 Residents • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R8 500 per bed (R93 500 per year)* **The Solo Bunker** • 1 Residents • 24m² • 1 Bed, 1 bath, 1 Kitchenette *R13 500 per bed (R148 500 per year)* **The Crew** • 4 Residents • 85m² • 4 Bed, 4 bath, 1 Kitchenette *R11 000 per bed (R121 000 per year)*	• 4 Residents • 92m² • 4 Bed, 4 bath, 1 Kitchenette *R11 000 per bed (R121 000 per year)* **The Duo** • 2 Residents • 48m² • 2 Bed, 2 bath, 1 Kitchenette *R11 500 per bed (R126 500 per year)* **The Trio** • 2 Residents • 72m² • 3 Bed, 3 bath, 1 Kitchenette *R11 000 per bed (R121 000 per year)*
@SWEET 16 **16 Soeteweide, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Kitchenette (basin/place for microwave/place for bar fridge • Room inventory may vary **Security** • Whatsapp group with Armed response service provider • 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped WiFi	• Three payments – rental R118 447 pa, R9 870 pm **Excluded** • Water & Electricity

Name	Services & Facilities	Rates
@POST OFFICE MY SPACE RESIDENCE **20 Soeteweide, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Room inventory may vary **Security** • Whatsapp group with Armed response service provider • 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped WiFi	• Three payments – rental R129 088,20 pa, R10 757 pm
@LOOKOUT MY SPACE RESIDENCE **2 Kleinewiede, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Room inventory may vary **Security** • Whatsapp group with Armed response service provider • 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped WiFi	• Three payments – rental R129 088,20 pa, R10 757 pm
@ER	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Room inventory may vary	• Three payments – rental R118 447 pa, R9 870 pm **Excluded** • Water & Electricity

Name	Services & Facilities	Rates
MY SPACE RESIDENCE **34 Soeteweide, Stellenbosch**	**Security** • Whatsapp group with Armed response service provider • 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped Wi-Fi	
@GREENHOUSE MY SPACE RESIDENCE **15 Cluver, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Room inventory may vary **Security** • WhatsApp group with Armed response service provider • 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped Wi-Fi	• Three payments – rental R118 447 pa, R9 870 pm **Excluded** • Water & Electricity
@TEMPLE MY SPACE RESIDENCE **21 Cluver, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Room inventory may vary **Security** • Whatsapp group with Armed response service provider	• Three payments – rental R118 447 pa, R9 870 pm **Excluded** • Water & Electricity

Name	Services & Facilities	Rates
	• 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped WiFi	
@THE FORT **217 Banghoek, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk • En-suite bathroom • Room inventory may vary **Security** • Whatsapp group with Armed response service provider • 8-line electric fence • Clear burglar bars **Services** • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped Wi-Fi	• Three payments – rental R118 447 pa, R9 870 pm **Excluded** • Water & Electricity
@BASECAMP **22 Verreweide, Stellenbosch**	**Room** • 3/4 bed with mattress • Built in desk. • En-suite bathroom • Room inventory may vary. **Security** • Whatsapp group with Armed response service provider • 8-line electric fence • Clear burglar bars	• Three payments – rental R118 447 pa, R9 870 pm **Excluded** • Water & Electricity
	Services • Biweekly cleaning for communal areas • Weekly cleaning for bedrooms • 1 parking bay per room • DSTV in lounge • Uncapped Wi-Fi	

Source: Demacon, 2023

Findings:

As seen from the above table there are several student residences, accredited with the University of Stellenbosch and NSFAS approved institutions within Stellenbosch.

427

Map 12.2: Private Accredited Student Accommodation Facilities

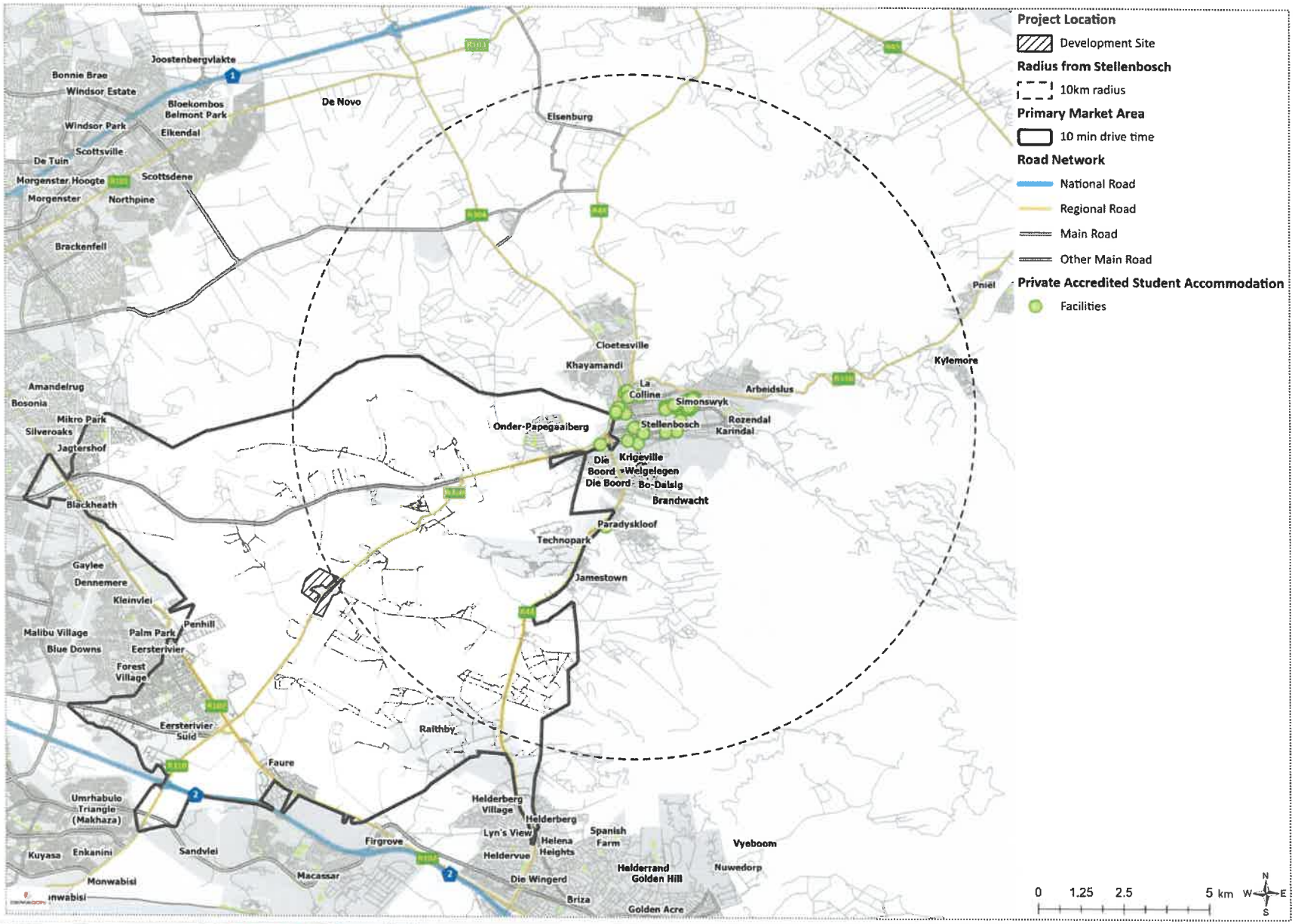
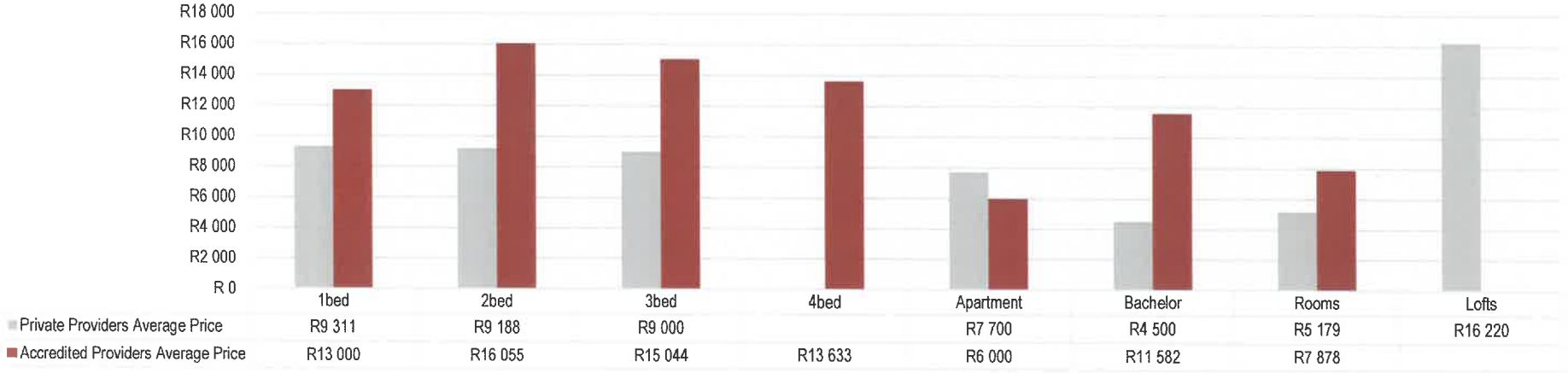


Figure 12.2: Average Price per Unit Types



Source: Demacon 2023

Findings:

As seen in the graph above, the average price per unit provided by accredited providers is significantly higher than that of private providers in Stellenbosch. Accommodation provided by Stellenbosch University at their on-campus residences range between R4 336 and R6 509 (average R5 630) per room.

The **accredited providers** include a higher premium with the following being included:

- Furnished items such as a bed, curtains
- Study desk and chair
- Lamp and bedside table
- Lockable cupboards
- Wardrobe
- Heater
- Premium items (Kitchenette, Bathroom, TV)

In the case of shared rooms, many spaces are often shared. These include:

- Bathroom
- Kitchen: Gas stove (provide own gas), oven, microwave oven and fridge/freezer.
- Smeg oven and stove
- Couches
- Dining table with chairs
- Personal lockable groceries cupboard
- Lockable cages for sage and secure on-site storage
- Hot plate/Induction cooker
- LED TV
- Aircon and hot water billed separately.
- Waterpoint in bathroom for washing machine available.

The **amenities** provided by the building is an essential component of student accommodation. As noted by Pepler Sandri (Director of Capital Markets at JLL), student accommodation is a mixture of rental accommodation and hotel living. The following amenities are typically provided by student residences:

- Laundry services
- Entertainment areas
- Study room
- Cleaning service
- Convenience retail
- Free uncapped Wi-Fi
- DStv
- Bus/shuttle services

- 24-hour security
- Biometric access control

In the competitor market area of the proposed development, several student accommodation providers, i.e., **Stellies Student Stay, Studentlife, Campus Key** and **My Space**, offer **premium services and extras** (these increase the price of accommodation).

- Backup power generation
- Rooftop entertainment
- Swimming pool
- Braai facilities
- On-site building manager
- Secure parking (at a premium / extra cost)
- Fully equipped gym
- Alarm System in the apartment
- Units equipped with washing machine.

STUDENT PERCEPTIONS AND PREFERENCES

Given the profiling of student accommodation in the competing market area, it is also important to note student preferences and perceptions regarding accommodation, especially when student accommodation is provided by the private sector.

The following provides an overview of student perceptions and perspectives on student accommodation.

Student Rooms and Related Aspects

Student market research identifies that privacy and access to sufficient space within a room are paramount aspects of accommodation that allows for conducive student environments. Students also identify that education related activities such as studying, and the completion of assignments can be inhibited by unconducive unit/room layouts. Comfort is also cited as an important element that speaks to privacy and individual spaces within a shared room. The intrusion of space is seen as a key concern when two or more share accommodation and this aspect is further exacerbated when more than two students are housed in a shared room.

Given the above, the size of rooms become an essential consideration to ensure that students have access to a conducive environment. Rooms sizes can easily create intrusive spaces and in some instances room sizes are small and do not provide sufficient storage or learning space.

The Multi-Functional Application of Purpose-Built Student Accommodation Spaces

Student market research shows that the inclusion of a desk/student space within a room is crucial to ensure that students can complete educational activities after hours. The use of shared student areas does not necessarily appeal to students because the space is not always conducive to all students for study purposes.

The Importance of Furniture and Appliances

Student market research shows that the furnishing of rooms is an essential part of student accommodation. Student market research suggests that in many instances students do not have access to furniture or funds to furnish a room. Therefore, many students are dependent on the furniture provided in student accommodation.

Likewise, student market research also identifies that access to fridges and related appliances are an important consideration. Research suggests that sufficient supply of fridges and related appliances are essential to ensure equitable access to appliances – in the event that shared appliances are applicable.

Student market research also highlights that the maintenance of appliances should occur in a timely manner.

Proximity to Campus and Safety and Security Aspects

Student market research identifies that safety and security, especially in major urban centres and inner-city regions, is an important consideration and aspect. Three aspects can be highlighted as important to safety and security. The first aspect speaks to the security of the area within which the student residence is located as opposed to the security of the building in which they reside. Many examples identified that the area surrounding off-campus accommodation

(institutionally and privately operated) are in locations that require students to interact with unsafe environments.

The second aspect identifies that student residences must restrict access to persons that are not students at an HEI or does not reside within the student residence.

The third aspect deals with emotional safety, especially in instances where a range of people have different sexual orientations and where gender can play a role in the interaction of students. Educational programmes at some institutions have allowed for greater demystification of gender and sexual orientation fallacies.

Internet Accessibility

Student market research identifies that internet connectivity is an essential comment to students in residences. Research also suggests that Wi-Fi is the best option for connectivity given that not all students have access to a laptop and many students make use of tables and smart phones. Internet usage is also not restricted to academic functions but also includes a leisure component.
Student market research identifies that although wireless internet is provided, in many cases the coverage is restrictive and does not afford equal access to all students. The restriction of internet access to communal spaces is also a problematic aspect whereby students are required to move to areas where internet connectivity can be accessed in order to submit academic papers, assignments or tests. LAN connectivity is seen as inefficient and not a priority for students.

Other Items

Student market research also identified that living environments must be clean and hygienic. Student market research indicates that the cleaning of buildings is important and should be a priority. These factors impact on the quality of the living environment for students.

12.5 MARKET DEMAND MODELLING

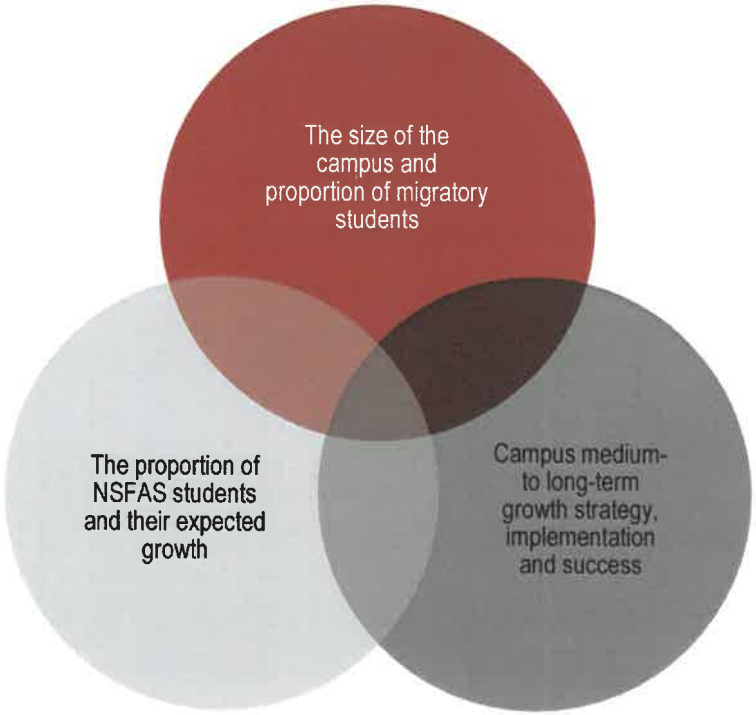
Demand for student accommodation is a function of the rate at which the student population of a target institution/s grows and the capability of the local market, which is inclusive of institutional and privately owned and operated student accommodation, to provide adequate student accommodation.

Existing market research on the perceived needs of students in terms of student accommodation reveal the following:

- Not all students attending a higher education facility prefer or can afford to live in on-campus or off-campus (private) accommodation. In some cases, especially where students have adequate access to flexible transport and whose parental home is within an acceptable driving distance of the university/college (or do not have access to funds to live away from the parental home), such students would prefer to live at their parental home. It is, however, an established notion that the majority of students enrolled at a higher education institution prefer student accommodation over home-based learning.
- As such, the student accommodation market seems to be primarily driven by students whose parental homes are not located in close proximity to a university/college, or students who prefer to live away from the parental home.
- In cases of private student accommodation, students prefer to be located in close proximity to a public transport stop or node where shuttle services are available to the university/college. Students have also indicated that student accommodation is preferred if it is within 2 km of a university/college.
- Proper security is of utmost importance for any student accommodation development. Biometric security systems and guarding services add to visible protection and are advised for such developments.
- Parking garages add value to a student accommodation development and may be a deciding factor for prospective students and investors.
- The most important facilities which need to be included in a student accommodation development include internet access, socialising and entertaining spaces and laundry services.

Considering the preceding, the following factors are considered in establishing the demand for a student accommodation development on the proposed development site:

Diagram 12.1: Factors Considered in Establishing the Demand and Sustainability of Student Accommodation



- The size of the campus and proportion of migratory students: the demand and sustainability of student accommodation is correlated with the size of the campus (i.e., the number of enrolments) and the proportion of migratory students (i.e., students that do not originate from the immediate area in which the campus is situated and thus needs to commute to the area on a daily basis) that requires accommodation.
- Campus medium- to long-term growth strategy implementation and success: The medium-to long- term demand for student accommodation will hinge on the successful implementation of the institution's long-term growth and expansion plan.
- Local socio-economic impact: the demand and financial viability of institutional student accommodation is impacted by the quantum of migratory students, but in turn also has an impact on the local private sector service providers from whom they currently rent accommodation. A structural market shift from other non-institutional and related accommodation arrangements to institutional related accommodation is required.

12.5.1 STUDENT ACCOMMODATION MARKET POTENTIAL

The following section provides an overview of the market demand estimated for student accommodation as a land use opportunity for the proposed development. Market demand estimations are based on the prevailing market conditions of the market within which the proposed project is to operate. In order to determine potential demand for student accommodation, and especially demand for **private off-campus accommodation**, several inputs and considerations must be identified and defined. The inputs and considerations are used to inform and calibrate the model to address the intended market demand calculation and serves as a baseline indication of the core attributes that define future demand.

The following key considerations are used to calibrate the student accommodation demand model:

- Stellenbosch University is the main target campus with approximately 20 687 full-time enrolled students (2023) attending class on the campus.
- Data indicates that the total Accredited Student Accommodation Available (Institutional and Private) amounts to 14 635 (2023).
- The percentage of students accommodated in available accommodation is 70.7%.
- The university is expected to increase their student numbers in line with the growth targets to reach ±25 060 students by 2033.
- Considering the above, we are of the view that an initial take-up rate in line with the current student take-up at the institutions and national targets be used as a baseline for student residence demand.

The following table provides an overview of the estimated student accommodation demand within the primary market area. The result is based on student demand generated by Stellenbosch University and takes into account the preceding considerations, assumptions and indicators. It should be noted that the demand calculations provide an indication of the cumulative (i.e., individual modelled years do include prior year's demand as well) and annualised (i.e., individual modelled years do not include prior year's demand as well) market demand estimates.

Table 12.7: Student Accommodation Market Demand between 2023 and 2033

		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Full-Time Enrolled Contact Students		20 687	21 084	21 491	21 905	22 328	22 761	23 202	23 651	24 112	24 581	25 060
Accredited Student Accommodation Available (Institutional and Private)		14 635	14 702	14 769	14 837	14 906	14 975	15 045	15 116	15 188	15 260	15 333
Percentage of Students Accommodated in Available Accommodation		70.7%	69.7%	68.7%	67.7%	66.8%	65.8%	64.8%	63.9%	63.0%	62.1%	61.2%
Market Gap at 100% of Students		**6 052**	**6 382**	**6 722**	**7 068**	**7 422**	**7 786**	**8 157**	**8 535**	**8 924**	**9 321**	**9 727**
Student Accommodation Target Market % (Increasing Incrementally)		71%	72%	73%	74%	75%	76%	77%	78%	79%	80%	80%
Total Target Market (Number)		14 688	15 180	15 688	16 210	16 746	17 298	17 866	18 448	19 048	19 665	20 048
Total Market Gap (Cumulative)		53	478	919	1 373	1 840	2 323	2 821	3 332	3 860	4 405	4 715
Effective Market Gap (Cumulative)		**53**	**478**	**919**	**1 373**	**1 840**	**2 323**	**2 821**	**3 332**	**3 860**	**4 405**	**4 715**
Annualised Take-Up (Cumulative)	Low	1	10	18	27	37	46	56	67	77	88	94
	High	2	14	28	41	55	70	85	100	116	132	141
	Average (units)	**2**	**12**	**23**	**34**	**46**	**58**	**71**	**84**	**97**	**110**	**118**

Source: DEMACON, 2023

The market demand modelling estimate shows that between 2023 and 2033 approximately 4 373 new students could be enrolled as full-time contact students at the University of Stellenbosch. Likewise, student accommodation (supply) is forecast to increase by 698 beds (based on the historic supply-side growth trajectory). Early indications based on the preceding information suggest, that over the medium-term, a shortfall of student accommodation beds could emerge (3- to 5-years).

Given the National Planning Commissions aspirations (80% of students accommodated in accredited student accommodation) and minimum benchmarks (Minimum Norms and Standards), present student accommodation supply in the market area appears to be fairly saturated. Considering that the total student accommodation target market (i.e., demand) will increase systematically over time (from 71% to 80% as per National student accommodation guidelines and aspirations), the saturated market will transition to a market with a measurable student accommodation market demand gap over the medium-term. Furthermore, the rate at which student accommodation supply is currently growing is below the student enrolment growth rate of the University – consequent to which a shortfall in accommodation is likely to emerge over the medium term).

The net additional demand for student accommodation in the competitive market is estimated to be:

- Between 1 800 and 2 300 beds in the near term and
- Up to 4 400 to 4 700 beds in the medium-term

Given the dynamic nature of demand-side growth (systematically expanding student numbers), compared to the relatively inelastic supply-side expansion (supply is added in growth spurts over time), periodic over and under-supply is bound to occur.

Considering the preceding, further analyses reveal that the bulk of student accommodation demand is catered to by institutional accommodation provided in the vicinity of the University (within the prescribed 5 km minimum norms and standards radius) – in the case of Stellenbosch, this is even closer at a maximum 3 km radius. The following table illustrates that the cumulative effective market gap primarily consists of Non-NSFAS students that might be required to source accommodation outside of current and future proposed accredited accommodation providers. Growth in NSFAS students as a market source is likely to continue through 2025 and onwards as existing and potential future supply becomes saturated and NSFAS students might need to consider accommodation options outside existing accredited providers.

Table 12.8: Distribution of the Effective Market Gap between NSFAS and Non-NSFAS Students - Residual Demand between 2023 and 2033

		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Number of **NSFAS Students** that will Require Accommodation outside Existing Supply and Estimated Future Supply		0	0	78	160	244	331	420	512	606	703	763
Total Number of **Non-NSFAS Students** that will Require Accommodation outside Existing Supply and Estimated Future Supply		53	478	841	1 213	1 596	1 992	2 401	2 820	3 254	3 702	3 952
Effective Market Gap (Cumulative) – Residual demand for student accommodation not accommodated in existing and estimated future accredited student accommodation supply		**53**	**478**	**919**	**1 373**	**1 840**	**2 323**	**2 821**	**3 332**	**3 860**	**4 405**	**4 715**
Annualised Take-Up (Cumulative)	Low	1	10	18	27	37	46	56	67	77	88	94
	High	2	14	28	41	55	70	85	100	116	132	141
	Average (units)	**2**	**12**	**23**	**34**	**46**	**58**	**71**	**84**	**97**	**110**	**118**

Source: DEMACON, 2023

12.6 SYNTHESIS

GAP ANALYSIS

Considering the preceding analyses and outcomes, a perspective on the potential gap that may exist for student accommodation in the immediate catchment of Stellenbosch University targeted by the proposed project can be provided. The following figure provides an indication of the effective market gap identified for student accommodation per target market.

TARGET MARKET	EFFECTIVE MARKET GAP	DEVELOPMENT PROSPECT
Non-NSFAS Students	✓	Moderate

CONSIDERATIONS

Given the location of the proposed development and associated development concept, it is estimated that the proposed project could garner some market share al be it low. In the context of the preceding, the forecast medium- term demand is unlikely to **exceed ±150 beds.**

Several key aspects should be taken into consideration when evaluating the potential of the proposed project to capitalise on the student accommodation market and the potential of the project to garner market share:

- The proposed project is located approximately 10 km from the University of Stellenbosch. Therefore, the proposed project is removed from the core student accommodation supply area of the University (approximately 95% to 98% of current accredited and non-accredited supply are within a 2 to 3 km radius of the University) and also falls outside the preferred distance for student accommodation accreditation as set out by the National Minimum Norms and Standards documentation and related accreditation criteria for universities.
- The proposed project would have to overcome initial inertia in order to capture at least some interest from students and investors in student accommodation (should these be offered to the open market) against the backdrop of predetermined design considerations for student specific accommodation (and associated facilities and amenities) and the likely risk that the development may well not be granted accreditation.
- Furthermore, the distance that the proposed project is from the University and Stellenbosch town would impose, thereby introducing and additional travel cost driver on students residing in the project. An attempt could be made to offset these effects by offering substantially more affordable accommodation compared to providers in Stellenbosch. Construction and relate costs will dictate the viability and sustainability of such a strategy – most probably R6 500 to R7 500 rands per bed per month.
- The development concept of the proposed project does not articulate an aspirate to align with National Minimum Norms and Standards for purpose-built student accommodation and all the intricacies concerning the degree of services, configuration options and amenities (entertainment, student life programmes, furnished rooms and kitchens, free access to internet, access to student orientated services such as printing, room cleaning services, etc.). As a consequence, the proposed project could potentially be hamstrung in its drive to be competitive, regardless of discounted rental rates.
- Purely on the basis of distance, the project will find it challenging to receive accreditation from the University. Over and above the distance deterrence function, students will be removed from the hub of student life activity in town. It will take the project some years to build sufficient critical mass in order to sustain some minimum level of retail potential.
- Accreditation only occurs a project has been complete, which introduces a further real risk: student accommodation requires a comparatively higher development density, whereas the norm in the surrounding rural

environment is for lower density luxury living. This reality would introduce infinite challenges, should a later conversion considered on the basis of an accreditation rejection/denial.

Considering the above, the proposed development will likely need to consider a systematic approach to attracting and introducing students in a conventional open-market development (as opposed to a branded student accommodation village) to the proposed development given that it will take time to build the necessary critical mass of facilities and services to be supported.

BEDROOM / UNIT CONFIGURATIONS:

Considering the preceding, the following information seeks to provide an overarching perspective on the configuration of the total number of units/beds that would typically be incorporated in a student accommodation building.

The purpose is to illustrate how student accommodation supply is typically configured in terms of bedroom and unit typologies.

Alternative Example of a building with 1- and 2-bedroom units in the market



The illustrations show that for 1- and 2-bedroom unit configurations different configuration options are typically explored that focus on supplying either predominantly 1-bedroom units or 2-bedroom units. These developments can consist of shared units, small and large single bedroom units and premium apartments and townhouses.

Recommended configuration for the development:

Percentage Range of Student Beds per Unit Configuration



Table 12.9: Recommended configuration and Pricing Structure

Bedroom Types	Percentage (%)	Number of units	Unit Rental Rates
1 bedroom	30%	105	R8 000 - R10 000
2 bedrooms	70%	45	R10 000 - R12 000
	100%	150	

Source: Demacon 2023

Considering project locality and the need to be able to cater to a broader market segment, a 30:70 uit split is recommended. Furthermore, a differentiated product offering could be provided to students at a ±10% discount rate to account for the travel distance and associated costs between Lynedoch and the Stellenbosch campus (±20km return trip per day @ R1 000 petrol money per month).

The following **amenities** are typically provided by student residences:

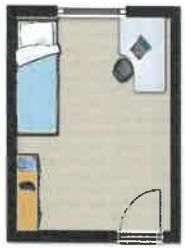
- Laundry services
- Entertainment areas
- Study room
- Convenience retail
- Free uncapped Wi-Fi
- DStv
- Bus/shuttle services
- 24-hour security
- Biometric access control

Based on the preceding analysis, the following seeks to provide an overview of the configuration considerations of individual units. The analysis seeks to highlight the typical layout, room facilities, building amenities and price ranges of units.

Accommodation Configuration and Room Offering

Based on the preceding analysis, the following seeks to provide an overview of the configuration considerations of individual units. The analysis seeks to highlight the typical layout, room facilities, building amenities and price ranges of units.

Table 12.10: 1-Bedroom Unit Configuration Considerations

	Private Sector Units	Institutional Units	Development
Typical Layout Examples			
Typical Configuration Options	Consist of: • Bedroom units • Studio and apartments • Penthouses	Consist of: • Bedroom units • Studio and apartments	Consist of: • 1 bedroom units • Townhouses / walk-ups
Room Features	• Bed • Curtains • Study desk and chair • Lamp and bedside table • Lockable cupboards • Wardrobe • Kitchenette (premium option) • Heater • Bathroom (premium option) • TV (premium option)	• Bed • Curtains • Study desk and chair • Lamp and bedside table • Lockable cupboards • Wardrobe • Kitchenette • Heater • Bathroom	• Study desk • Bathroom
Shared Facilities	• Bathroom • Kitchen • Fridge • Microwave	• In some instances, the residence is catered and therefore kitchens are not necessary	• Kitchen • Bathroom • Fridge
Building Amenities	• Laundry services • Entertainment areas • Study room • Convenience retail	• Laundry services • Entertainment areas • Study room • Convenience retail	• Entertainment area • Convenience retail
Services	• Free uncapped Wi-Fi • DStv • Bus/shuttle services • 24-hour security • Biometric access control	• Free uncapped Wi-Fi • DStv • Bus/shuttle services • 24-hour security	• Free uncapped Wi-Fi • Bus/shuttle services • 24-hour security
Premium extras	• Backup power generation • Rooftop entertainment • Swimming pool • Braai facilities • On-site building manager • Secure parking (at a premium) • Gym		• Swimming pool • Braai facilities • Secure parking (at a premium)

Source: DEMACON Research, 2023

Table 12.11: 2-Bedroom Unit Configuration Considerations

	Private Sector Units	Institutional Units	Development
Typical Layout Examples			
Typical Configuration Options	Consist of: • Bedroom units • Apartments	Consist of: • Bedroom units • Apartments	Consist of: • 2 Bedroom units • Townhouses
Room Features	• Bed • Curtains • Study desk and chair • Lamp and bedside table	• Bed • Curtains • Study desk and chair • Lamp and bedside table	• Study desk • 1 or 2 Bathrooms

	Private Sector Units	Institutional Units	Development
	• Lockable cupboards • Wardrobe • Kitchenette (premium option) • Heater • Bathroom (premium option) • TV (premium option)	• Lockable cupboards • Wardrobe • Kitchenette • Heater • Bathroom	
Shared Facilities	• Bathroom • Kitchen • Fridge • Microwave	• In some instances, the residence is catered and therefore kitchens are not necessary	• Bathroom • Kitchen • Fridge
Building Amenities	• Laundry services • Entertainment areas • Study room • Convenience retail	• Laundry services • Entertainment areas • Study room • Convenience retail	• Laundry services • Entertainment areas • Study room • Convenience retail
Services	• Free uncapped Wi-Fi • DStv • Bus/shuttle services • 24-hour security • Biometric access control	• Free uncapped Wi-Fi • DStv • Bus/shuttle services • 24-hour security	• Free uncapped Wi-Fi • DStv • Bus/shuttle services • 24-hour security • Biometric access control
Premium extras	• Backup power generation • Rooftop entertainment • Swimming pool • Braai facilities • On-site building manager • Secure parking (at a premium) • Gym		• Swimming pool • Braai facilities • Secure parking (at a premium)

Source: DEMACON Research, 2023

438

SUMMARY & RECOMMENDATIONS

13

CHAPTER

13. SUMMARY AND RECOMMENDATIONS

13.1 INTRODUCTION

The purpose of this chapter is to integrate the findings of the previous chapters into a concise set of development recommendations with reference to the optimum capacity of the proposed **mixed-use development** to be situated in **Lynedoch, Western Cape Province.** Subsequent section provides concise summary and recommendations for the development.

13.2 MARKET DEMAND SUMMARY AND OUTCOMES



LOCATIONAL ATTRIBUTES

STRATEGIC ANALYSIS

- ✓ The site is situated within Lynedoch, Stellenbosch Local Municipality, which forms politically, part of the Cape Winelands District Municipality, Western Cape Province.
- ✓ Stellenbosch Local Municipality is bounded to the east and south by the Drakenstein, Wemmershoek and Limietberg mountain ranges.
- ✓ The **main settlements** in SM are the historic towns of Stellenbosch and Franschhoek, and Klapmuts. There are also a number of **smaller villages**, including Jamestown (contiguous with Stellenbosch town), Pniel, Johannesdal, Lanquedoc, Lynedoch, and Raithby. New nodes are emerging around agricultural service centres, for example, Koelenhof and Vlottenburg.
- ✓ Lynedoch is classified as a **secondary settlement** with the role to gradual expand focusing on **sustainable living and education.**
- ✓ The **current housing demand** waiting list comprise some 15 780 applicants (Western Cape Housing Demand Database extract for Stellenbosch, May 2018).
- ✓ In terms of the Stellenbosch's Built Environment Context, a **housing backlog** in the rural settlements have a backlog of over **3 000 housing opportunities** in rural areas (based on information from the Draft Rural Plan).
- ✓ Lynedoch is identified as:
  - A growth node
  - Opportunities for a new high density MU infill development.
  - Future opportunities for new high-density MU – when transit implemented.
- ✓ In terms of the **consolidated concept**, Lynedoch is:
  - A primary development axis / transport corridor
  - A transit node,
  - Highly accessible location within the urban edge
- ✓ Several **settlement plans / new developments** for the municipality:
  - Raithby
  - Vlottenburg
  - Kylemore
  - Phiel
  - Koelenhof
  - Muldersvlei
  - Klapmuts
  - Groot Drakenstein
  - Wemmershoek
  - Franschhoek
  - Several **settlement plans / new developments** for the municipality:
- ✓ In terms of residential planning, the MSDF stipulated that over the longer term, it is believed that some settlements along the **Baden-Powell-Adam Tas-R304** corridor can support larger populations, particularly the broader Muldersvlei/ Koelenhof and Vlottenburg/ Spier/**Lynedoch** areas.

BUILDINGS COMPLETED

Key Findings – *Stellenbosch Local Municipality Building Statistics (from 2012 to 2022)*

- ✓ 88.7% of all buildings completed from 2012 to 2022, were residential, 1.9% were non-residential, and 9.4% were additions/alterations.
- ✓ In terms of **residential buildings** completed from 2012 to 2022:
  - 57.3% were dwelling houses,
  - 36.7% flats,
  - 5.5% townhouses and
  - 0.5% other residential buildings (incl. tourism accommodation etc).

- ✓ The majority of **non-residential buildings** completed from 2012 to 2022:
  - 34.9% were industrial and warehouse space,
  - 24.9% office and banking space,
  - 16.2% shopping space and
  - 16.2% schools, nursery schools, crèches, hospitals
- ✓ Industrial and warehouse space amounted to ±64 353m², office and banking space 45 958m² and shopping space 29 939m² from 2012 – 2022.

Source: Demacon ex StatsSA

Summary of Buildings Completed - *Stellenbosch Local Municipality*

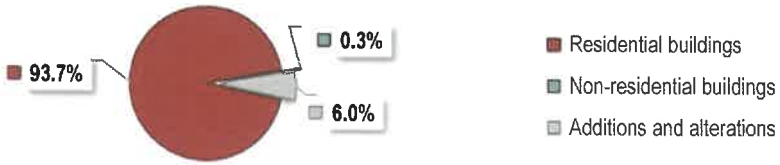


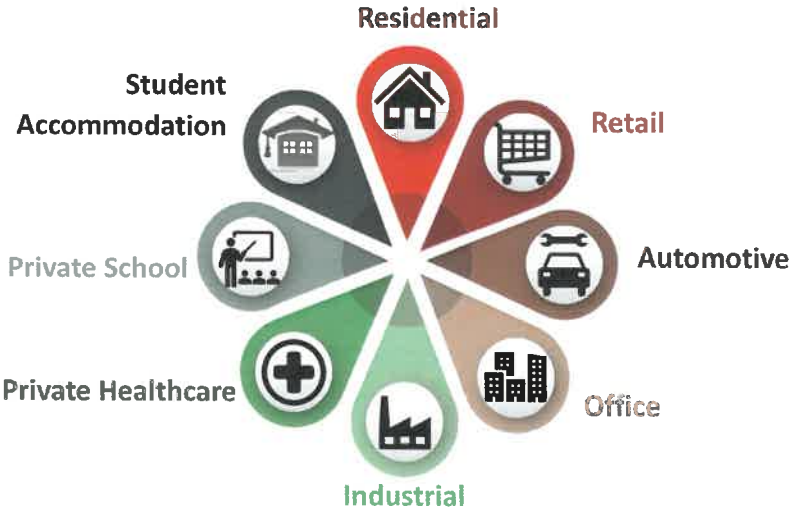
Table 13.1: Residential Buildings Summary

Stellenbosch Local Municipality			TOTAL	AVERAGE
Residential Buildings		Dwelling-Houses	2 462 units	224 units
		Flats	1 579 units	144 units
		Townhouses	238 units	22 units
		Other Residential (incl. Tourism Accommodation)	20 units	2 units
	RESIDENTIAL UNITS		4 299 units	430 units/a
Non-Residential Buildings		Office and banking space	45 958m²	4 178m²
		Shopping space	29 939m²	2 722m²
		Industrial and warehouse space	64 353m²	5 850m²
		Churches, sport and recreation clubs	2 967m²	270m²
		Schools, nursery schools, crèches and hospitals	29 833m²	2 712m²
		Other non-residential buildings	11 590m²	1 054m²
	NON-RESIDENTIAL BUILDINGS		184 640m²	16 785m²

Source: Demacon ex StatsSA

SITE ASSESSMENTS

Location assessments for the project include the following land uses:



The preceding analysis shows the outcome of the location analysis for the proposed development. The data shows that the site ratings are high and indicate that most important fundamentals for a successful development are in place.

Table 13.2: Summary of site assessments:

Residential	73.2%
Retail	74.3%
Office	72.9%
Private Healthcare	69.8%
Private School	73.8%
Student Accommodation	72.7%

The location scores rated high due to the following:

- Address Value
- Access to main roads (adjacent to the R566 Road)
- Accessibility
- Visibility
- Availability of Land
- Future Expansion Potential

SITE DESCRIPTION

- ✓ The proposed development is located in **Lynedoch, Stellenbosch Local Municipality, Western Cape Province**. The sites extend north and south of the R310 road (Baden Powell Drive). The focus of the market study is **Portion 28 to the north of the R310** which measures **±45.48 ha**.
- ✓ It is anticipated that the proposed development will have a positive impact on the local and metro economy as well as on the municipality.

DEMOGRAPHIC OVERVIEW

- ✓ The project is located within a primary market area of approximately **74 510 people / 20 347 households** and 3.2 people per household. (**68.7%** within SEM 2 to 5).
- ✓ The racial profile of the primary market area shows that 70.0% are Coloured, 15.4% White, 14.0% Black African and 0.6% Indian / Asian.
- ✓ The largest segment of the resident population is between the ages of 15 to 34 (35.3%) – classified as the youth to mature population,
- ✓ **Highest Level of Education Attained**
  Of the population only 1.5% have obtained no education.
  The largest portion of the primary market area has some secondary education (39.1%), followed by 27.5% who obtained Grade12 / Matric.
  17.5% of the population have a higher education.
- ✓ **Attendance at an Education Institution (Persons Aged 20 and Older)**
  Of the persons aged 20 years and older, 17.9% are currently enrolled at an educational institution. They are primarily enrolled at a university (57.8%). 11.0% at a FET College and 10.5% at another College.
- ✓ Of the economically active population, 84.8% are employed and 15.2% are unemployed. The primary market area reflects low to moderate dependency ratios.
- ✓ The largest segment of formal dwellings are free standing houses on single erven (84.0%).
- ✓ The weighted average annual household income for the resident population for 2023 amounts to **R271 759 per annum**, which amounts to **R22 647 per month** for **all SEM groups.**
- ✓ Approximately **31.3%** of the primary market area's households are classified within the SEM Supergroup 1 with **68.7%** of households classified within the **SEM Supergroup 2+** categories.
- ✓ For SEM groups 2 and higher, the average income is **R429 189 per annum,** which amounts to **R35 766 per month.**
- ✓ The largest segment of is represented by Generation Z (32.4%), followed by Millennials (26.0%) and Generation X consumers (21.0%).
- ✓ The Baby Boomers (7.9%) and Silent Generation (1.2%) form 9.1% of the population.

MARKET GAP ANALYSIS SUMMARY

Based on the above information, the market demand outcomes for the proposed **Lynedoch Mixed-Use** Development can be summarised as followed.

Table 13.3: Lynedoch Gap Analysis

Land Use	Effective Market Gap	Development Prospects
Residential Bonded (Low Density)	✓	Moderate to High
Student Accommodation (Medium Density)	✓	Moderate
Retail (Small Convenience Centre)	✓	Moderate
Trade (Automotive)	✓	Moderate
Offices / Administrative Functions	✓	Moderate
Private Day Clinic	✓	Moderate
Private School	✓	Moderate

13.3 OVERVIEW OF MARKET RECOMMENDATIONS

The table below provides a summary of the demand potential for the **Lynedoch Mixed-Use Development**.

Table 13.4: Key Findings and Recommendations

<table>
<tr><th>Land Use</th><th>Market Gap Development Prospects</th><th>High Level Recommendations</th></tr>
<tr><td>RESIDENTIAL
Low density cluster homes & walk-ups</td><td>Market Gap:
✓
Development Prospects:
Moderate to High
Site rating:
73.2%
Potential:
±300 units</td><td>
BONDED UNITS (Short to Medium Term – 3 to 5 years)
✓ An estimated 322 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 64 units.
✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 46 units per annum.
✓ A total of ±300 units could be developed and taken-up over the short term (80% take-up).
✓ Optimum point of market entry: 2024+
✓ Configuration of units: Low density cluster homes & walk-ups
✓ A first phase of 100 to 150 units is recommended (3- to 5-year take-up forecast).
✓ Optimum Distribution Range Configuration (based on market demand profile) – target market *
<table>
<tr><th>Target Market</th><th>% of target market</th><th>Sales Units</th><th>Sales Price Range</th><th>Rental Units</th><th>Rental Price Range</th><th>Composition</th><th>Unit Sizes (m²)</th></tr>
<tr><td rowspan="2">47.3%</td><td>24.6%</td><td>74</td><td>R650 000 - R800 000</td><td>15</td><td>R5 500 – R7 000</td><td>Bachelor</td><td>35 - 50</td></tr>
<tr><td>22.7%</td><td>68</td><td>R800 000 - R1.3 million</td><td>14</td><td>R7 000 – R10 000</td><td>1 bedroom, 1 bathroom</td><td>60 - 75</td></tr>
<tr><td rowspan="2">33.3%</td><td>17.3%</td><td>52</td><td>R1.3 million - R1.7 million</td><td>10</td><td>R10 000 – R15 000</td><td>1.5-bedroom, 1 bathroom</td><td>80 - 90</td></tr>
<tr><td>16.0%</td><td>48</td><td>R1.7 million - R2.5 million</td><td>10</td><td>R15 000 - R20 000</td><td>2 bedrooms, 1.5 bathroom</td><td>90 - 100</td></tr>
<tr><td rowspan="2">19.5%</td><td>13.2%</td><td>40</td><td>R2.5 million - R3.5 million</td><td>8</td><td>R20 000 - R30 000</td><td>2 bedrooms, 2 bathrooms</td><td>110 – 130</td></tr>
<tr><td>6.3%</td><td>19</td><td>R3.5 million+</td><td>4</td><td>R30 000+</td><td>3 bedrooms, 2 bathrooms</td><td>135+</td></tr>
<tr><td>TOTAL</td><td>100.0%</td><td>±300</td><td></td><td>±61*</td><td></td><td></td><td></td></tr>
</table>
Source: Demacon Modelling, 2023
*part of the 300 units
</td></tr>
<tr><td></td><td>Market Gap:
✓
Development Prospects:
Moderate to High</td><td>
BONDED UNITS (Medium to Longer Term – 5 to 10 years)
✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
✓ A total of ±750 units could be developed and taken-up over the medium to longer term (80% take-up) over a 5-to-10-year period.
✓ Optimum point of market entry: 2024+
✓ Configuration of units: Low density cluster homes & walk-ups
</td></tr>
</table>

Land Use	Market Gap Development Prospects	High Level Recommendations

Potential:
±750 units

✓ **Optimum Distribution Range Configuration** (based on market demand profile) – target market *

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m²)
47.3%	24.6%	184	R650 000 - R800 000	37	R5 500 – R7 000	Bachelor	35 - 50
	22.7%	170	R800 000 - R1.3 million	34	R7 000 – R10 000	1 bedroom, 1 bathroom	60 - 75
33.3%	17.3%	130	R1.3 million - R1.7 million	26	R10 000 – R15 000	1.5-bedroom, 1 bathroom	80 - 90
	16.0%	120	R1.7 million - R2.5 million	24	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	90 - 100
19.5%	13.2%	99	R2.5 million - R3.5 million	20	R20 000 - R30 000	2 bedrooms, 2 bathrooms	110 – 130
	6.3%	47	R3.5 million+	10	R30 000+	3 bedrooms, 2 bathrooms	135+
TOTAL	100.0%	±750		±152*			

Source: Demacon Modelling, 2023
**part of the 750 units*

Market Gap:

Development Prospects:
Moderate to High

Potential:
±1 500 units

BONDED UNITS (Long Term – 10 to 15 years)

- ✓ An estimated 431 new households will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately 86 units.
- ✓ Under present market conditions, the bonded segment (71.9%) will yield a take-up rate of 62 units per annum.
- ✓ A total of **±1 500 units** could be developed and taken-up over the medium to longer term (80% take-up) over a 10-to-15-year period.
- ✓ Optimum point of market entry: **2024+**
- ✓ Configuration of units: **Low density cluster homes & walk-ups**
- ✓ **Optimum Distribution Range Configuration** (based on market demand profile) – target market *

Target Market	% of target market	Sales Units	Sales Price Range	Rental Units	Rental Price Range	Composition	Unit Sizes (m²)
47.3%	24.6%	369	R650 000 - R800 000	75	R5 500 – R7 000	Bachelor	35 - 50
	22.7%	340	R800 000 - R1.3 million	69	R7 000 – R10 000	1 bedroom, 1 bathroom	60 - 75
33.3%	17.3%	259	R1.3 million - R1.7 million	52	R10 000 – R15 000	1.5-bedroom, 1 bathroom	80 - 90
	16.0%	239	R1.7 million - R2.5 million	48	R15 000 - R20 000	2 bedrooms, 1.5 bathroom	90 - 100
19.5%	13.2%	198	R2.5 million - R3.5 million	40	R20 000 - R30 000	2 bedrooms, 2 bathrooms	110 – 130
	6.3%	94	R3.5 million+	19	R30 000+	3 bedrooms, 2 bathrooms	135+
TOTAL	100.0%	±1 500		±303*			

Source: Demacon Modelling, 2023
**part of the 1 500 units*

Note: As the project builds momentum and gains an established brand and identity, the take-up of the project will accelerate.

Land Use	Market Gap Development Prospects	High Level Recommendations
RETAIL **Small Convenience Centre**	**Market Gap:** **Development Prospects:** Moderate **Site Rating:** 74.3% **Potential:** **±2 278m² GLA** *(Baseline Scenario)* **±2 869m² GLA** *(Optimistic Scenario)*	**Two scenarios were modelled:** 1. Both scenarios consider a 5-minute drive time, 2. The **optimistic scenario** is based on a *higher market share*. Over and above, the site stands to benefit from daily transient trade due to its favourable location adjacent to Baden Powell Drive. **Demand Modelling Results:** ✓ In the context of residual nodal capacity calculations, the demand calculations indicate an optimum size of **±2 278m² GLA** in terms of the *baseline scenario* and **±2 869m² GLA** in terms of the *optimistic scenario*. ✓ Considering the growth dynamics of the area, the *optimistic* scenario is deemed realistic achievable. ✓ The optimum point of market entry could be **2029+** ✓ An opportunity over the short to medium term exists for a **Small Convenience Centre**. ✓ The proposed shopping centre should be able to attain an annual sales potential of approximately **R60 million** (*baseline scenario*) and **R75 million** (*optimistic scenario*) based on benchmark trading densities. ✓ Permanent on-site job creation of **±76** (baseline) or **±96** (optimistic), based on the SEM 2 to 5+ calculation. ✓ Performance will be dependent on, inter alia, appropriate tenant composition. ✓ Ample parking should be provided at a ratio of **4 bays per 100m²** retail GLA. ✓ The parking area should be accessible, convenient, paved and well-lit in the evenings. **Main Tenants (Small Convenience Centre):** ✓ Small café / superette ✓ Restaurant(s) ✓ Few small convenience stores. **Summary of Retail Demand**

	Baseline Scenario (Rand / sqm)	Optimistic Scenario (Rand / sqm)
Total Annual Growth in Market Demand (Sqm/A)	411	465
Centre Share of Growth (Sqm/A)	92	116
Point Of Market Entry	2029+	2029+
Additional Growth in Demand for Centre (Sqm)	831	1 047
Retail GLA At OPME	1 937	2 440
Services GLA at OPME	341	429
OPME Centre Size (sqm GLA)	±2 278m²	±2 869m²
On-Site Job Creation	76	96
Retail Sales Potential (R2023 Value)	R60 081 770	R75 656 444
Total Capital Investment (R2023 Value)	R43 289 861	R54 511 659
Additional Parking Bays Required	137	172
Parking Infrastructure & Landscaping Cost	R3 253 575	R4 096 982

Source: Demacon Demand Modelling, 2023

Land Use	Market Gap Development Prospects	High Level Recommendations
AUTOMOTIVE **Automotive Service Centre with Ancillary Uses**	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 74.3% **Potential:** ±455m² *(Initial phase)* ±862m² *(Medium to long term)*	**Recommended Sizes:** ✓ Trade sector market demand of **Stellenbosch Local Region** increases cumulatively from 50 670m² GLA in 2028 to 157 938m² GLA in 2043. ✓ Viable market-based take-up for the proposed development over the next 5 to 10 years is approximately **455m² GLA** and **862m² GLA** over the medium to long term. ✓ This floor space could include either a motor dealership, automotive workshop, or any other automotive related activities. ✓ Optimum point of market entry: **2028+** for the initial phase and **2033+** for the medium to long term. ✓ This floor space could include one of the following automotive services: • **Car service centre, fitment and repair centre** e.g., Bosch Car Services, Tyres & More, Car Care Clinic, Car Service City etc. • **Commercial servicing and repairs** • Selected **automotive ancillary services** such as a car wash performing not only washing but cosmetic repair services, valet services. e.g. Sparkling Car Care, AutoZone, Car Wash Worx **Recommended Sizes (Take-up forecast)**

Recommended Sizes	Initial Phase (5-10yrs) Rand per annum / m²	Medium to long term Rand per annum / m²
Capital investment (2023 constant values)	R8 651 201	R16 371 804
Employment opportunities	15	29
Parking	18	34
Parking infrastructure & landscaping cost (2023 constant values)	R433 471	R820 314
Point of market entry	2028+	2033+
Size of development (sqm) (up to 2028 & 2038)	±455m²	±862m²

Source: Demacon Demand Model, 2023

OFFICES **Office with administrative functions**	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 72.9% **Potential:** ±2 082m²	**Recommended Sizes:** ✓ The office market has rebounded much quicker than anticipated with an accelerated "return-to-office" that has less than 5% of office workers still working from home. ✓ Market demand for office floor space in the sub-regional economy, increases cumulatively from 8 394m² GLA in 2028 to 95 744m² GLA in 2043. ✓ Over the medium to long term, the project could attract office take-up of approximately **2 082m² GLA (2033).** ✓ This space includes GLA for offices and related facilities, but excludes parking, storage and basements. ✓ It is recommended that low- to medium-density office development could be supported as part of the proposed mixed-use development. ✓ Take-up will predominantly be from small enterprises and SMMEs: • **Service-orientated occupants**: dentist offices, medical practitioners, local surgeons, attorneys, financial services etc. • **Local government service functions, administrative functions, and/or institutional functions.**

Land Use	Market Gap Development Prospects	High Level Recommendations
		• Targeting these tenants could strengthen the demand for and the take-up of office space demand in the mixed-use node. ✓ Optimum point of market entry: **2029+**

Recommended office park space options (10-year demand and take-up forecast)

Variables	Rand per annum / m²
Capital Investment (2023 constant values)	R37 481 572
Optimum size (GLA – 2033)	**±2 082m²**
Employment (on-site)	104
Parking bays	83
Parking infrastructure & landscaping cost (2023 constant values)	R1 982 359
Point of market entry	2029+

Source: Demacon Demand Model, 2023

PRIVATE HEALTHCARE
Private Day Clinic



Market Gap:

Development Prospects: Moderate

Site Rating: 69.8%

Potential: ±5 – 7 beds

Recommended Sizes:

- ✓ There is approximately 29 785 medically insured persons in the primary market area, from a total estimate population of **74 510** - a total of 40.0% of the market population.
- ✓ For demand modelling purposes, the number of private beds catering required to the needs of the medically insured segment of the market is 4.8 private beds per 1 000 medically insured persons.
- ✓ The above yields a total demand for 168 private beds in the market area (2023), increasing to 170 in 2028 and 172 in 2033.
- ✓ Potential exists for a **private day clinic** with approximately **5 - 7 beds** over the next 5 to 10 years.
- ✓ The optimum point of market entry: **2028+.**

Recommended Sizes

	2023	2028	2033
Market potential (total number of viable beds for facility)	**5**	**6**	**7**
Total additional area requirement (sqm hospital floor space)	357	425	488
Model Calibration & Sensitivity			
Beds / 1000 total population as benchmark:			
Population ('000)	35.0	35.4	35.8
National Average (Private beds per 1000 population)	4.80	4.80	4.80
Study area private beds per 1000 total population (as per Demacon Model)	4.19	4.17	4.15
	87.3%	**86.9%**	**86.5%**

Interpretation: <100% = Conservative market potential estimation, >100% = Liberal market potential estimation (likely to produce oversupply in market)

Land Use	Market Gap Development Prospects	High Level Recommendations
PRIVATE SCHOOL	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 73.8% **Potential:** ±350 to 400 learners	**Recommended Sizes** ✓ It can be concluded that there is a moderate demand for a private school as part of the larger development. ✓ Potential exists for the development of a facility catering to approximately **350 to 365 pupils** over the short term to medium term, increasing to **370 to 400 pupils** over the medium to long term (2038) at full capacity. ✓ Optimum point of market entry: **2028+** ✓ Potential exists for say **350 to 400 learners.**
STUDENT ACCOMMODATION	**Market Gap:** ✓ **Development Prospects:** Moderate **Site Rating:** 72.7% **Potential:** ±118 units 199 beds	**Findings:** ✓ The market demand modelling estimate shows that between 2023 and 2033 approximately 4 373 new students could be enrolled as full-time contact students at the university of Stellenbosch. Likewise, student accommodation (supply) is forecast to increase by 698 beds (based on the historic supply-side growth trajectory). Early indications based on the preceding information suggest, that over the medium-term, a shortfall of student accommodation beds could emerge (3- to 5-years). ✓ Given the National Planning Commissions aspirations (80% of students accommodated in accredited student accommodation) and minimum benchmarks (Minium Norms and Standards), present student accommodation supply in the market area appears to be fairly saturated. Considering that the total student accommodation target market (i.e., demand) will increase systematically over time (from 71% to 80% as per National student accommodation guidelines and aspirations), the saturated market will transition to a market with a measurable student accommodation market demand gap over the medium-term. Furthermore, the rate at which student accommodation supply is currently growing is below the student enrolment growth rate of the University – consequent to which a shortfall in accommodation is likely to emerge over the medium term). ✓ The net additional demand for student accommodation in the competitive market is estimated to be:

Recommended Sizes

	2023	2028	2033	2038
Total number of people	48 729	49 761	50 815	51 891
• Ages 5 – 9 (7.9%)	581	593	606	619
• Ages 10 – 14 (8.0%)	588	600	613	626
• Ages 15 – 19 (8.7%)	639	652	666	680
Target Age Segment	12 050	12 305	12 566	12 832
Private School Attendance	1 808	1 846	1 885	1 925
• Ages 5 - 9	271	277	283	289
• Ages 10 - 14	362	369	377	385
• Ages 15 - 19	**316**	**323**	**330**	**337**
Minimum	271	277	283	289
Maximum	362	369	377	385
Average	**316**	**323**	**330**	**337**
Secondary Injection	40	41	42	43
Total Demand	356	364	372	380

Source: Demacon Demand Model, 2023

Land Use	Market Gap Development Prospects	High Level Recommendations

- Between 1 800 and 2 300 beds in the near term and
- Up to 4 400 to 4 700 beds in the medium-term

✓ Given the dynamic nature of demand side growth (systematically expanding student numbers), compared to the relatively inelastic supply side expansion (supply is added in growth spurts over time), periodic over and under supply is bound to occur.

✓ Considering the preceding, further analyses reveal that the bulk of student accommodation demand is catered to by institutional accommodation provided in the vicinity of the University (within the prescribed 5 km minimum norms and standards radius) – in the case of Stellenbosch this is even closer at a maximum 3 km radius. The following table illustrates that the cumulative effective market gap primarily consists of non-NSFAS students that might be required to source accommodation outside of current and future proposed accredited accommodation providers. Growth in NSFAS students as a market source is likely to continue through 2025 and onwards as existing and potential future supply becomes saturated and NSFAS students might need to consider accommodation options outside existing accredited providers.

Demand Modelling

		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Full-Time Enrolled Contact Students		20 687	21 084	21 491	21 905	22 328	22 761	23 202	23 651	24 112	24 581	25 060
Accredited Student Accommodation Available (Institutional and Private)		14 635	14 702	14 769	14 837	14 906	14 975	15 045	15 116	15 188	15 260	15 333
Percentage of Students Accommodated in Available Accommodation		70.7%	69.7%	68.7%	67.7%	66.8%	65.8%	64.8%	63.9%	63.0%	62.1%	61.2%
Market Gap at 100% of Students		6 052	6 382	6 722	7 068	7 422	7 786	8 157	8 535	8 924	9 321	9 727
Student Accommodation Target Market % (Increasing Incrementally)		71%	72%	73%	74%	75%	76%	77%	78%	79%	80%	80%
Total Target Market (Number)		14 688	15 180	15 688	16 210	16 746	17 298	17 866	18 448	19 048	19 665	20 048
Total Market Gap (Cumulative)		53	478	919	1 373	1 840	2 323	2 821	3 332	3 860	4 405	4 715
Effective Market Gap (Cumulative)		53	478	919	1 373	1 840	2 323	2 821	3 332	3 860	4 405	4 715
Annualised Take-Up (Cumulative)	Low (units)	1	10	18	27	37	46	56	67	77	88	94
	High (units)	2	14	28	41	55	70	85	100	116	132	141

449

Land Use	Market Gap Development Prospects	High Level Recommendations										
		Average (units)	2	12	23	34	46	58	71	84	97	110	118

The market demand modelling estimate shows that between 2023 and 2033 approximately 4 373 new students could be enrolled as full-time contact students at the university of Stellenbosch. Likewise, student accommodation (supply) is forecast to increase by 698 beds (based on the historic supply-side growth trajectory). Early indications based on the preceding information suggest, that over the medium-term, a shortfall of student accommodation beds could emerge (3- to 5-years).

Given the National Planning Commissions aspirations (80% of students accommodated in accredited student accommodation) and minimum benchmarks (Minium Norms and Standards), present student accommodation supply in the market area appears to be fairly saturated. Considering that the total student accommodation target market (i.e., demand) will increase systematically over time (from 71% to 80% as per National student accommodation guidelines and aspirations), the saturated market will transition to a market with a measurable student accommodation market demand gap over the medium-term. Furthermore, the rate at which student accommodation supply is currently growing is below the student enrolment growth rate of the University – consequent to which a shortfall in accommodation is likely to emerge over the medium term).

The net additional demand for student accommodation in the competitive market is estimated to be:

- Between 1 800 and 2 300 beds in the near term and
- Up to 4 400 to 4 700 beds in the medium-term

Given the dynamic nature of demand side growth (systematically expanding student numbers), compared to the relatively inelastic supply side expansion (supply is added in growth spurts over time), periodic over and under supply is bound to occur. Considering the preceding, further analyses reveal that the bulk of student accommodation demand is catered to by institutional accommodation provided in the vicinity of the University (within the prescribed 5 km minimum norms and standards radius) – in the case of Stellenbosch this is even closer at a maximum 3 km radius. The following table illustrates that the cumulative effective market gap primarily consists of non-NSFAS students that might be required to source accommodation outside of current and future proposed accredited accommodation providers. Growth in NSFAS students as a market source is likely to continue through 2025 and onwards as existing and potential future supply becomes saturated and NSFAS students might need to consider accommodation options outside existing accredited providers.

Distribution of the Effective Market Gap between NSFAS and Non-NSFAS Students - Residual Demand between 2023 and 2033

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Number of **NSFAS Students** that will Require Accommodation outside Existing Supply and Estimated Future Supply	0	0	78	160	244	331	420	512	606	703	763
Total Number of **Non-NSFAS Students** that will Require Accommodation outside Existing Supply and Estimated Future Supply	53	478	841	1 213	1 596	1 992	2 401	2 820	3 254	3 702	3 952
Effective Market Gap (Cumulative) – Residual demand for student accommodation not accommodated in existing and	**53**	**478**	**919**	**1 373**	**1 840**	**2 323**	**2 821**	**3 332**	**3 860**	**4 405**	**4 715**

Land Use	Market Gap Development Prospects	High Level Recommendations

estimated future accredited student accommodation supply

Annualised Take-Up (Cumulative)	Low (units)	1	10	18	27	37	46	56	67	77	88	94
	High (units)	2	14	28	41	55	70	85	100	116	132	141
	Average (units)	2	12	23	34	46	58	71	84	97	110	118

Source: DEMACON, 2023

Given the location of the proposed development and associated development concept, it is estimated that the proposed project could garner some market share al be it low. In the context of the preceding, the forecast medium- term demand is unlikely to exceed ±150 beds.

Several key aspects should be taken into consideration when evaluating the potential of the proposed project to capitalise on the student accommodation market and the potential of the project to garner market share:

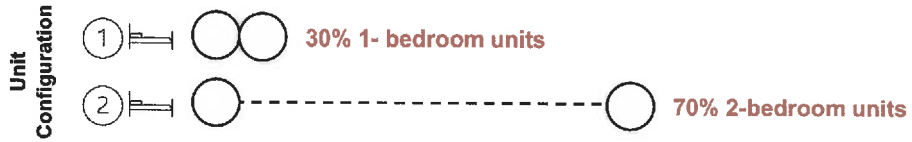
- The proposed project is located approximately 10 km from the University of Stellenbosch. Therefore, the proposed project is removed from the core student accommodation supply area of the University (approximately 95% to 98% of current accredited and non-accredited supply are within a 2 to 3 km radius of the University) and also falls outside the preferred distance for student accommodation accreditation as set out by the National Minimum Norms and Standards documentation and related accreditation criteria for universities.
- The proposed project would have to overcome initial inertia in order to capture at least some interest from students and investors in student accommodation (should these be offered to the open market) against the backdrop of predetermined design considerations for student specific accommodation (and associated facilities and amenities) and the likely risk that the development may well not be granted accreditation.
- Furthermore, the distance that the proposed project is from the University and Stellenbosch town would impose, thereby introducing and additional travel cost driver on students residing in the project. An attempt could be made to offset these effects by offering substantially more affordable accommodation compared to providers in Stellenbosch. Construction and relate costs will dictate the viability and sustainability of such a strategy – most probably R6 500 to R7 500 rands per bed per month.
- The development concept of the proposed project does not articulate an aspirate to align with National Minimum Norms and Standards for purpose-built student accommodation and all the intricacies concerning the degree of services, configuration options and amenities (entertainment, student life programmes, furnished rooms and kitchens, free access to internet, access to student orientated services such as printing, room cleaning services, etc.). As a consequence, the proposed project could potentially be hamstrung in its drive to be competitive, regardless of discounted rental rates.
- Purely on the basis of distance, the project will find it challenging to receive accreditation from the University. Over and above the distance deterrence function, students will be removed from the hub of student life activity in town. It will take the project some years to build sufficient critical mass in order to sustain some minimum level of retail potential.
- Accreditation only occurs a project has been complete, which introduces a further real risk: student accommodation requires a comparatively higher development density, whereas the norm in the surrounding rural environment is for lower density luxury living. This reality would introduce infinite challenges, should a later conversion considered on the basis of an accreditation rejection/denial.

Land Use	Market Gap Development Prospects	High Level Recommendations

Considering the above, the proposed development will likely need to consider a systematic approach to attracting and introducing students in a conventional open-market development (as opposed to a branded student accommodation village) to the proposed development given that it will take time to build the necessary critical mass of facilities and services to be supported.

Recommended configuration for the development:

Percentage Range of Student Beds per Unit Configuration



Recommended configuration and Pricing Structure

Bedroom Types	Percentage (%)	Number of units	Unit Rental Rates
1 bedroom	30%	105	R8 000 - R10 000
2 bedrooms	70%	45	R10 000 - R12 000
	100%	150	

Source: Demacon 2023

Considering project locality and the need to be able to cater to a broader market segment, a 30:70 uit split is recommended. Furthermore, a differentiated product offering could be provided to students at a ±10% discount rate to account for the travel distance and associated costs between Lynedoch and the Stellenbosch campus (±20km return trip per day @ R1 000 petrol money per month).

13.4 LYNEDOCH MIXED-USE DEVELOPMENT LAND BUDGET & PHASING

The individual land uses are allocated in the table below.

Table 13.5: Land Use Budget & Phasing – 10-year timeframe

Land Use	Proposed Size	Net demand (ha)	Surplus buffer (10%)	Including roads (15%)	Composition (% of land)	OPME*	Market Gap
Residential Bonded (Low Density)	±630 units	25.2	27.73	31.89	82.2%	2024+	Moderate to High
Student Accommodation (Medium Density)	±120 units	2.0	2.20	2.53	6.5%	2024+	Moderate
Retail (Small Convenience Centre)	±2 869m²	0.8	0.90	1.04	2.7%	2029+	Moderate
Trade (Automotive)	±455m²	0.1	0.14	0.16	0.4%	2028+	Moderate
Offices / Administrative Functions	±2 082m²	0.5	0.57	0.66	1.7%	2029+	Moderate
Private Day Clinic	±488m² (5 to 7 beds)	0.1	0.13	0.15	0.4%	2028+	Moderate
Private School	±3 720m² (350 to 400 pupils)	1.9	2.05	2.35	6.1%	2028+	Moderate
Total Hectare Take-Up		30.7	33.72	38.78	100.0%		

Source: Demacon Demand Modelling, 2023
**Optimum point of market entry*

A total of **38.78 hectares** could be developed and taken up over a 10-year timeframe. This includes 88.7% (34.41 ha) for residential uses and 11.3% (4.37 ha) for non-residential uses. The site is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. Take-up is forecast to accelerate as the development gains traction in the market.

Considering the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45.48 ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development.

ANNEXURE A

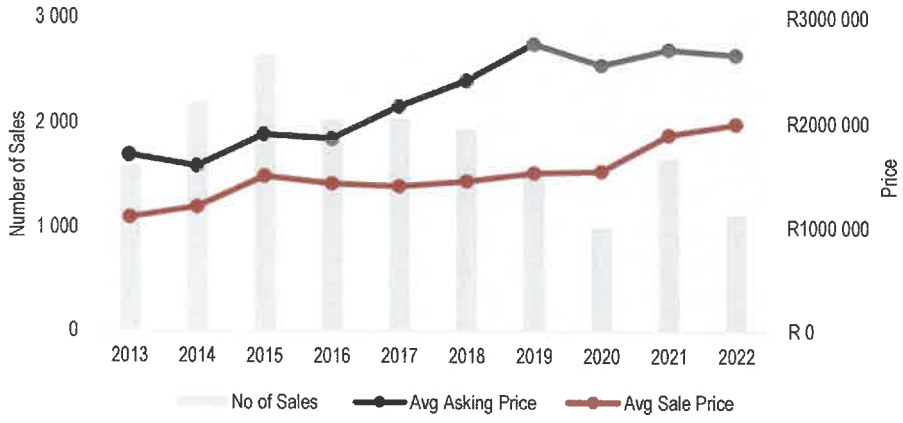
Stellenbosch & Jamestown

Market Activity

A. RESIDENTIAL MARKET ACTIVITY – STELLENBOSCH & JAMESTOWN

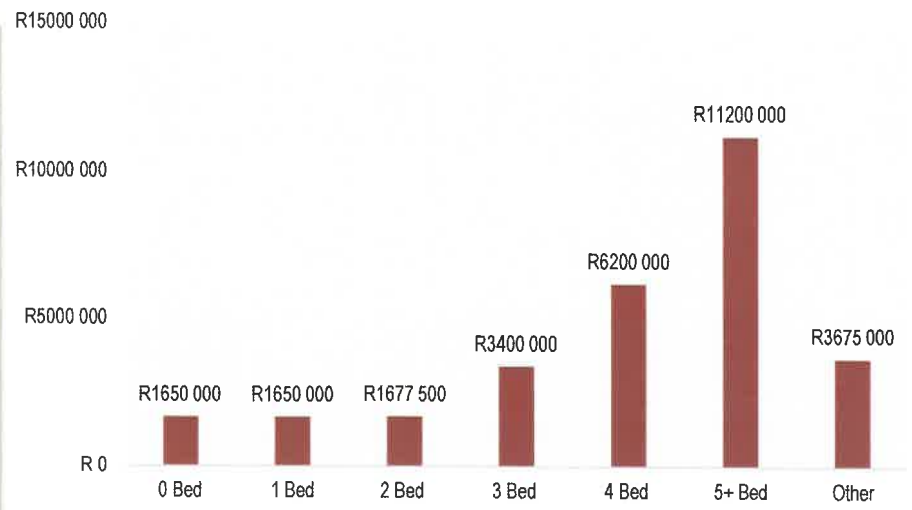
STELLENBOSCH

Annual Sales & Listing Trends

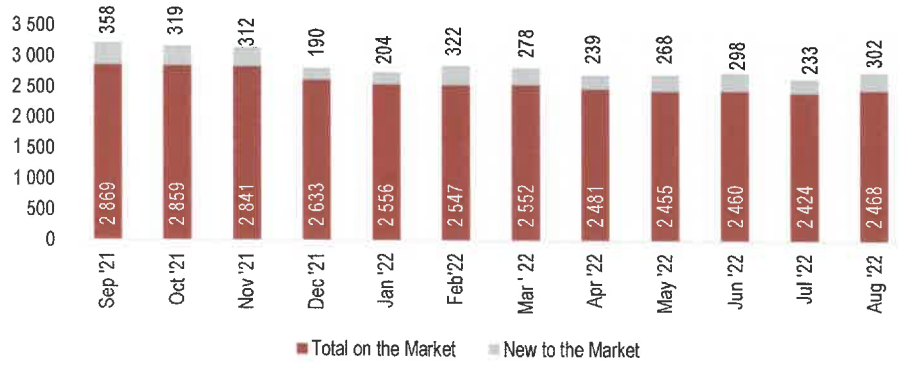


Average	No of Sales	1 781	Asking Price	R2 223 125	Sales Price	R1 502 900

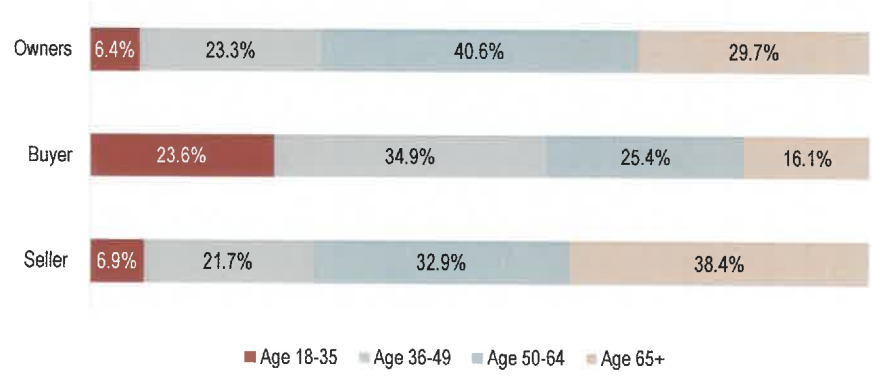
Average Asking Price per Bedroom



Monthly Properties for Sale



Ownership Age Profile



JAMESTOWN

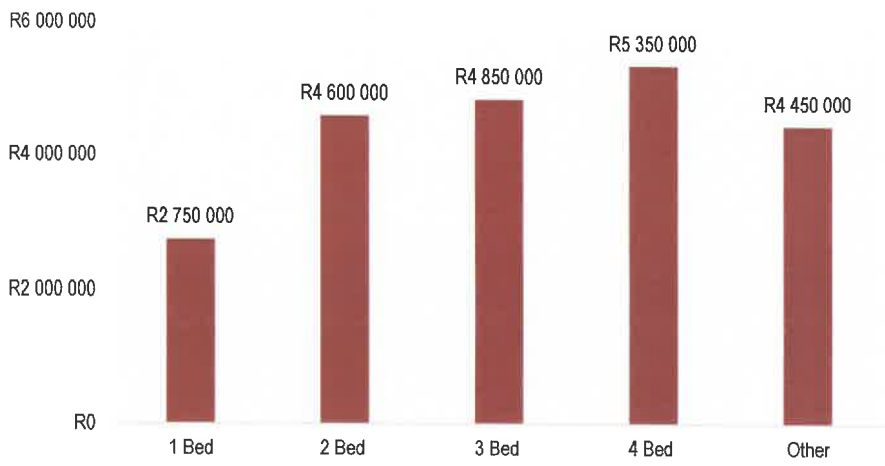
Weber Estate is situated to the eastern part of Jamestown – a more prominent estate. Higher-end residential units are also evident towards to southern part of Jamestown, near the cemetery. These higher-end residential units have a substantial influence on the data that follows.

Annual Sales & Listing Trends

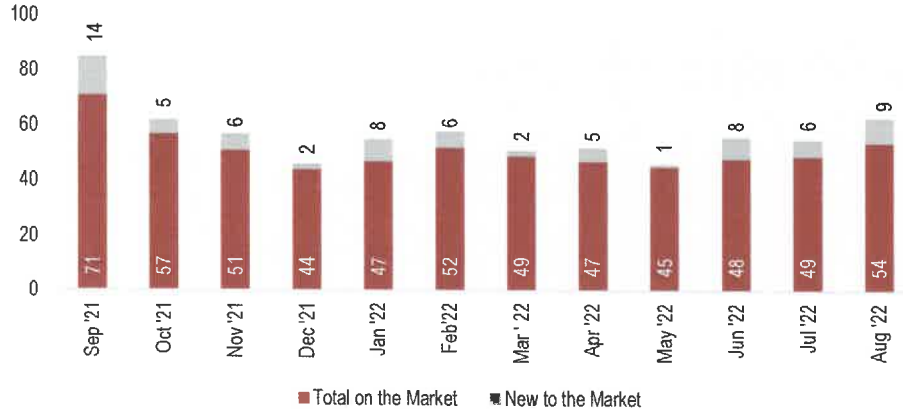


Average	No of Sales	38	Asking Price	R2 275 300	Sales Price	R1 728 135

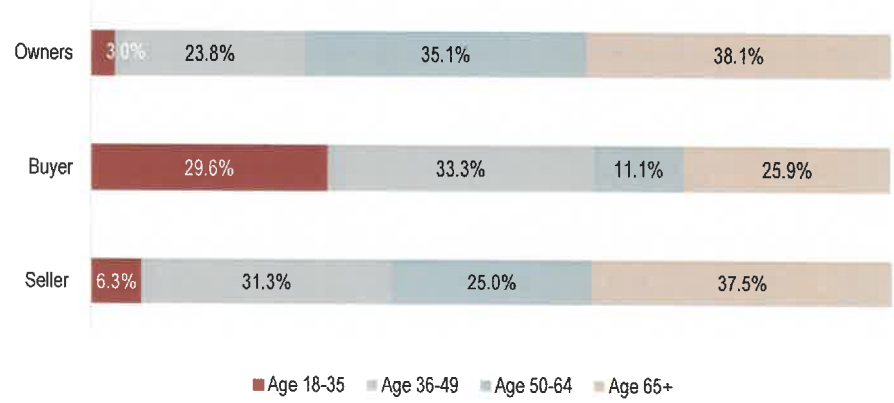
Average Asking Price per Bedroom



Monthly Properties for Sale



Ownership Age Profile



RESIDENTIAL SUPPLY

The following suburbs were included in the analysis

- ✓ De Zalze Winelands Golf Estate
- ✓ Aan De Weber Estate
- ✓ Baauwklippen
- ✓ La Pastorale
- ✓ Paradyskloof
- ✓ Schuilplaats
- ✓ Digteby Estate
- ✓ Fairways
- ✓ Brandwacht
- ✓ Klein Geluk
- ✓ Die Boord
- ✓ Dalsig
- ✓ Bo Dalsig
- ✓ Welgelegen
- ✓ Krigeville
- ✓ Devonvallei
- ✓ Devon Park
- ✓ Onder Papegaaiberg

RESIDENTIAL SALES

Summary of Residential Supply

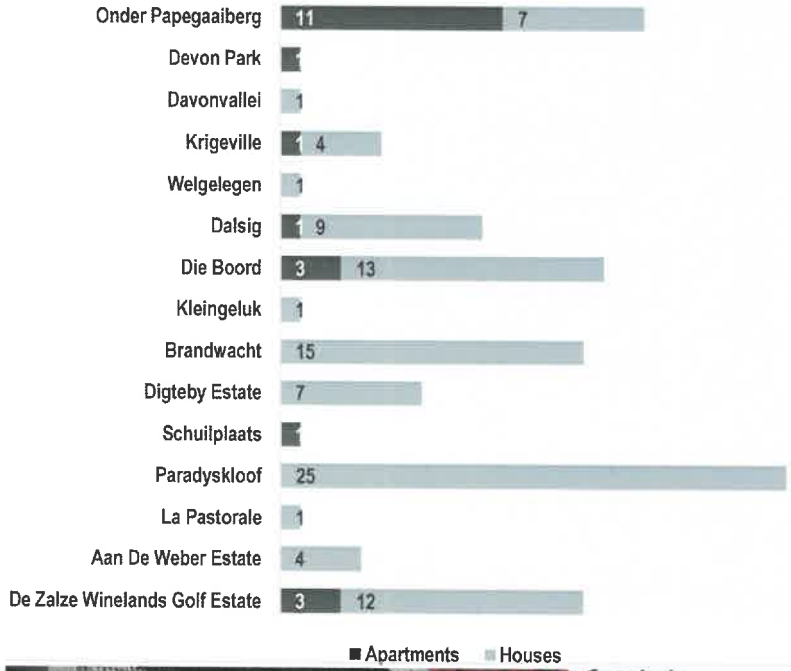


* No Townhouses were listed during the time of the analysis

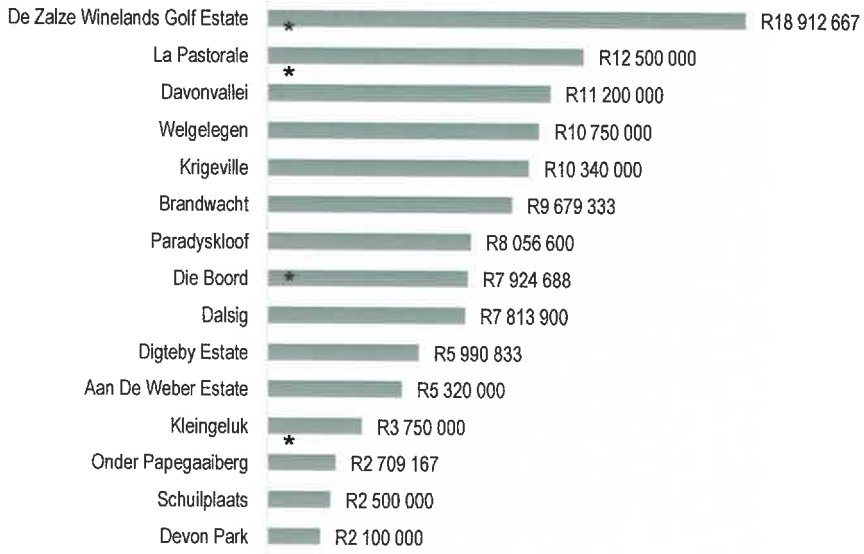
Average Sales Price per Property Type



Number of Property Type per Suburb



Average Sales Price per Suburb



* Suburbs nearest to Jamestown
No data was available for Jamestown during the time of the analysis

RESIDENTIAL SALES – APARTMENTS/FLATS

Average PRICE OF PROPERTIES FOR SALE

R2 574 048

Total Current Properties 21



1-, 2- and 3-Bedroom Dwellings are equally Prominent

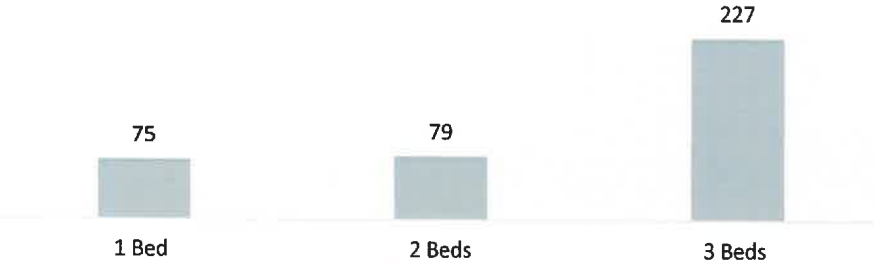
NUMBER OF BEDROOMS



AVERAGE PRICE PER BEDROOM TYPE



AVERAGE UNIT SIZE PER BEDROOM TYPE (sqm)

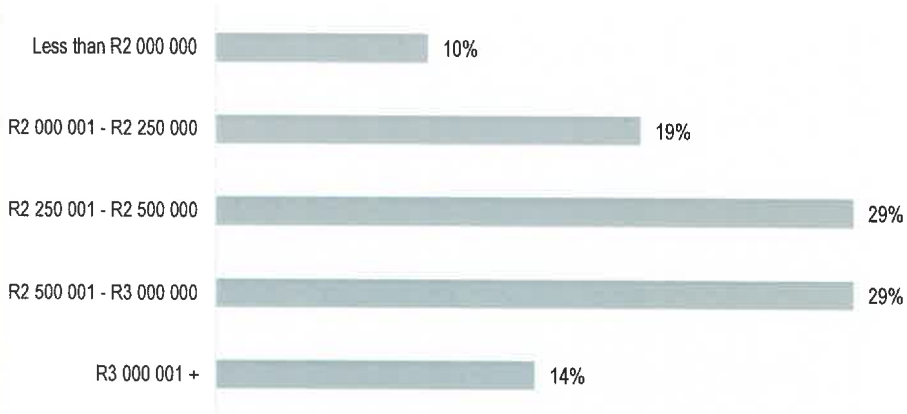




MOST expensive property in the Market Area
R4.5 million (3-bedroom Apartment)

CHEAPEST property in the Market Area
R450 000 (1 bedroom Apartment)

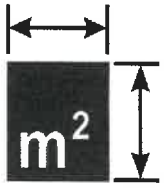
AVERAGE PRICE



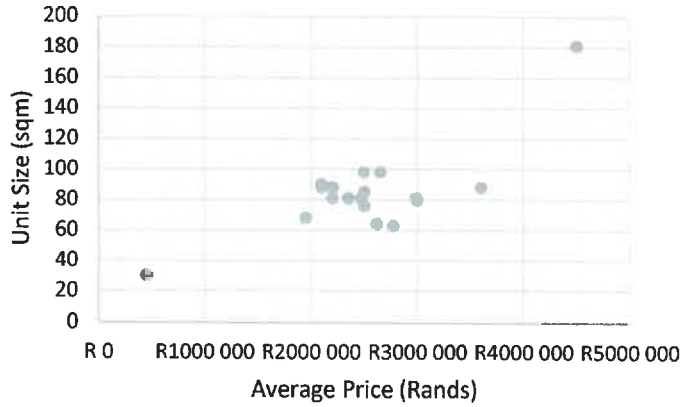
Average unit size

84m²

Min: 30m²
Max: 181m²



AVERGAGE PRICE VERSUS UNIT SIZE



RESIDENTIAL SALES - HOUSES

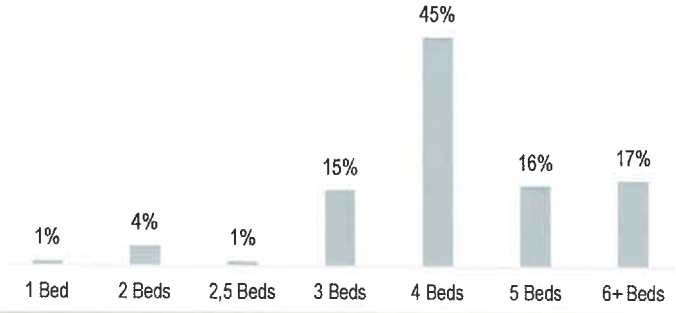
Average PRICE OF PROPERTIES FOR SALE R9 915 798

Total Current Properties 99



Bedroom
Dwellings are Most Prominent

NUMBER OF BEDROOMS

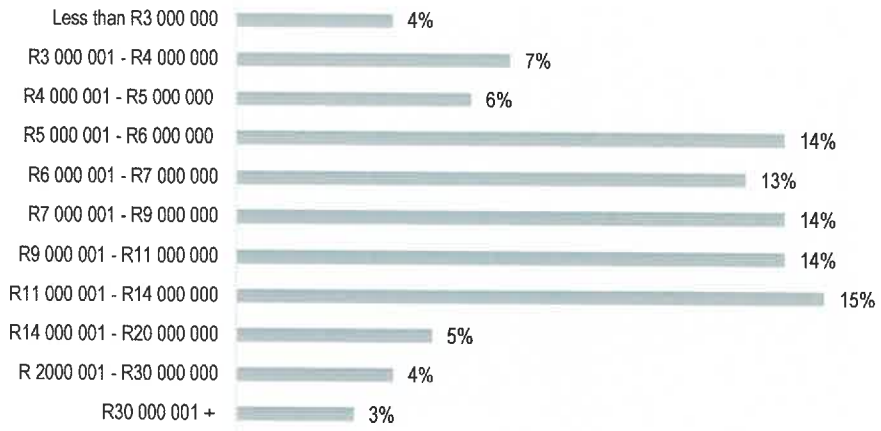




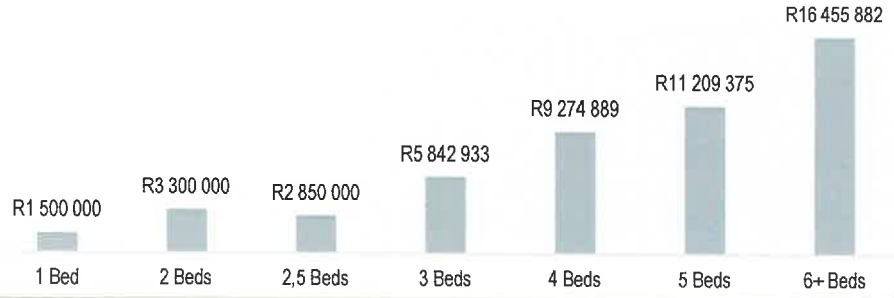
MOST expensive property in the Market Area
R44 500 000 (6-bedroom House in De Zalze Estate)

CHEAPEST property in the Market Area

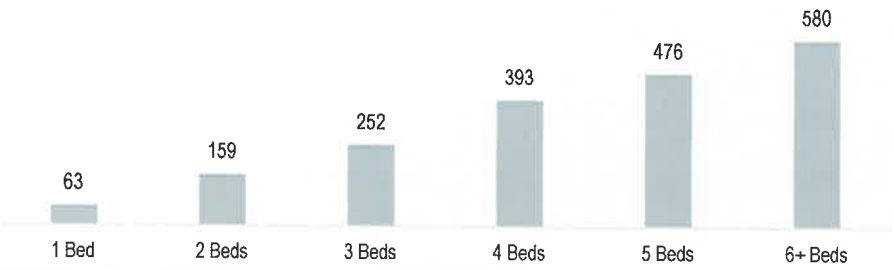
AVERAGE PRICE



AVERAGE PRICE PER BEDROOM TYPE

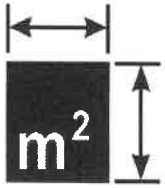


AVERAGE UNIT SIZE PER BEDROOM TYPE

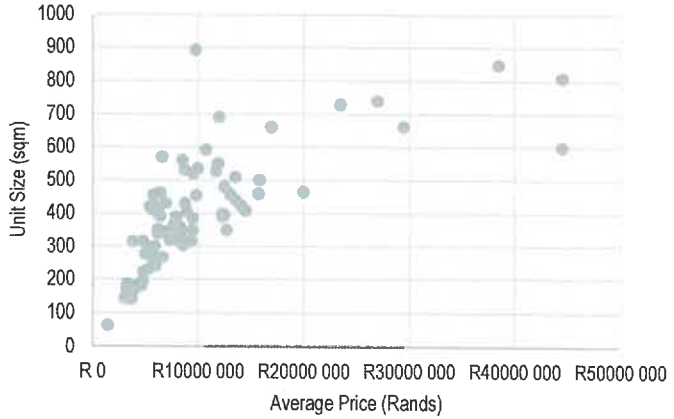


Average unit size
407m²

Min: 63m²
Max: 893m²



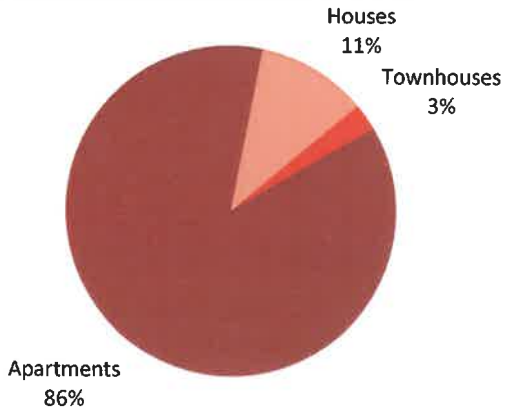
AVERAGE PRICE VERSUS UNIT SIZE



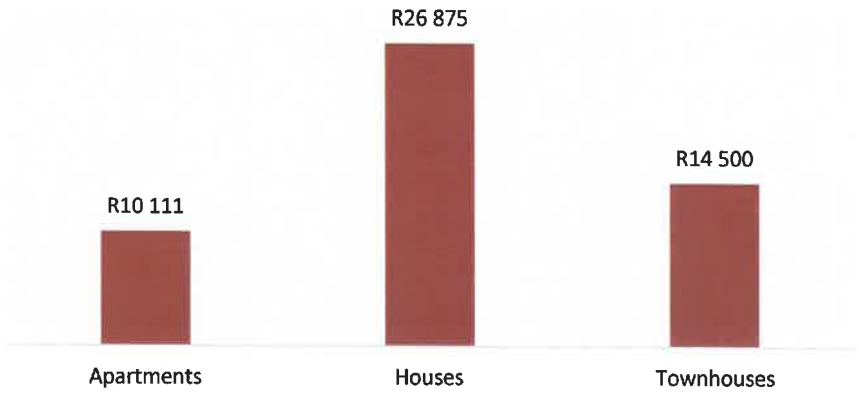
RESIDENTIAL MONTHLY RENTALS

Summary of Residential Supply

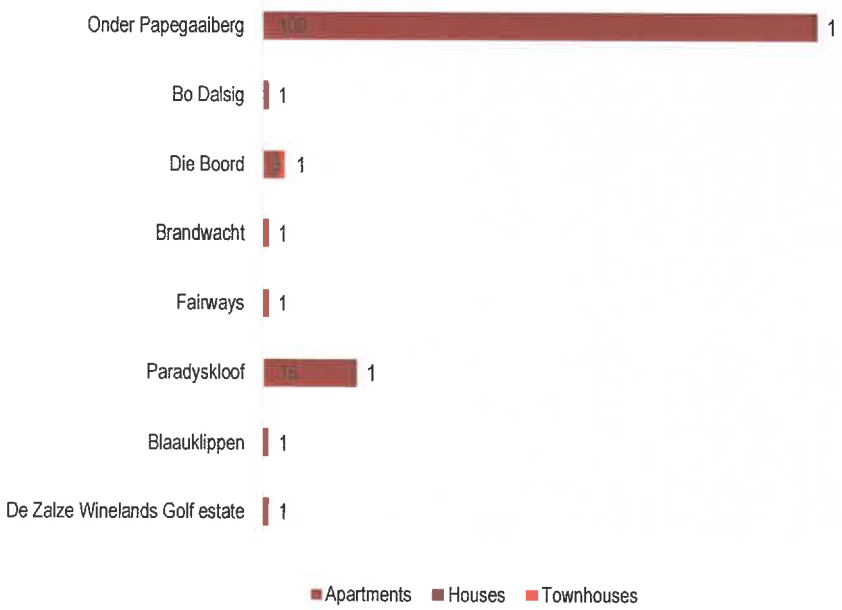
Only 1 townhouse were listed during the time of the analysis. This 2-bedroom, 1-bathroom townhouse is listed in Die Boor, with a rental price of R14 500 for a 121m² unit.



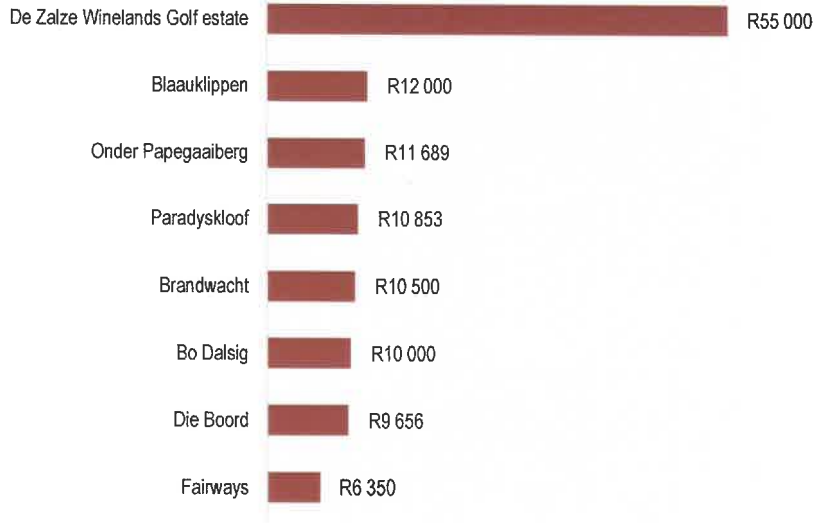
Average Monthly Rental Price per Property Type



Number of Property Type per Suburb



Average Monthly Rental Price per Suburb



* Suburbs nearest to Jamestown
No data was available for Jamestown during the time of the analysis.

RESIDENTIAL RENTALS – FLATS AND APARTMENTS

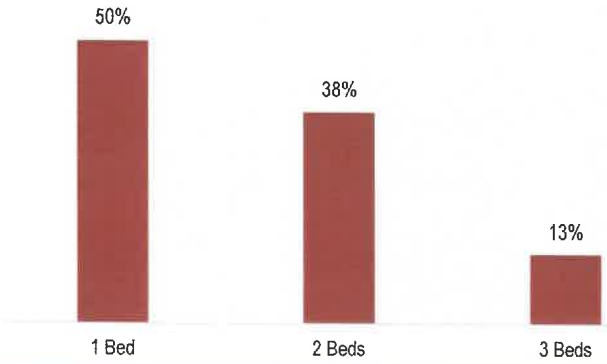
Average monthly RENTAL PRICE **R10 111**

Total Current Properties **32**



1 Bedroom
Flats and Apartments are Most Prominent

NUMBER OF BEDROOMS

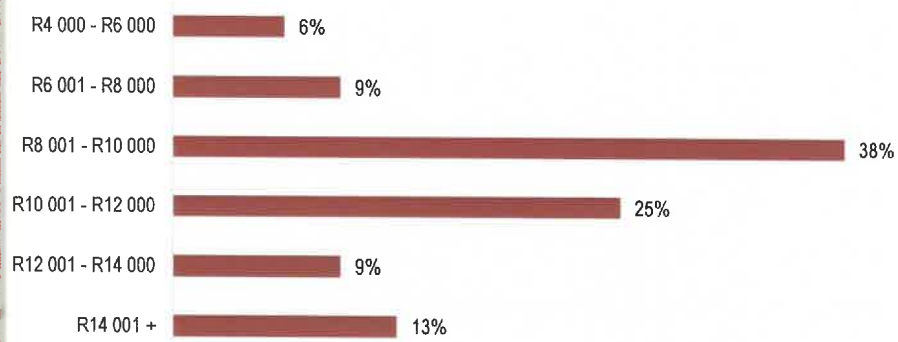




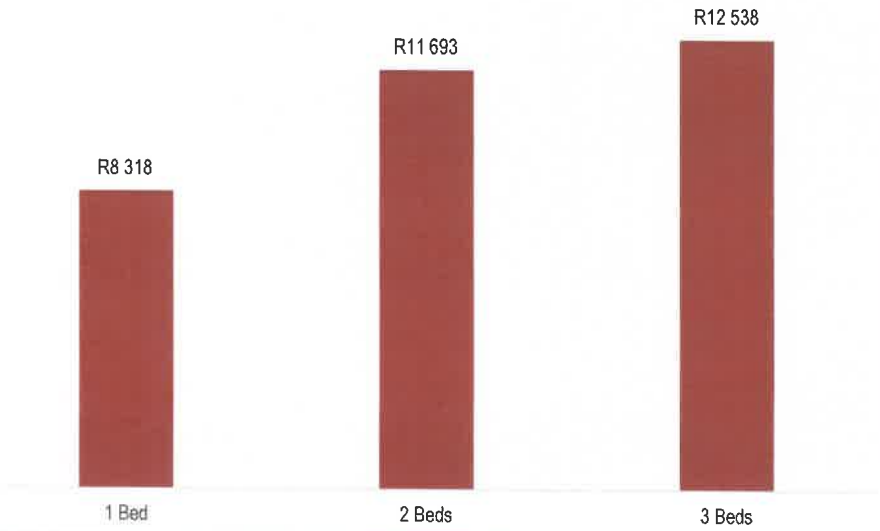
MOST expensive property in the Market Area
R20 000p/m (2-bedroom)

CHEAPEST property in the Market Area
R4 580p/m (1-bedroom)

AVERAGE MONTHLY PRICE



AVERAGE MONTHLY PRICE PER BEDROOM TYPE

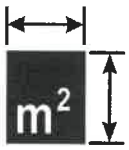


Average Unit size

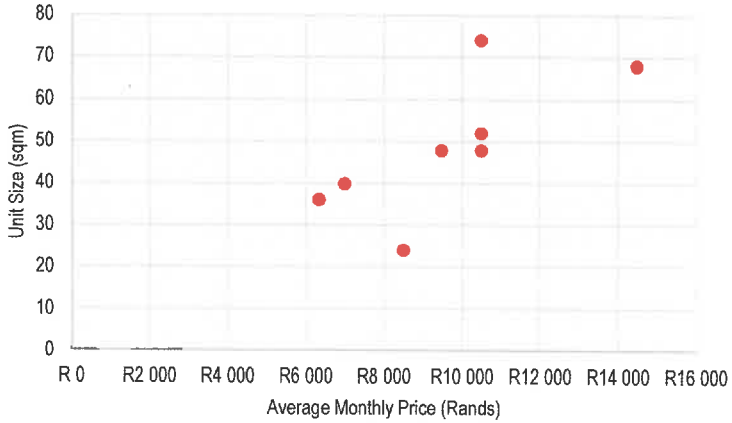
39m²

Min: 24m²

Max: 74m²



AVERAGE MONTHLY PRICE VERSUS UNIT SIZE



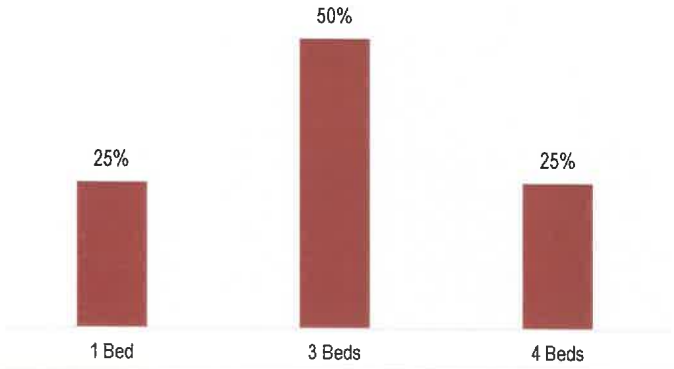
RESIDENTIAL RENTALS – HOUSES

Average Monthly RENTAL PRICE **R26 875**

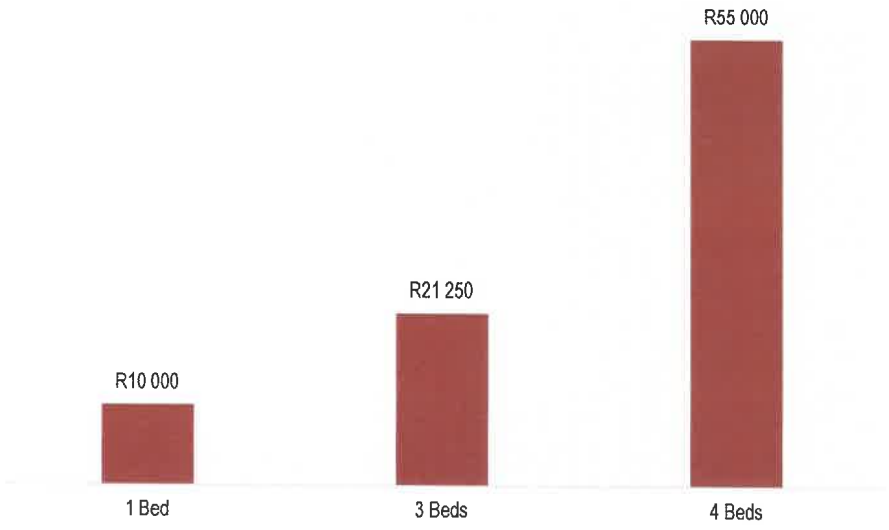
Total Current Properties **4**

3 Bedroom Houses are Most Prominent

NUMBER OF BEDROOMS



AVERAGE MONTHLY PRICE PER BEDROOM TYPE

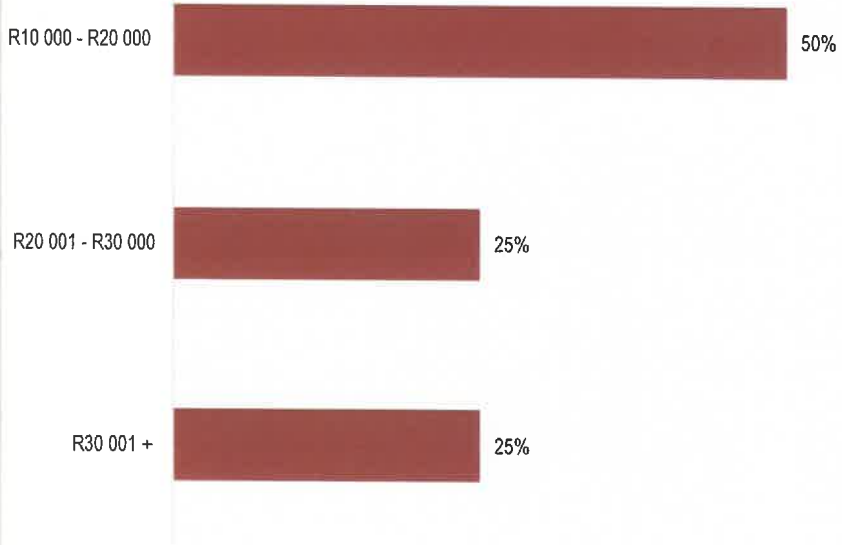


FOR RENT

MOST expensive property in the Market Area
R 55 000p/m (4-bedrooms in De Zalze Estate)

CHEAPEST property in the Market Area
R 10 000p/m (1 bedroom)

AVERAGE MONTHLY PRICE



Average Erf size

1 092m²

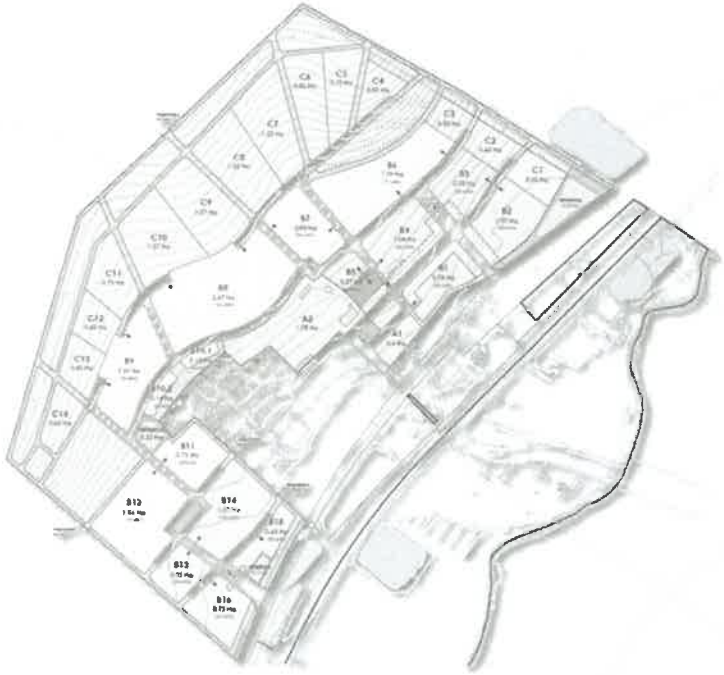


ANNEXURE G.1

Report Prepared For:

UNiQON

September 2024



Lynedoch Mixed-Use Development

Socio-Economic and Fiscal Impact Report

DEMACON

LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT

Market Studies
Retail Studies | Centre Repositioning | Consumer Surveys

Special Projects
Mixed Use Developments | Inclusionary Housing Projects | Economic Impact Assessments

Africa
Real Estate Feasibility Studies | Economic Assessments | Socio-Economic Surveys | Impact Assessments

Incorporating **GIS Technology** for Advanced **Geo-Spatial Analysis**

Contact Us:
Dr. Hein du Toit
+27 460 7009
+27 12 346 5883
+27 82 8988 667
hein@demacon.co.za
www.demacon.co.za

DEMACON
markets studies

About Us

We provide accurate & independent market insight solutions

DEMACON is a specialist research firm with a focus on topics in the fields of Demographics, Mapping (i.e., GIS – geographic information systems) and Economics, including real estate economics. Hence the acronym, DE-MA-CON.

The company is privately owned and offers clients the benefit of extensive in-house databases, including responses from more than 100 000 consumer surveys conducted all over South Africa and in time series format. DEMACON delivers a highly specialised product range of custom designed research reports, tailored to each client's unique research needs. The company's analytical processes are supported by specialised expertise, extensive experience, multi-variable databases, and advanced information technology systems. In addition to our focused research reports, the company offers high calibre industry insights and project specific solutions.

Services & Solutions

Advanced market potential modelling techniques were developed for all sectors, based on international best practice and leading methods globally. The services offered by the company include:

- Market research
- Economic analyses (Macro, meso and micro level)
- Socio-economic analyses (Macro, meso and micro level)
- Feasibility studies
- Business plans
- Real estate market analyses (Macro, meso and micro level)
- Urban and rural markets (Including township and traditional area)

DEMACON has developed specialised expertise and technically sound methodologies, aligned with international best practice, to address the complex research needs of our clients in a highly effective and efficient manner.

In this respect, we have developed a unique, customisable, and flexible research system - deploying a combination of primary and secondary data assimilation techniques, tailored to suit, respectively, the client's and project's specific requirements.

TABLE OF CONTENTS

Executive Summary ..... **i**

1 Introduction and Project Brief **1**

1.1 Introduction and Purpose of the Report 1

1.2 Project Brief 1

1.3 Project Methodology 1

1.4 Report Layout 3

2 Project Overview and Key Information **4**

2.1 Introduction 4

2.2 Project Location and Overview 4

2.3 Socio-Economic Context and Considerations 6

2.4 Graphic Synopsis of Market Indicators 7

2.5 Agriculture Use and Long-Term Potential of the Development Property 8

3 Quantitative Impact Assessment **12**

3.1 Introduction 12

3.2 Input-Out Model Methodology 12

3.3 Proposed Development Socio-Economic and Fiscal Impact Assessment 15

3.3.1 Key Indicators and Inputs 15

3.3.2 Impact Synopsis 16

3.3.3 Construction Phase Impacts 17

3.3.4 Operational Phase Impacts 18

3.3.5 Effects on the Provincial Economy 19

3.3.6 Cost and Benefit Analysis of the Impact 20

3.4 Existing Agriculture Operations Socio-Economic and Fiscal Impact Assessment 21

3.4.1 Key Indicators and Inputs 21

3.4.2 Impact Synopsis 21

3.4.3 Operational Impacts 22

3.4.4 Effects on the Provincial Economy 23

3.4.5 Cost and Benefit Analysis of the Impact 24

3.5 Impact Synopsis 25

4 Qualitative Impact Assessment **28**

4.1 Introduction 28

4.2 Impact Assessment Procedure 28

4.3 Qualitative Impact Assessment 29

4.3.1 Construction Phase Qualitative Impact Assessment 29

4.3.2 Operational Phase Qualitative Impact Assessment 42

4.4 Synthesis 51

5 Overview and Conclusions **58**

5.1 Introduction 58

5.2 Socio-Economic and Fiscal Impact Assessment Conclusion and Key Outcomes 58

Annexure A: Development Framework Socio-Economic and Fiscal Impact Report **66**

Annexure B: Existing Farm Socio-Economic and Fiscal Impact Report **111**

EXECUTIVE SUMMARY

The proposed Lynedoch mixed-use development is a large-scale real estate project aimed at implementing various land uses to support an integrated development concept. At full maturity, it will provide a diverse range of productive land uses that will contribute to the local and regional economies through direct, indirect, and induced economic, socio-economic, and fiscal impacts. Approximately 45 hectares of developable land will be utilised to establish over 800 residential units of varying densities and configurations, while also incorporating complementary uses such as retail spaces, entertainment venues, educational facilities, public open spaces, and supporting bulk infrastructure.

The integrated real estate development will transform commercial agricultural land, currently used for wine grape production, to accommodate the proposed land uses. This transition will affect the economic function of the property, shifting from agricultural use to more diverse productive land uses. It is necessary to consider the opportunity cost of transitioning from the existing agricultural value of the property to the proposed development. In essence, the economic benefit or cost of the proposed development is weighed against the current agricultural use of the property.

An analysis of the agricultural use of the property reveals that, under current yields, the property generates positive economic, socio-economic, and fiscal impacts. The operational expenditure of approximately R2.6 million from farming and related processing activities stimulates approximately R4.8 million in business sales, R2.0 million in GDP, and supports eight employment opportunities across the Western Cape economy. These positive impacts stem from the wine grape production on the property, as well as the operational expenditures necessary to generate this output.

The positive economic effects generated by the property as a commercial agricultural unit may not be sustainable in the long term. According to the Agriculture Impact Assessment (2023), the current vineyard production is highly dependent on yields in order to cover essential production costs. The ageing vineyards on the farm, coupled with limited capacity for replacement and insufficient water resources, have resulted in an achievable yield of only 5.5 tons per hectare—significantly below the 15 tons per hectare required for sustainable wine grape production. As such, the farm faces dwindling commercial viability, hampered by high input costs, limited irrigation potential, and the absence of an economic rational to reinvest in newer vineyards on a comparatively small land holding.

Although the property still produces agricultural output (approximately 32.5 hectares of the property have historically been farmed, but due to the progressively aging vines, more than 3.2 hectares have become unproductive and were lost to uprooting), the Agriculture Impact Assessment (2023) indicates that the potential for long-term commercial agricultural use is low. The decline in profitability due to rising costs, aging vineyards, and market pressures is eroding the capacity of the farm to remain a viable agricultural unit. These challenges reflect broader industry trends affecting wine grape production in South Africa, leading to a shift to specialised entities (away from smaller scale/recreational farming units) and the conversion of less productive units to alternative uses (dictated by location dynamics).

Given these circumstances, the agricultural functions of the property could become unproductive over time, representing a suboptimal use of the potential economic value of the land. The current agricultural activities have limited prospects for economic expansion, as the productivity of the property declines due to aging vineyards, unaffordable replacement costs, and rising input costs.

In contrast, the proposed development offers the potential for economic benefits that far exceed those generated by the current agricultural use of the property. The mixed-use development can generate substantial short-term economic value during construction and long-term value once the productive land uses are fully operational, addressing market demand and urban development pressures.

According to the quantitative impact assessment, the proposed development, with a R1.5 billion capital investment, could generate between R1.5 billion and R3.5 billion in additional GDP and business sales during construction. Moreover, nearly 5,300 temporary employment opportunities could be created. In the operational phase, household and operational expenditures are estimated to contribute R301 million, unlocking as much as R317 million in additional sustained GDP, while supporting nearly 890 sustained employment opportunities.

EXECUTIVE SUMMARY

In comparing the potential economic, socio-economic, and fiscal impacts of the proposed development to the loss generating agricultural use, the impact assessment indicates that the proposed development stands to create a considerable net benefit to the local economy, not least of which would be additional rates and taxes. The long-term and sustained economic value generated by the mixed-use development far exceeds the declining economic value of the current agricultural use of the property. Therefore, the proposed development represents a greater economic benefit to the local economy by establishing long-term value, in contrast to the diminishing returns of continued wine grape production.

Quantitative Economic Impact Assessment Comparison during the Operational Phases of Each Use

Economic Impact Name	Current Agricultural Production – Wine Grape Farming	Proposed Mixed-Use Development	Net Economic Benefit
Economic Value Added/Subtracted by Each Property Use	R2 560 611	R300 534 625	**R297 974 01**
Additional Business Sales	R4 798 987	R561 723 704	**R556 924 717**
Additional Gross Domestic Product	R1 969 061	R317 017 638	**R315 048 577**
Additional Taxes	R463 538	R62 418 141	**R61 954 603**
Additional Property Taxes	R15 760	R8 003 615	**R7 987 855**
Additional Formal Employment Compensation	R543 851	R101 339 452	**R100 795 601**
Additional Formal Employment	7	726	**719**
Additional SMME Opportunities	0	0	**0**
Additional SMME Opportunities (Black Owned)	0	0	**0**

Source: DEMACON, 2023

Aside from the inherent quantitative socio-economic and fiscal benefits of the proposed development, the construction and operation of the proposed development could generate a plethora of impacts that influence the underlying functions and socio-economic characteristics of the receiving economy during construction and operational activities. The qualitative impact assessment therefore considers impacts that are not necessarily quantitatively quantifiable and therefore must be identified and measured within a qualitative analysis framework.

The qualitative impact assessment revealed the following outcomes:

- **Economic Impact:**
  - **Key Outputs:** The project will significantly boost the local, provincial, and national economy during both its construction and operational phases. The construction phase will create a temporary surge in economic activity, while the operational phase will have sustained effects through multiple value chains (healthcare, education, retail, property management, etc.).
  - **Risks:** The presence of "construction mafias" may delay construction and the realization of economic benefits.
- **Employment Impact:**
  - **Key Outputs:** Nearly 5,300 temporary and 888 sustained employment opportunities will be created. Direct and indirect

EXECUTIVE SUMMARY

jobs span construction, retail, healthcare, and more, providing a significant source of income in a high-unemployment region.
    - **Challenges:** A potential shortage of skilled local labour may require importing talent. Mitigation efforts, such as local skills training, could address this gap.
- **Community Impact:**
    - **Key Outputs:** Job creation will improve household livelihoods, leading to increased demand for services and products. The
    - increase of population, onsite during construction efforts and during the operational phase where residents occupy the development could influence aspects such as crime.
    - **Challenges:** The influx of people may strain housing and services, necessitating infrastructure expansion and stronger community policing.
- **Infrastructure and Utility Impact:**
    - **Key Outputs:** The project will put pressure on local transportation infrastructure and utilities, such as electricity, water, and sanitation. However, it will also generate increased rates and taxes, providing additional revenue for infrastructure improvements.
    - **Challenges:** Sustained demand for utility infrastructure and transportation services may strain existing systems, necessitating expansion.
- **Environmental and Agricultural Impact:**
    - **Key Outputs:** The project will reduce land dedicated to wine grape production but offers a sustainable development opportunity. Air, noise, and visual pollution from construction could impact community health if not properly managed.
    - **Challenges:** Loss of agricultural land and yields could affect the regional wine industry, though current agricultural use is deemed unsustainable.
- **Property Valuation and Revenue Impact:**
    - **Key Outputs:** The development will lead to a revaluation of land in the area, resulting in higher property rates and increased revenue for the local authority. This could help address socio-economic challenges and support infrastructure investments.
    - **Challenges:** The increased property rates could affect landowners but would provide necessary funding for municipal improvements.

Overview of the Final Impact Significance Rating of Each Impact Measured Qualitatively

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Local and Regional Business Base	The construction phase of the project will generate demand for goods and services necessary to sustain construction activities. This sustained demand over the construction phase could lead to additional business sales throughout the construction industry's value chain (increased economic output, production and gross value added).	Construction Phase	40	Medium	The development stands to relate sector specific as well as value chain benefits elsewhere in the economy for the duration of the construction period
Impact on Local and Regional Business Base	The demand for goods and services required to sustain construction activities may not be fully serviced by the local economy's existing construction sector value chain and as a result would need to source goods and services from outside the local economy.	Construction Phase	30	Low to Medium	There is an impact, but can be mitigated

EXECUTIVE SUMMARY

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Local and Regional Business Base	Increased economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Construction Phase	27	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	The effective execution of the proposed project might face hindrance due to the presence of local 'construction mafias'. The possibility exists that these entities might intimidate external labour sources, disrupt the local community, and consequently cause delays in project completion.	Construction Phase	14	Low	The impact does not have a direct bearing on the decision to develop
Impact on Local and Regional Business Base	The labour force involved in the construction of the intended project could drive a surge in demand for lodging facilities and related services within the host economy. This heightened demand arises from the need to accommodate workers who aren't native to the area. This situation presents an opportunity for local lodging providers to experience extended periods of high occupancy, consequently leading to increased revenue streams.	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Stimulation of Employment Opportunities	The construction of the proposed project will create temporary construction related employment opportunities on-site (across the skills spectrum).	Construction Phase	32	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	New employment opportunities throughout the construction industry's value chain could be stimulated as a result of the increased demand generated by the construction of the proposed project.	Construction Phase	33	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	It might be necessary to temporarily import various tiers of skilled labour to the region to effectively carry out construction activities.	Construction Phase	27	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Employment opportunities created on-site by the project during the construction phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Construction Phase	40	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods during the construction phase. This could place an additional burden on existing social amenities and services due to an increase in demand.	Construction Phase	21	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Where labour is sourced from beyond the receiving economy the receiving socio-economic environment's labour absorption capacity is diminished and the spending of money earned locally is reduced – remittances to homesteads. In the event that labour must be sourced from outside the local area, these migrants could be viewed as temporary.	Construction Phase	36	Medium	The impact could influence the decision to develop unless it is effectively mitigated

EXECUTIVE SUMMARY

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Local Communities	An influx of population to the receiving economy (employed or job-seekers) may lead to increased crime activity. Job-seekers that do not find employment may turn to crime and in turn influence community safety. The introduction of persons outside the local labour market (i.e. sourcing from other economic regions for instance) could introduce a criminal element. Additionally, contractors undertaking construction of the proposed development may also, due to bad behaviour, influence community safety through inappropriate actions.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop
Impact on Local Communities	Due to construction activities, labour is transported to and from the construction site, i.e. from home to work and vice versa. Additionally, construction related transportation of goods and services will also occur. The daily movement of construction workers and related activities increases the load on the local transport network – influencing travel times and congestion.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to project related construction activities as well as the increased transportation of economic goods and services. Construction activities may generate vehicles in support of construction efforts. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area.	Construction Phase	16	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, construction activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden • Positive impacts relate to increased revenue collection from service delivery	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.	Construction Phase	36	Medium	The impact could influence the decision to develop unless it is effectively mitigated

EXECUTIVE SUMMARY

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on the Natural Environment	The construction phase will give rise to environmental factors that can impact health both on-site and in nearby communities. Common environmental factors, including elevated noise levels, increased dust and associated air pollutants, as well as visual impacts, may occur.	Construction Phase	6	Low	The impact does not have a direct influence on the decision to develop
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation existing agricultural land is removed from the total inventory of agricultural land used for wine grape production and the broader wine production industry.	Construction Phase	50	Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be costly and challenging
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation the existing wine grape production on the property will cease and as a result less wine grapes will be available to support the broader wine and related product manufacturing value chain.	Construction Phase	45	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local and Regional Business Base	The operational phase of the project will generate sustained demand for goods and services necessary to maintain operational efficiency. This sustained demand over the operational phase could lead to additional business sales throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project (increased economic output, production and gross value added).	Operational Phase	48	Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be costly and challenging
Impact on Local and Regional Business Base	The demand for goods and services required to sustain operational activities may not be fully serviced by the local economy's existing industries and as a result would need to source goods and services from outside the local economy.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	Increased and sustained economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Operational Phase	40	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	The proposed project will create permanent operational employment opportunities on-site (across the skills spectrum).	Operational Phase	45	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	New employment opportunities throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project could be stimulated as a result of the increased demand generated by the operation of the proposed project.	Operational Phase	39	Medium	The impact could influence the decision to develop unless it is effectively mitigated

EXECUTIVE SUMMARY

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Stimulation of Employment Opportunities	The local economy faces constraints both in terms of its size, reflected in its economic output, and its available labour force. This localised supply-side limitation could potentially result in a disparity between the required number of labourers with diverse skill levels needed for the operation of the proposed project.	Operational Phase	-27	Low to Medium	There is an impact, but can be mitigated
Stimulation of Employment Opportunities	Given the localised and industry specific labour supply constraint that could arise during the operational phase, it might be necessary to import various tiers of skilled labour to the region to effectively carry out operational activities.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Employment opportunities created on-site by the project during the operational phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Operational Phase	44	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods. This could place an additional burden on existing social amenities and services due to an increase in demand.	Operational Phase	-18	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Without meticulous planning, the proposed project runs the risk of influencing the inherent "sense of place" within the immediate community. The proposed changes might potentially reshape the local environment's importance to the community, which, over time, could potentially impact how the community perceives and values the natural resource setting.	Operational Phase	-18	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Due to operational activities, labour at the proposed project will move to and from the project site, i.e. from home to work and vice versa. Additionally, the transportation of goods and services required for operational activities will also occur. The daily movement of employees and related activities increases the load on the local transport network – influencing travel times and congestion.	Operational Phase	-16	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to the operational activities of the project as well as the increased transportation of economic goods and services. Operational activities may generate vehicles in support of operations. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area.	Operational Phase	-27	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated

EXECUTIVE SUMMARY

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, operational activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden Positive impacts relate to increased revenue collection from service delivery	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.	Operational Phase	44	Medium	The impact could influence the decision to develop unless it is effectively mitigated

Source: DEMACON, 2024

The proposed development presents significant net benefits to the socio-economic environment through job creation, increased revenue, and long-term sustainable economic growth. Negative impacts, such as pressure on infrastructure and environmental concerns, can be mitigated through effective planning and coordination.

In addition to the previous points, government systems in urban, and particularly metropolitan, areas place increasing pressure on property owners to optimize property use to align with policy goals related to densification, unlocking economic and socio-economic potential, and maximizing fiscal value through property taxation and rates. These pressures are driven by high and increasing rates of urbanization and inter-provincial migration. The Western Cape Province, second only to Gauteng, is one of the fastest-growing regions, primarily due to continuous migration to the province's key metropolitan areas and major towns. Smaller, marginal agricultural parcels, which have become sub-optimal production units, are particularly affected by these development-related pressures. These pressures also affect both property owners and developers, requiring constant evaluation to ensure that properties are positioned to address the expansion of urban systems while meeting government objectives regarding optimal land use, productive development, sustainable practices, and the unlocking of fiscal value in well-located areas.

Therefore, the proposed development, in light of the aforementioned and previous analyses, represents an opportunity to utilise property that is currently underperforming economically. The land produces agricultural yields that are below commercially sustainable levels and has limited future prospects for achieving sustainability. It does not represent a long-term or viable use of strategically located land. The agricultural potential of the property is assessed to be very low, with current agricultural practices identified as temporary due to factors such as limited irrigation, high input costs, lack of capital for vineyard reestablishment, aging vineyards, and declining yields. These issues limit the capacity of the property for long-term wine grape production. Furthermore, the property has minimal potential for alternative agricultural activities and does not contribute to food security in South Africa. Given these circumstances, the proposed development represents the highest opportunity cost as an alternative use of the property, leveraging its inherent real estate value.

1 INTRODUCTION AND PROJECT BRIEF

1.1 INTRODUCTION AND PURPOSE OF THE REPORT

Chapter One of the report provides an introduction and concise roadmap of the socio-economic and fiscal impact assessment for a proposed mixed-use development in Lynedoch located in the south-western region of the Stellenbosch Local Municipality (Western Cape). To understand the scope, objectives and outline of this document, Chapter 1 seeks to introduce the project brief and its intended outcomes and the outline of the remainder of the report.

1.2 PROJECT BRIEF

DEMACON Market Studies were commissioned by **Uniqon** to assess the economic trends and drivers, trade area-based demographic profile and development and growth potential of the proposed Lynedoch Mixed-Us Development. The purpose of the analyses was to compile a market study to assess the viability and optimum composition of the Lynedoch mixed-use development concept.

In addition to the preceding, DEMACON was commissioned to conduct a Socio-Economic and Fiscal Impact Assessment as part of the market study. This assessment serves as an expansion of the market research, demand modelling, and recommendations provided in the study. Its objective is to determine the potential economic, socio-economic, and fiscal effects of the proposed development based on the long-term development framework of the project. Moreover, the assessment considers the potential impact of transforming the current agricultural land on the economic, socio-economic, and fiscal contributions that the property, in its current form, provides to the broader economic system in which it operates.

The purpose of the socio-economic and fiscal impact assessment is to provide an assessment of the overarching impacts that may arise from the construction and operation of the proposed project on the local and/or regional communities and economy (measured within quantitative and qualitative assessment frameworks) by considering several aspects that include, inter alia:

- The impact of the project on job creation and skills requirements
- The impact that the project has on gross domestic product
- The impact that the project has on business sales
- The impact that the project could have on businesses and the opportunity for new business development
- The impact that the project could have on the compensation of new employment opportunities created
- The impact that the proposed project could have on government's fiscal collections (taxes etc.)
- Impact that the project could have on property rates
- The impact that the project could have on the value chain within which the project operates
- The impact that the project could have on the economy at large and its distribution throughout the provincial and national economy
- The impact that the proposed project could have on households and local communities because of the social, economic, health and other related impacts
- The impact on economic activity that results from the loss of current agricultural activities

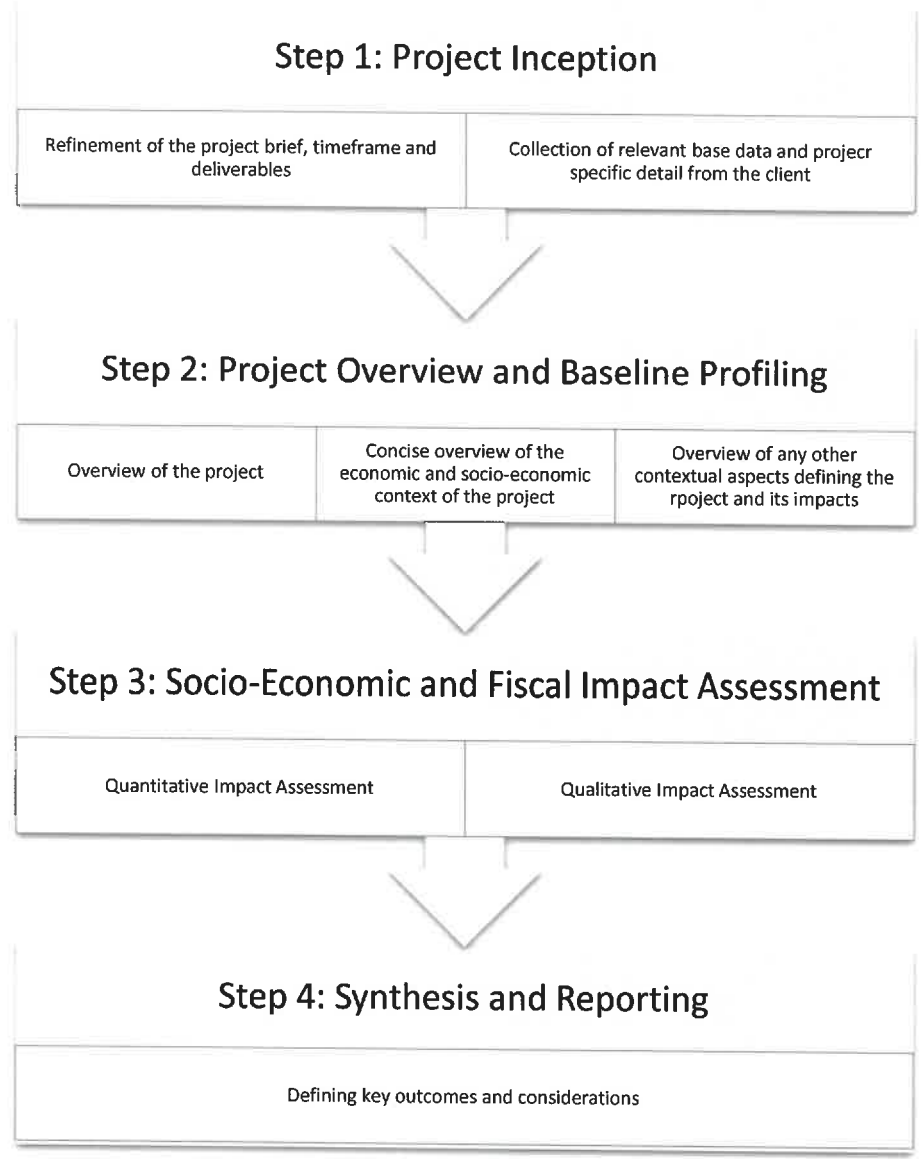
The socio-economic and fiscal impact assessment, therefore, seeks to provide a constructive overview of the opportunity that the project offers to the community and economy and also considers the effect that the proposed project could have on the local and wider economy as a result of its operations.

1.3 PROJECT METHODOLOGY

In order to undertake the socio-economic and fiscal impact assessment of the proposed development, an overarching project methodology has been adopted that identifies and informs key aspects of the impact assessment and focusses the outcomes of the assessment on project specific objectives.

Diagram 1.1 (overleaf) provides a representation of the project research methodology used to conduct the socio-economic and fiscal impact assessment of the proposed project. The diagram is accompanied by a short description of each step of the methodology. The description provides an overview of the components that make-up each step of the methodology and highlights any limitations associated with each step.

Diagram 1.1: Socio-Economic and Fiscal Impact Assessment



The project methodology of the socio-economic and fiscal impact assessment consists of the following four steps:

- Step 1: Project Inception
  - Step 1 entails the inception of the project. The step focusses on refinement of the project brief, the project timeframe and the deliverables required. Furthermore, the step also collates relevant base data and documents and seeks to acquire any project specific detail and information relevant to the study
- Step 2: Baseline Socio-Economic and Economic Profiling
  - The step focusses on establishing the socio-economic and economic context of the proposed development
  - In September 2023, DEMACON Market Studies completed a Market Study for the Lynedoch Mixed-Use project. The study aimed to assess economic trends and drivers, trade area-based demographic profiles, and the development and growth potential of the proposed project. The goal was to establish the viability and optimum composition of the development. This report refers to the market assessment report, particularly in terms of the overarching locational, economic, and socio-economic context of the proposed development's market area
  - Given the preceding, the project's socio-economic and economic receiving environments are defined by the 2023 Market Study
  - The identification of the project's socio-economic receiving environment is done in order to provide a summary of the socio-economic context profiled by the 2023 Market Study within which the proposed project will likely operate and impact on. The socio-economic context is assessed by profiling the receiving environment in relation to different metrices such as population and household size, population and household average annual growth, population education levels, skills and employment factors, household characteristics and attributes, household income, etc.
  - The identification of the project's economic receiving environment is done in order to provide a summary of the economic context profiled by the 2023 Market Study within which the proposed project will likely operate and impact on. The

economic context is assessed by profiling the receiving economy in relation to different metrices such as economy size, distribution, growth, composition, basic and non-basic sectors, tress index concentration, labour absorption and key spatial considerations.

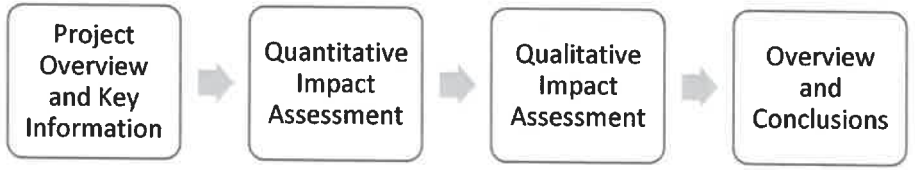
- Based on the outcome of the profiling analyses, several potential economic impacts that may arise from the proposed project's operation is identified. The purpose is to highlight potential areas of impact that can be assessed in greater detail in subsequent analyses.

- Step 3: Socio-Economic and Fiscal Impact Assessment
  - Step 3 of the project methodology focusses on the socio-economic and fiscal impact assessment of the proposed project. The socio-economic and fiscal impact assessment consists of two assessment phases and culminates in a perspective on the impact (and extent thereof) of the proposed project within its construction and operational context.
  - A fiscal and socio-economic impact assessment model is developed to model and quantitatively measure the socio-economic and economic impacts that could arise from the project based on its construction and operational phases. The quantitative impact assessment, therefore, measures the impact of the project within the context of several metrices that include, inter alia,
    - Jobs created by skills level
    - Impact on GDP
    - Impact on business sales
    - Estimated number of formal SMMEs created (including estimated number of black owned SMMEs)
    - Compensation impacts (i.e. wages & salaries)
    - Impact on social facilities required
    - Taxes on products (value added tax; custom duties; excise levies; fuel levies; other)
    - Taxes on production
    - Taxes on businesses
    - Taxes on employees
    - Impact on property rates
    - Sector profiling, etc.
  - The impact assessment then focusses on a qualitative impact assessment. The qualitative analysis makes use of an impact significance rating methodology. The broad approach to the significance rating methodology is to determine the environmental risk (ER) by considering the consequence (C) of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/ likelihood (P) of the impact occurring. The ER is determined for the pre- and post-mitigation scenario. In addition, other factors, including cumulative impacts and potential for irreplaceable loss of resources, are used to determine a prioritisation factor (PF) which is applied to the ER to determine the overall significance (S).
  - The quantitative and qualitative impact assessment is then synthesised to provide a holistic view on the range and potential impact of the proposed project.
- Step 4: Synthesis and Reporting
  - Step 4 focusses on the synthesis and reporting of the outcome of the analyses undertaken in Steps 2 and 3.

1.4 REPORT LAYOUT

The following diagram provides an overview of th layout of the report.

Diagram 1.2: Report Layout



2 PROJECT OVERVIEW AND KEY INFORMATION

2.1 INTRODUCTION

This chapter of the report focusses on defining the proposed project. The intent of the chapter is to describe the overarching purpose of the project and its immediate and future objectives. By identifying and defining the objectives of the project and its ultimate intent, future analyses, the interpretation of data and the identification of impacts can be guided by the context of the project and its desired outcomes.

Furthermore, the chapter spatially references the project in order to understand the project's relative positioning in relation to probable areas of impact and influence. By spatially referencing the project areas of socio-economic and economic sensitivity can be spatially defined and measured. Moreover, the contextualisation of the project along with a spatial perspective of the project and its likely area of influence provide a basis upon which other critical considerations and factors can be identified and discussed.

2.2 PROJECT LOCATION AND OVERVIEW

The proposed mixed-use development is situated adjacent to the Lynedoch village which is located within the south-western region of the Stellenbosch Local Municipality of the Western Cape Province. The development site (Portion 28 of Farm 468) is approximately 10 kilometers southwest of the Stellenbosch central business district and covers approximately 45.48 hectares of land in the greater Vlottenburg, Spier and Lynedoch area. The northern, north-eastern, southern and south-western borders of the development site borders existing farmland whilst the eastern border of the property extends along the R310 road and northern, southern and western borders of the Lynedoch village.

The property is currently used for agricultural purposes. The farmland is being used to produce a variety of wine grape cultivars that in turn is processed to produce several wine and related products. Detailed information regarding the current agricultural application of the property, the potential for commercial agricultural applications and the long-term sustainability of the property as an agricultural asset is discussed in greater detailed in subsequent sections.

The proposed development, according to the latest Block Plan (Master Plan) will offer a variety of land use opportunities that focus on the establishment of a mixed-use precinct. The precinct aims to offer a diversified product offering by incorporating a mixture of residential opportunities that vary by density and type whilst also incorporating a commercial, recreational and educational component in support of residents of the development and the broader community.

The master planning of the project identifies that approximately 61.8% of the total project/site area (28.09 hectares of 45.48 hectares) will be used to accommodate productive land uses such as residential, education, business and entertainment. The remainder of the property will be used to accommodate uses such as private open spaces, indigenous slopes, roads and related squares and detention areas.

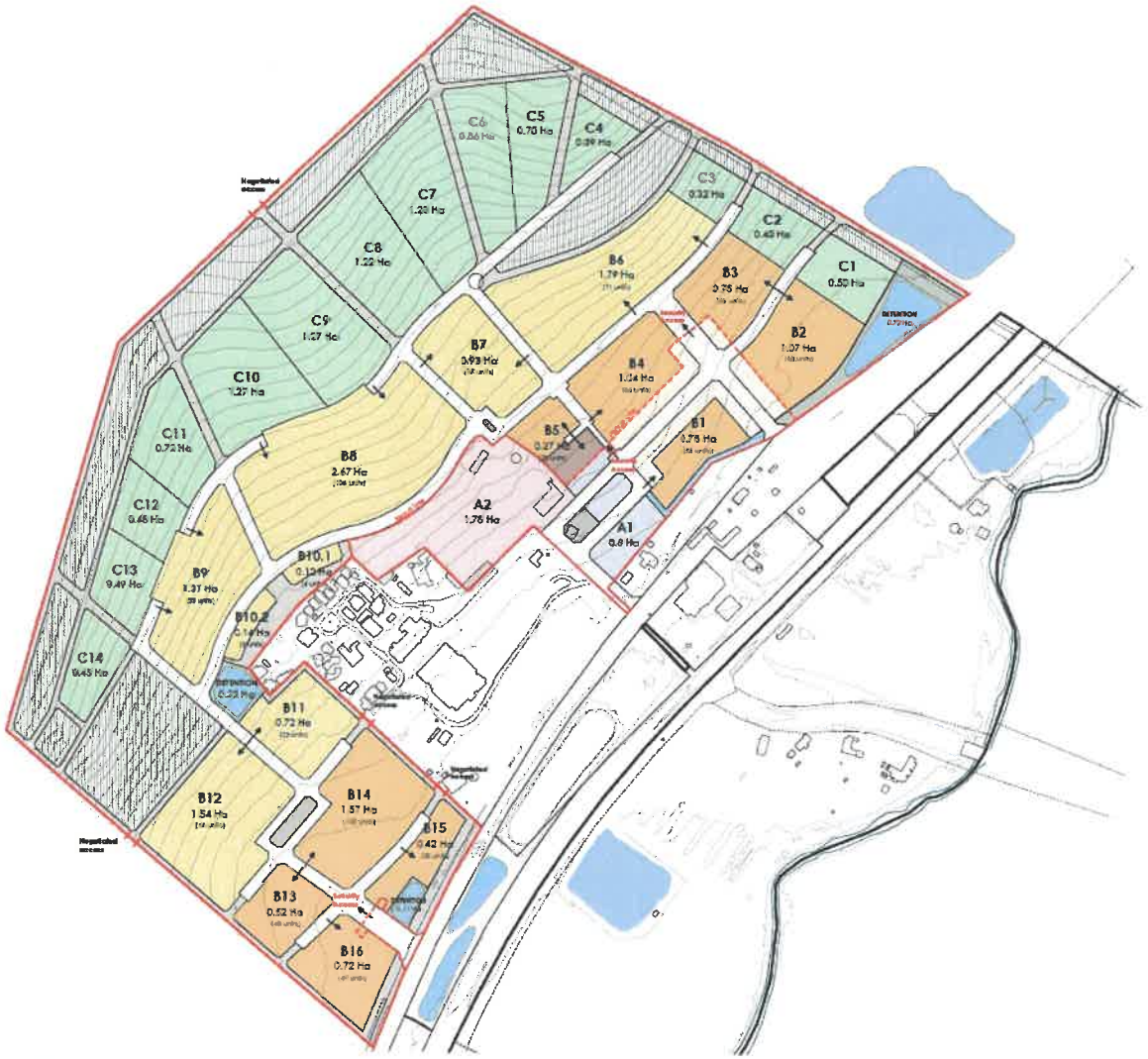
The following map and table provide an overview of the development proposal for the project.

Table 2.1: Land Use Proposals

Land Use	Units	Site Area (ha)	Proportion
Education		1.78	3.9%
Commercial (Business)		0.50	1.1%
Clubhouse (Entertainment)		0.18	0.4%
Residential (80 du/ha)	515	6.58	14.5%
Residential (40 du/ha)	355	8.74	19.2%
Residential (Allotment Villa)	14	10.31	22.7%
Detention and SW Area		1.15	2.5%
Indigenous Slopes		6.43	14.1%
Roads & Squares		4.86	10.7%
Private Open Space		4.04	8.9%
Total	**884**	**45.48**	**100%**

Source: DEMACON ex Uniqon, 2024

Map 2.1: Portion 28 of the Farm 465 Development Block Plan - Master Plan Development



PORTION 28 LAND USE TABLE			
	Site area	45.48 Ha	
	Land use	Area	Units
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Allotment Villas	10.31 Ha	14 units
	Total (excluding areas below)	28.09 Ha	884 units
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024 WELMOED URBANSTUDIO architects & urban designers

Source: DEMACON ex Uniqon, 2024

2.3 Socio-Economic Context and Considerations

The following provides an overview of the key elements that define the socio-economic context within which the proposed development is situated. The aim of the information is to extract important information from the socio-economic analysis contained in the Lynedoch Mixed-Use Market Assessment in order to provide a baseline account of the character and overarching trends present within the development's host community. Understanding the context of the host community provides a rounded perspective of the potential and range of impacts that could influence the baseline of the proposed development.

ECONOMY SIZE AND CONTRIBUTION

Stellenbosch
Sub-Regional Economy GVA
(current prices 2022)

13.6% contribution to the Cape Winelands Regional Economy

1.5% contribution to the Western Cape Provincial Economy

The Stellenbosch sub-regional economy is the **fourth largest** contributor to the total economy of the Cape Winelands regional economy. Compared to other economies in the Cape Winelands regional economy, the Stellenbosch sub-regional economy **expanded** its proportional contribution to the regional economy since 2012. Therefore, the sub-regional economy has **continually expanded** economic output and functions as one of the key sub-regional economies that drives the growth and development of the regional economy.

POPULATION SIZE

74 510 PEOPLE IN THE **PRIMARY** TRADE AREA

Population Average Annual **Growth Rate** 2.24%

20 347 HOUSEHOLDS

Household Average Annual **Growth Rate** 3.06%

DWELLING

Majority of Households Reside in a **Formal Dwelling** 93.8%

5.8% of households reside in an **informal dwelling**

ECONOMY GROWTH

1.0% (2012 - 2022) average annual growth of the sub-regional economy over the previous 10 years

0.4% (2017 - 2022) average annual growth of the sub-regional economy over the previous 5 years

The sub-regional economy has recovered the bulk of economic capacity lost during 2020. In 2022 the sub-regional economy was 1.8% over pre-pandemic economic GVA output.

The unemployment rate of the local economy is **14.5%**. The unemployment rate has started to increase from a low of 11.7% in 2017. The data shows that the sub-regional economy is experiencing a slowdown in the rate at which the local economy can produce jobs.

STRUCTURE OF EMPLOYMENT

Formal employment accounts for 71.9% of all jobs

21 669 informal jobs exist in the local economy

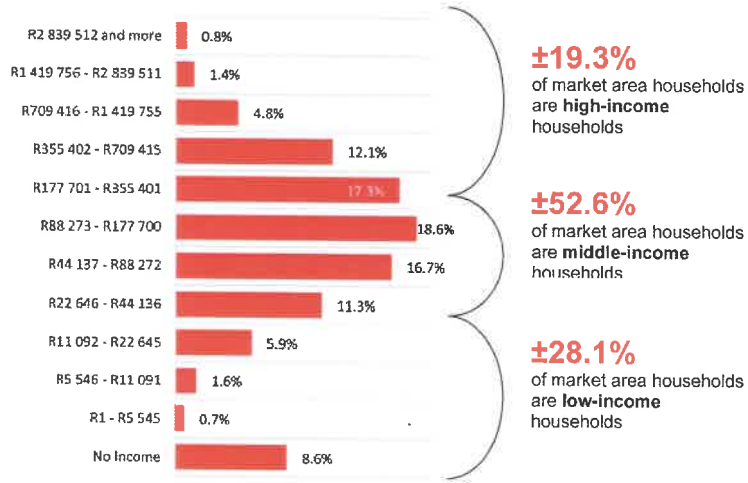
Informal employment accounts for **28.1%** of all jobs

The **informal economy** gained 3 045 jobs since 2012 at an average rate of 305 jobs per year

56 966 formal jobs exist in the local economy

The **formal economy** gained 10 092 jobs since 2012 at an average rate of 1 009 jobs per year

HOUSEHOLD INCOME PROFILE



±19.3% of market area households are **high-income** households

±52.6% of market area households are **middle-income** households

±28.1% of market area households are **low-income** households

2.4 Graphic Synopsis of Market Indicators

The following provides a graphic synopsis of the key market indicators and development recommendations identified by the 2023 Market Study of the proposed development. The purpose of the information is to highlight overarching market indicators that inform the development's potential as a development opportunity and outlines the medium- to long-term forecasted development take-up of the project and its anticipated long-term sustainability given overarching market conditions.

Key Indicators



Development Options and Compatibility

	Indicator
Site Ratings	High
Economic Base & Drivers	Compatible
Labour Profile	Semi-Skilled
Socio-Economic Profile Demand (Base)	Middle to High Income
Market Gap	Moderate

Development Recommendations

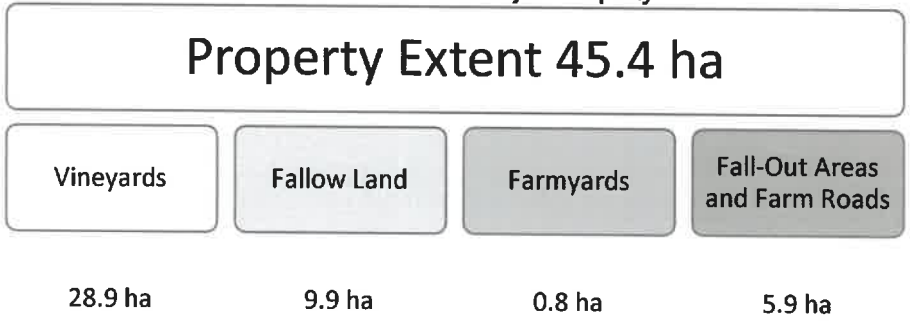
Land Use	Market Demand Expectations	Hectares
Residential Bonded (Low Density)	630 units	31.9 ha
Student Accommodation	120 units	2.5 ha
Retail (Small Convenience)	2 869 m²	1.0 ha
Trade (Automotive)	455 m²	0.2 ha
Offices / Administrative Functions	2 082 m²	0.7 ha
Private Education (350 – 400 desks)	3 720 m²	2.4 ha
Private Healthcare (5 – 7 beds)	488 m²	0.2 ha

2.5 Agriculture Use and Long-Term Potential of the Development Property

The development site for the proposed mixed-use project has historically been, and is currently, used for agricultural purposes. Since the proposed development aims to repurpose the site away from its agricultural use, it is important to consider the current role of the property in the agricultural sector and assess the long-term sustainability and viability of the land as an agricultural producer. The transformation of the property into an alternative land use is likely to impact the local economy's equilibrium. Therefore, the potential effects of such a transformation must be acknowledged. In order to consider the agricultural use and future potential of the property as an agricultural producer, reference is made to the Agricultural Impact Assessment Report (June 2023). The report provides key insight into the sensitivity of the property as an agricultural function and determines the agricultural potential and viability of the property as a productive agricultural use.

According to the Agricultural Impact Assessment (June 2023) of the development location, the proposed development site is currently being used for dryland (rainfed) agricultural purposes that focus on wine grape farming. Approximately 32.5 hectares of the 45.4 hectare extent of the property is potentially arable agricultural land, of which approximately 28.9 hectares of land is currently used to accommodate vineyards and facilitate wine grape farming. A further 10 hectares of land is farrow whilst the remainder of the property is used for farmyards and fall-out areas and farm roads.

Diagram 2.1: Land Use Distribution on the Subject Property



Source: DEMACON ex AGRIinformatics, 2023

The vineyards currently active on the property (approximately 28.9 hectares of cultivated land) consist of multiple cultivars that produce wine grapes for various wine types and products. These vineyards yield approximately 159 tons of wine grapes annually, translating to about 5.5 tons per hectare of planted and harvested vineyards.

Diagram 2.2: Wine Grape Production of the Subject Property (2022)

Vineyard	Area (ha)	Age	Avg. Yield (t/ha)
A	0.9	36	6.9
C	4.0	43	4.1
D	3.3	20	3.0
E	2.2	31	5.5
F	3.3	40	7.7
G	6.4	38	6.5
H	1.0	36	4.5
L	3.3	33	7.4
M	3.6	29	4.6
Total/Average	28.9	34	5.5

Source: DEMACON ex AGRIinformatics, 2023

Although the property presently produces wine grape harvests, the agricultural potential analysis in the Agriculture Impact Assessment (2023) indicates that the long-term sustainability and commercial viability of wine grape production on the property are under strain due to production and market-related factors.

The Impact Assessment notes that the sustainability of wine grape production as a commercially viable operation depends on factors such as the yields produced by the vineyards, the income generated from grape sales (with grape prices

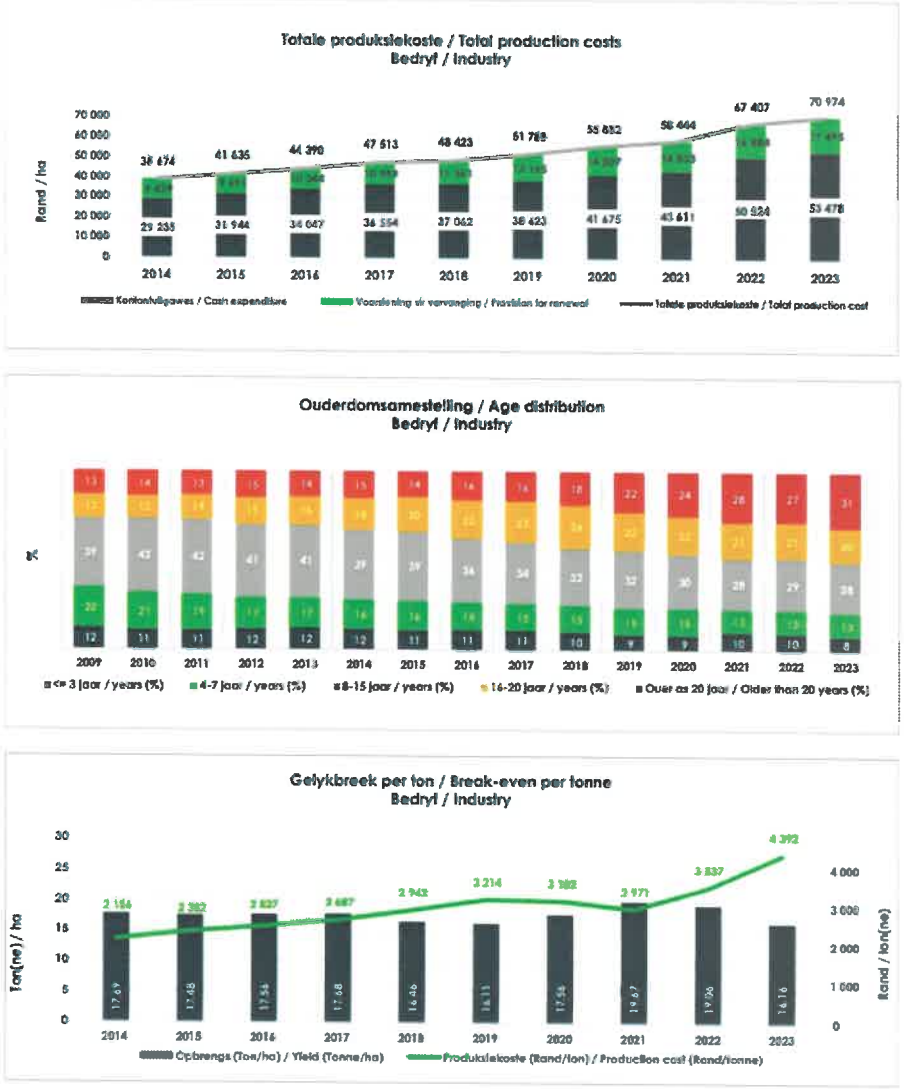
having underperformed in recent years), and the input costs required not only to operate a wine grape farm but also to ensure vineyard longevity through replacement. These factors currently affect the long-term sustainability of the property as a wine grape production location. The Impact Assessment suggests that current vineyard production on the farm can be considered a temporary activity, highly dependent on the vineyards' ability to produce yields sufficient to cover essential production costs.

Wine grape production on the farm is considered temporary due to the impact of aging vineyards on yield and the current market and input cost climate, which limits investment in long-term sustainability. The Impact Assessment identifies that, due to aging vineyards, the farm's limited capacity to replace end-of-life vineyards, and the insufficient water resources for sustained irrigation, the current yield of 5.5 tons per hectare is significantly below the 15 tons per hectare required to ensure sustainable wine grape production and farming activities. The data thus indicate that, although the property does produce wine grapes, the commercial viability of long-term sustainability as a productive agricultural asset is limited and under constant market pressure, eroding the farm's capacity to reinvest in maintaining its commercial viability.

Moreover, it is important to note that the challenges the property faces in terms of commercial viability reflect an industry-wide trend affecting the economic potential of the wine grape production industry in South Africa's core and secondary regions. According to the Impact Assessment (2023), the long-term sustainability of wine grape production in South Africa is hindered by producers' inability to reinvest in vineyard replacement, largely due to rising production costs that outpace stagnant grape prices. As a result, the income generated by farms diminishes year by year, reducing producers' capacity to invest in necessary replacements.

Data from Vinpro (2024) shows that vineyard replacement costs have increased by 85%, from R9,439 per hectare in 2009 to R17,495 per hectare in 2023. Concurrently, the age of vineyards has risen, with fewer replacements occurring due to escalating input costs. In 2009, approximately 26% of vineyards were 16 years or older; by 2024, this figure has increased to 51%. In the Stellenbosch wine grape production region, nearly 67% of vineyards are 16 years or older, partly attributable to the region's comparatively high input costs. According to Vinpro's Cost Guide for 2024, the large segment of older vineyards has begun to impact yields, adversely affecting the break-even point that farms must reach.

Figure 2.1: Wine Grape Production Operational Costs, Vineyard Replacement Costs, Vineyard Age Distribution and Break-Even Point



Source: DEMACON ex Vinpro, 2024

In light of the preceding, the data from the Agriculture Impact Assessment and market information reported by Vinpro suggest that wine grape production will remain under pressure and will require substantial capital investment to alter the age structure of vineyards, thereby improving yields and profitability. Market pressures, such as stagnant grape prices and macroeconomic factors driving inflation in production costs, further hinder the stabilisation of wine grape profitability and long-term commercial viability. The subject property is part of this industry trend, with aging vineyards that, in many cases, have reached their end of life (all vineyards on the property are older than 16 years and thus yield less than younger vines and are more susceptible to weather conditions and diseases). This is evident in the underperforming yields, which fall short of what is needed to support sustainable farming practices.

Although the preceding analysis recognises the need for capital investment to support the establishment of long-term, sustainable agricultural production on the subject property, a financial viability assessment by Agri Informatics reveals that such a capital expenditure on the property, whether self-funded or loan-supported, does not present a viable investment opportunity. The analysis indicates that, unless there is a significant increase in current wine prices, the re-establishment of vineyards on the property and in the greater Stellenbosch area will remain unfeasible.

Table 2.2: Summar of Financial Viability of Different Re-Establishment Scenarios on the Subject Property

Scenario	Capital Investment (R/ha)	Break Even Period	Net Present Value (R/ha)	Annualised Rate of Return
1a Own Capital – Irrigated	R324 428	Year 7	R75 293	4.0%
1b – Own Capital Dryland	R279 765	Year 10	- R59 421	-1.9%
2a Bank Finance – Irrigatd	R324 428	Year 7	R87 438	1.0%
2b – Bank Finance – Dry Land	R279 765	Year 15	- R55 630	-15.7%

Source: DEMACON ex Agri Informatics, 2024

Additionally, the property lacks sufficient groundwater resources to support irrigation across the entire area, making it dependent on annual rainfall. Therefore, the data suggest that the current wine grape production on the property is not sustainable in the long term and will continue to decline in productivity until the vineyards can no longer produce grapes. As noted by the Impact Assessment (2023), wine grape production on the property does not directly contribute to food security in the country. While the farm produces wine grapes that contribute to the wine manufacturing industry, this production is under constant strain due to high input costs and aging vineyards. Furthermore, the Assessment notes that current farming activities are unsuitable for the property unless additional irrigation water sources can be secured.

Beyond the agricultural potential of the current wine grape production, the Impact Assessment also considered the potential of the property for other types of farming. The analysis concluded that the potential for irrigated cultivation, dryland cultivation, and livestock farming is very low. The key outcomes of this analysis can be summarized as follows:

- Groundwater sources on the property are insufficient to support perennial crops, resulting in **very low agricultural potential for irrigated cultivation**
- Dryland cultivation has potential for supporting winter cereal crops but not summer cash or fodder crops. However, the topography of the property limits its suitability for dryland crop production (excluding grapes) due to the impediments to farm equipment movement and the risk of soil erosion. Therefore, the agricultural potential **for dryland cultivation is not feasible or very low**
- Grazing capacity in the area is indicated as 25 hectares per large stock unit, meaning the property cannot accommodate more than two large stock units, resulting in **very low agricultural potential for livestock farming**

The agricultural potential of the subject property for different types of agricultural production is assessed to be low and unviable based on the preceding information. The primary reasons for this low potential include:

- The limited water supply for irrigation. If additional water sources were available, the potential of the property as a commercially viable and sustainable agricultural production location could be improved.
- The low to medium potential of soil in the low-lying and flat areas of the property. Steep topographies hinder the potential for other types of

dryland farming, making lower-lying and flatter areas more suitable for such activities. However, poor water drainage, waterlogging of duplex soils, or limited soil depth further reduce the ability of the property to support other farming activities.

- The steep slopes of the property limit its capacity to support a variety of farming activities.
- The size of the property restricts the types of agricultural activities that can be supported and limits the extent of cultivable areas, thereby limiting the establishment of any viable farming activity.
- Lastly, the ongoing pressure of urban expansion in rural areas, especially in larger metropolitan regions, suggests that the property, situated within the municipal spatial development framework's urban development boundary, could support future urban expansion.

3 QUANTITATIVE IMPACT ASSESSMENT

3.1 INTRODUCTION

The following chapter of the report is focused on the assessment of potential economic impacts that may arise from the implementation of the proposed mixed-use development in the Lynedoch area of Stellenbosch.

The chapter aims to evaluate two key implications of the proposed development. The first is to consider the anticipated economic impact generated by the implementation and operation of the development. This impact is quantified by analysing the capital investment during the construction phase and the operational revenue during the operational phase, assessing their effects on the local, regional, and provincial economies.

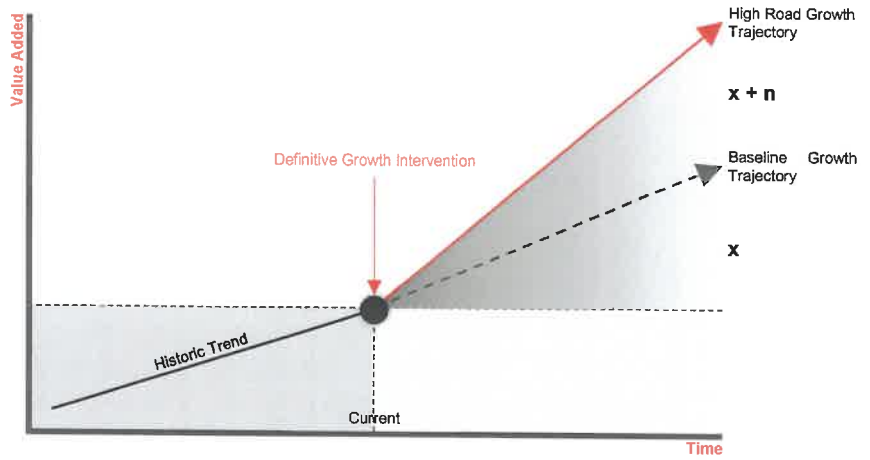
The second implication is to assess the anticipated economic impact resulting from the transformation of the current commercial agricultural use of the property (wine grape production) to the proposed development. This transformation would remove the commercial agricultural activity on the property, thereby altering the established flow of goods and services within the economy that stems from the current operational activities on the property.

Given the preceding, the economic impact refers to the ripple effect throughout the economy caused by investment in a specific sector. The transformation of agricultural land into the proposed development will have a net economic effect on the economy. The additional flow of goods and services created by the capital and operational expenditures of the proposed development is weighed against the change in the flow of goods and services resulting from the loss of commercial agricultural operations. This impact extends beyond the jobs and income generated by the original project. To estimate the total socio-economic impact, the input-output model is employed.

3.2 INPUT-OUT MODEL METHODOLOGY

The following figure conceptually illustrates the socio-economic impact that the proposed mixed-use development could have on the economy in terms of additional GDP.

Diagram 3.1: Economic Impact of a Development



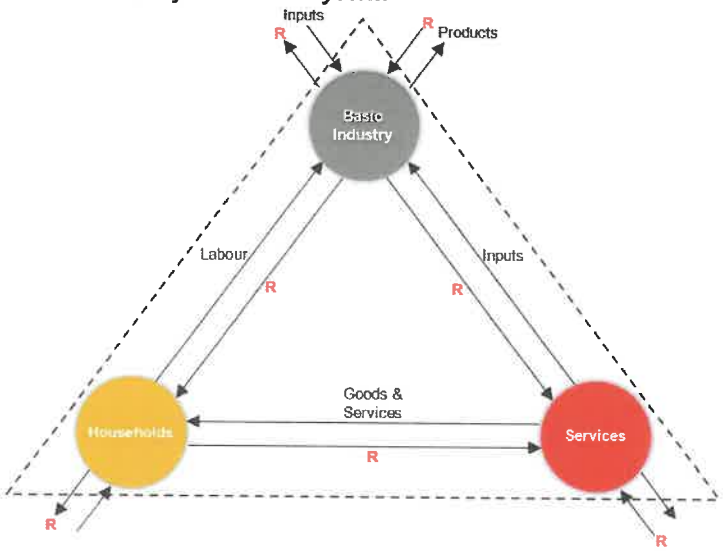
Source: DEMACON, 2024

Before the input-output model is discussed it is necessary to understand the community economic system and underlying interrelationships (Refer to Diagram 3.2 - Overleaf).

There is a strong interrelationship and interdependence between the three dominant sectors of the local economy: Basic industry, households and services. These interrelationships refer to sectors purchasing from other sectors, sectors selling to other sectors, sectors selling outside of the local economy and sectors buying outside of the local economy.

This results in the flow of labour, inputs, goods and services as well as money within and beyond the local economy. The input-output analysis creates a picture of a provincial economy describing the flows to and from industries and institutions. In other words, it describes the provincial economy and predicts the estimated impacts resulting from a change in the economy.

Diagram 3.2: Community Economic System



Source: DEMACON, 2024

The Input-Output Model depicts economic relationships between different components of an economy by identifying monetary flows (expenditures, receipts) between various units. The relationship between the initial spending and the total effects generated by the spending is known as the multiplier effect of the sector, or more generally as the impact of the sector on the economy. The input-output table represents the nucleus of the Inset-Output Model – as reflected in Table 3.1.

Table 3.1: Schematic Presentation of the Input-Output Model

	Intermediate Outputs	**Final Demand**	**Total Production**
	Quadrant I	**Quadrant II**	
Intermediate Inputs	x11 x12	C1 G1 I1 IC1 E1	X1
	x21 x22	C2 G2 I2 IC2 E2	X2
	xn1 xn2	Cn Gn In ICn En	Xn
	m11 m12	MC MG	Mn
	Quadrant III	**Quadrant IV**	
Primary Inputs	A1 A2	VC VG Vi VIC VE	A
	B1 B2		B
	T1 T2		T
Total Production	X1 X2 Xn	C G | IC E	Z

Source: DEMACON, 2024

Final demand (Y) can be presented by the following formula:

Y = C + I + G + (X - Z) where:

C:	Private consumption expenditure
I:	Gross domestic fixed investment
G:	Government consumption expenditure
X:	Exports
Z:	Imports

Both the intermediate inputs as well as intermediate outputs for the different production sectors are shown in Quadrant I. This quadrant is usually referred to as the transaction table or transaction matrix and is an indication of the transfer of goods and services between the industrial sectors for production purposes.

The different final demand components as applied in the input-output table are shown in Quadrant II. Components of final demand are private consumption expenditure (C), government consumption expenditure (G), gross domestic fixed investment (I), change in inventories (IC) and total exports (E).

Quadrant III represents the demand for primary inputs by the industrial sector. The elements of primary input, which are referred to are the remuneration of employees (A), the gross operating surplus (B) as well as net indirect taxes (T).

Quadrant IV is that portion of primary input, which is part of the final demand.

The linkage effects between the various sectors in the transaction matrix can be presented by xij, which shows the flow of goods from sector i to sector j.

The input-output model consists of three basic components:

- Transaction Table: illustrate the monetary flows of goods and services in a local economy for a given period
- Direct Requirements Table: indicates the purchases of resources (inputs) by a sector from all sectors to produce one Rand of output (creating a production recipe)
- Total Requirements Table: indicates the indirect and induced transactions caused by the purchases of resources (inputs) by a sector from all sectors

The input-output table is also based on certain basic assumptions:

- It is possible to group the different production activities in homogeneous industries
- The demand for intermediates by a particular sector will change in direct proportions to the specific sector's change in output
- No substitution of intermediates is possible due to price changes
- No technological change takes place
- Each sector produces only one primary product

It should be noted that:

- All rand values in the report represent 2024 current prices
- The different measures of economic impact cannot be added together and should be interpreted separately
- The model quantifies the economic impacts for a specific amount of time, and it is not derived gradually over time
- The input-output table is based on provincial supply and use tables, therefore, the multipliers and other related data measure economic impacts throughout the provincial economy (Quantec derived multipliers based on StatsSA Annual Financial Statistics, GDP at various economic levels, employment data and quarterly labour force surveys, 2024).

Impacts are traced through the provincial economy in terms of the application of a set of multipliers derived from provincial economic accounts (only local transactions are used to create the multiplier effect).

A multiplier summarises the total impact that can be expected throughout the economy from one-unit change for a given sector. There are several types of multipliers used by the model:

- Output multipliers (Business revenue or sales): it estimates the total change in sales volume
- Employment multipliers: measures the total change in employment resulting from an initial change in output/production of a specific industry
- Value-added multiplier (GDP): provides an estimate of the additional value added to the products as a result of this economic activity. Value-added includes employee compensations, corporate profits, indirect business taxes, and proprietary and other property income. It is the sum of the remuneration of employees and the gross operating surplus.
- Income multiplier: measures the total increase in income in the local economy resulting from a 1 Rand increase in total output/production
- Taxation multiplier: measures the increase in tax revenue that the national treasury could collect from the operation of business activities
- SMME opportunities measure the potential of the economy to create opportunities for new SMME's based on the causal relationship with an increase in the GDP of the economy. The analysis also considers the relationship between SMME growth and black ownership. The relationship takes into consideration GDP growth (StatsSA) and concomitant business registration and ownership data (SARS).
- Potential skills requirements: measures the demand for jobs based on different skill levels, i.e. low, semi and skilled jobs
- Sector profiling: measures the linkage of defined land uses with sectors of the economy and estimates the impact that increased economic activity could have on the various components of the economy.
- In addition to the preceding multipliers, reference is also made to the need and demand for social amenities based on economic growth. The growth of the economy increases the demand for jobs. Consequently, an increased demand for jobs, aligned with increased livelihoods increases demand for social amenities. The impact tool seeks to measure the increased demand for a spectrum of social amenities.

Difference between multipliers and turnover:

Turnover is typically used as a synonym for the output or production of business. Turnover refers to the number of times some of the initial Rand that is received from outside the community, changes hands within the community. Example: 1 Rand received from a new investment changes hands five times within the local economy. The multiplier is 1.66, although some portion of the initial Rand turns over five times.

During each exchange of money for goods or services, some of the original Rand leaves the local economy, which reduces the amount spent locally during the next exchange. Multipliers measure the full impact of a Rand on the local economy, whereas turnover merely indicates the number of times some of the initial Rand is spent locally.

The economic impact can be measured in terms of three effects:

- Direct effects: those economic effects caused by the new investment or proposed project
- Indirect effects: occurs to industries in the backward linked industries that supply goods and services to the proposed development. Economic activity triggered by the purchases made as a result of the initial round of project expenditure
- Induced effects: result from households spending some of the additional income they receive on goods and services within the local, regional and provincial economies.

There are two types of multipliers:

- Type 1 multipliers: Include direct or initial spending, as well as indirect spending or business buying and selling to each other
- Type 2 multipliers: Include Type 1 multiplier effects, plus household spending based on the income earned from the direct and indirect effects – the induced effects

In summary: Economic impacts represent the positive or negative effects caused by the expansion or contraction of an area's economy, resulting from the changes in a facility or project. In the case of the proposed project, it represents the impacts caused by the proposed construction activities.

Subsequent sections provide an overview of the estimated socio-economic impacts that could be caused by the implementation and operation of the proposed mixed-use development as well as the effect that the removal of commercial agricultural land could have of economic activity. The impact for the mixed-use development is estimated in terms of two project phases – the construction and the operational phases whilst the impact for the loss of commercial agricultural land is estimated for the current operational activities of the property.

3.3 Proposed Development Socio-Economic and Fiscal Impact Assessment

The purpose of this section is to assess the anticipated socio-economic impact that could be generated as a result of the implementation and operation of the proposed development's master plan. The estimated capital investment during the construction phase and operational revenue during the operational phase are used to quantify the potential impact on the regional, provincial and national economies.

The impact refers to the ripple effect throughout the economy caused by investment in a specific economic sector/land use. This impact stretches beyond the jobs and income generated by the original project. To estimate the total socio-economic impact, the input-output model is employed.

3.3.1 Key Indicators and Inputs

The following section provides an overview of the key indicators and inputs used to inform the input-output model. The data used as input to the model assists with calculating an estimated capital expenditure (CAPEX) and estimated operational revenue (OPEX) of the proposed development's master plan when fully developed and operational.

The following key indicators and inputs are based on the latest Block Plan (Master Plan) of the proposed development – compiled by URBANSTUDIO on 28 March 2024.

Diagram 3.3: Modelling Key Indicators and Inputs - Proposed Development

Land Use Type		Estimated Bulk (m²)	CAPEX	OPEX
	Education	4 000	R49 072 800	R19 200 000
	Commercial (Business)	2 869	R39 357 946	R109 022 000
	Clubhouse (Entertainment)	900	R12 346 515	RR34 200 000
	Residential (80 du/ha)	25 750	R681 590 913	R80 461 540
	Residential (40 du/ha)	28 400	R751 735 220	R55 463 780
	Residential (Allotment Villa)	3 500	R61 763 625	R2 187 305
	Total	**65 419**	**R1 595 867 019**	**R300 534 625**

Source: DEMACON Modelling, 2024

3.3.2 IMPACT SYNOPSIS

Total Estimated Capital Investment and Operational Revenue

The total estimated capital investment of the Lyndoch Mixed Use Development (Net Present Value for the current year) is R1.6 billion - It should be noted that the Total CAPEX includes expenditure on furniture, fixtures, fittings and related services. The total estimated operational revenue (annualised on-site business sales or turnover) of the development (Net Present Value for the current year) is R300.53 million.

Summary of Construction Phase Impacts

Impacts generated during the construction phase of the project are once-off and are sustained for as long as construction occurs. These impacts dwindle as construction activity comes to an end and the development becomes operational – then operational impacts, which are created and sustained annually, are activated.

The total CAPEX (Capital Investment) of the project could temporarily add approximately R3.5 billion in additional business sales, R1.49 billion in additional GDP (contributes +1.49% to the provincial economy) and approximately 5 253 once-off jobs (formal and informal) throughout the Western Cape provincial economy. An estimated 13 formal small, medium and micro-enterprise opportunities could be created. Black-owned SMMEs would potentially represent 61.54% of new formal SMME opportunities, given the prevailing legislative environment.

Formal employment during the construction phase represents 4 111 jobs (total direct, indirect and induced). Approximately 21.31% of formal employment opportunities are expected to be filled by skilled labourers compared to 56.75% semi-skilled labourers and 21.94% low-skilled labourers. Additional compensation paid to employees during the construction phase is estimated to be approximately R526.92 million.

It is estimated that approximately R428.93 million in additional taxes could be generated during the construction phase. The largest contributor to new taxes is as a result of corporate taxes, contributing 33.44% to all taxes collected economywide.

Summary of Operational Phase Impacts

Operational phase impacts are generated when the productive-land uses of the development commence with operations. Impacts created during the operational phase are "sustained" impacts. "Sustained impacts" are impacts that are continuously generated (i.e. created and then sustained annually) as soon as the full operation of the project commences (long-term impacts).

The total OPEX (operational revenue) of the project could annually add approximately R561.72 million in additional business sales, R317.02 million in additional GDP (contributes +0.32% to the provincial economy) and approximately 888 sustained jobs (formal and informal) throughout the Western Cape provincial economy. An estimated 0 formal small, medium and micro-enterprise opportunities could be created throughout the lifetime of the project. Black-owned SMMEs would potentially represent 0% of new formal SMME opportunities, given the prevailing legislative environment.

Formal employment opportunities created throughout the lifetime of the project represents 725 jobs (total direct, indirect and induced). Approximately 34.34% of formal employment opportunities are expected to be filled by skilled labourers compared to 45.24% semi-skilled labourers and 20.41% low-skilled labourers. Additional annual compensation paid to employees during the operational phase is estimated to be approximately R101.34 million.

It is estimated that approximately R62.42 million in additional taxes could be generated during the operational phase. The largest contributor to new taxes is as a result of personal income tax, contributing 48.43% to all taxes collected economywide.

Overall Outcome

Overall, the construction and operational phase of the project would have a measurable positive effect on the Western Cape provincial economy, generating sizeable GDP over the short- to long-term, high additional business sales and new business formation and a considerable number of new employment opportunities - across all skill levels. Additional taxes can contribute to national and local treasuries and households across the province can increase their livelihoods. The increased demand for social amenities will influence the fiscus and operation of public sector entities. The increased pressure on the fiscus is offset by the addition of productive rateable assets through the envisaged capital investment in the project.

3.3.3 CONSTRUCTION PHASE IMPACTS

The following section provides a concise overview of impacts that could arise during the construction phase of the proposed project. For a detailed breakdown of construction phase impacts, please refer to Annexure A. Please note that all effects of the construction phase are unsustained meaning that impacts are once-off and sustained for the duration of the construction phase.

Overarching Impacts

Total estimated **CAPEX** of the project **R1.60 billion**

- R3.5 billion — Additional Business Sales
- R1.49 billion — Additional GDP
- 5 253 jobs — Additional Formal and Informal Jobs

Estimated Number of New Enterprise Opportunities

Micro Enterprises (1 to 10 employees)	Small Enterprises (11 to 50 employees)	Medium Enterprises (51 to 200 employees)
6	5	2

Calculations indicate that the total estimated GDP impact of the construction phase could create 13 new SMME enterprise opportunities



61.5% of opportunities could be **black owned**

Social Amenities Potentially Required

No social amenity impacts apply during the construction phase

Formal Job Opportunities and Compensation

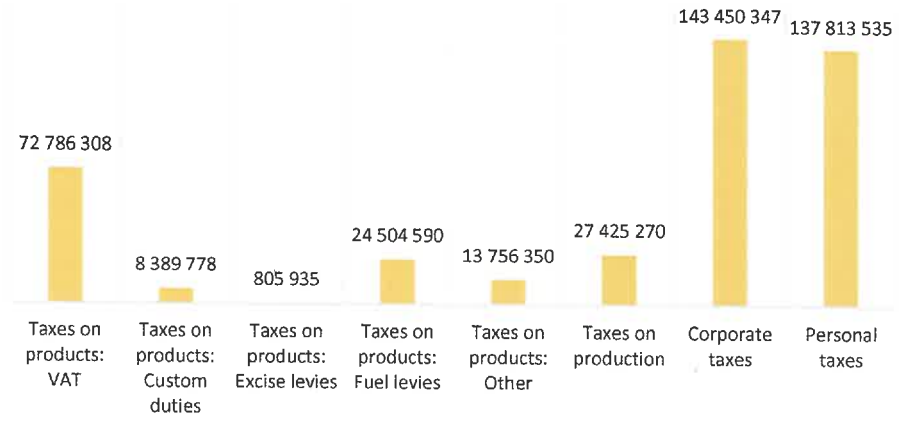


78.3% of total employment opportunities are **formal**

Skilled Jobs	21.3%
Semi-Skilled Jobs	56.7%
Low-Skilled Jobs	21.9%

Skilled Jobs	Semi-Skilled Jobs	Low-Skilled Jobs
876	2 333	902
Total Compensation for all Job Opportunities		
R149.6 million	R211.7 million	R165.6 million

Impact on Taxation



3.3.4 Operational Phase Impacts

The following section provides a concise overview of impacts that could arise during the operational phase of the proposed project. For a detailed breakdown of operational phase impacts, please refer to Annexure A. Please note that all effects of the operational phase are sustained meaning that impacts are continuously generated (i.e. created and then sustained annually) as soon as the full operation of the project commences (long-term impacts).

Overarching Impacts

Total estimated **OPEX** of the project: **R300.5 million**

- R561.7 million — Additional Business Sales
- R317.0 million — Additional GDP
- 888jobs — Additional Formal and Informal Jobs

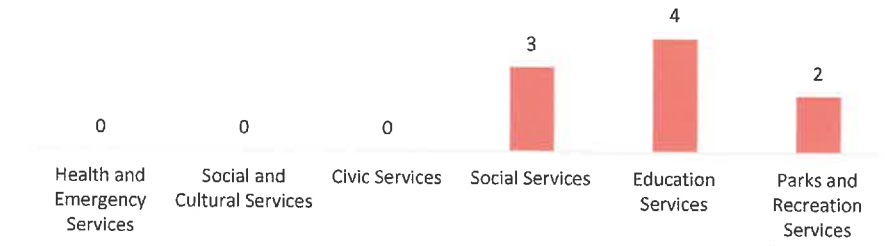
Estimated Number of New Enterprise Opportunities

Micro Enterprises (1 to 10 employees)	Small Enterprises (11 to 50 employees)	Medium Enterprises (51 to 200 employees)
0	0	0

Calculations indicate that the total estimated GDP impact of the construction phase could create 0 new SMME enterprise opportunities

0% of opportunities could be **black owned**

Social Amenities Potentially Required



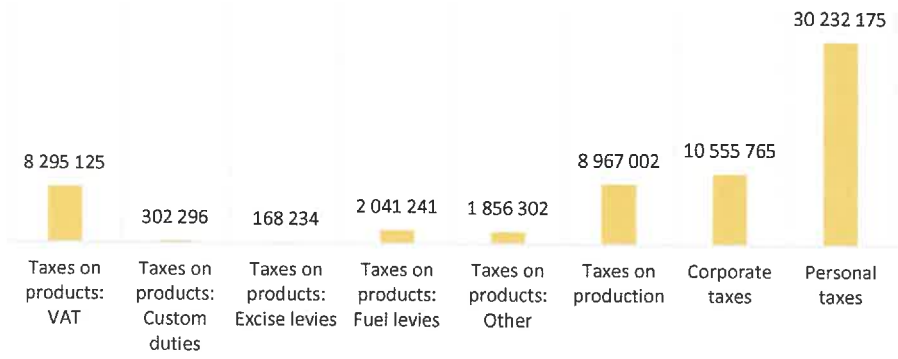
Formal Job Opportunities and Compensation

81.8% of total employment opportunities are **formal**

Skilled Jobs	34.4%
Semi-Skilled Jobs	45.2%
Low-Skilled Jobs	20.4%

Skilled Jobs	Semi-Skilled Jobs	Low-Skilled Jobs
249	328	148
Total Compensation for all Job Opportunities		
R41.8 million	R35.3 million	R24.2 million

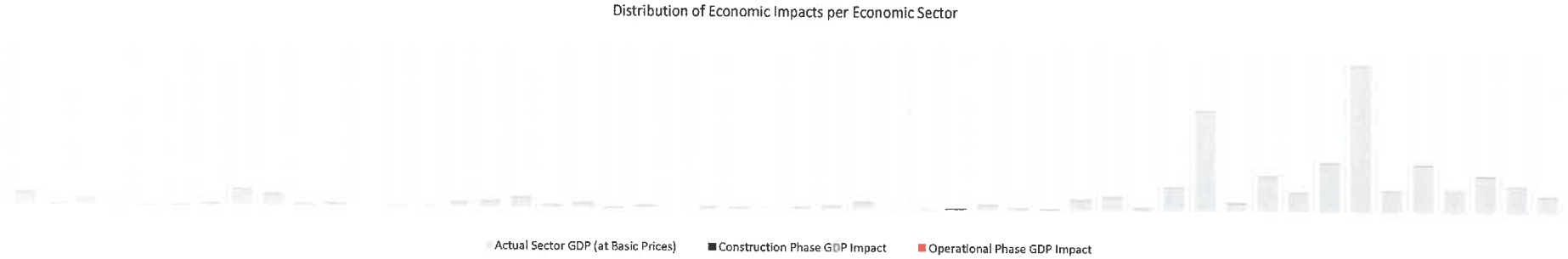
Impact on Taxation



Property taxes total approximately **R8 003 615** per annum

3.3.5 EFFECTS ON THE PROVINCIAL ECONOMY

The following illustrates the impact that the proposed development has on the Western Cape provincial economy by providing a graphical representation of the distribution of added GDP as a result of the construction and operational phase of the project.





3.3.6 COST AND BENEFIT ANALYSIS OF THE IMPACT

The following provides a concise perspective on the cost and benefit of the proposed development, taking into account the outcome of the preceding impact assessment.

Cost		Benefit (Impact)					
Construction Phase (CAPEX)		**Unsustained Impacts**		**Direct (e.g. Industry)**	**Indirect (e.g. Value Chain)**	**Induced (e.g. Consumption)**	**Total**
Land, Buildings and Infrastructure	R1.53 billion	Financial Impact	Additional Business Sales	R2.4 billion	R427.6 million	R694.0 million	R3.5 billion
			Total Production, Product and Operational Taxes (including VAT, Levies, Personal Income Tax, Corporate Taxes, etc.)	R302.2 million	R47.1 million	R79.7 million	R429.0 million
			Property Rates and Taxes – Municipal				
+		Economic Impact	Additional GDP (Market Prices)	R955.5 million	R190.3 million	R346.9 million	R1.49 billion
Furniture, Fittings and Related Services	R69.4 million	Business Impact – New business opportunities and/or business employment expansion	Micro Enterprise (1 to 10)	4	0	2	6
			Small Enterprises (11 to 50)	3	0	2	5
↓			Medium Enterprises (51 to 200)	2	0	0	2
Total CAPEX	R1.60 billion	Social Impact	Additional Jobs (Formal and Informal)	3 812	470	971	5 253
			Total Compensation Benefits of New Jobs Created (Salaries and Wages)	R343.8 million	R55.6 million	R127.5 million	R526.9 million
Operational Phase (OPEX)		**Sustained Impacts (annualised; at maturity)**		**Direct (e.g. Industry)**	**Indirect (e.g. Value Chain)**	**Induced (e.g. Consumption)**	**Total**
		Financial Impact	Additional Business Sales	R371.2 million	R33.2 million	R157.3 million	R561.7 million
			Total Production, Product and Operational Taxes (including VAT, Levies, Personal Income Tax, Corporate Taxes, etc.)	R40.6 million	R3.7 million	R18.1 million	R62.4 million
			Property Rates and Taxes – Municipal	R8.0 million			
		Economic Impact	Additional GDP (Market Prices)	R221.6 million	R16.8 million	R78.6 million	R317.0 million
		Business Impact – New business opportunities and/or business employment expansion	Micro Enterprise (1 to 10)	0	0	0	0
			Small Enterprises (11 to 50)	0	0	0	0
			Medium Enterprises (51 to 200)	0	0	0	0
Total OPEX	R300.5 million	Social Impact	Additional Jobs (Formal and Informal)	624	43	220	888
			Total Compensation Benefits of New Jobs Created (Salaries and Wages)	R67.0 million	R5.5 million	R28.9 million	R101.3 million

3.4 Existing Agriculture Operations Socio-Economic and Fiscal Impact Assessment

This section aims to assess the socio-economic impact generated by the day-to-day operations of the commercial agricultural activities on the proposed development site. The estimated expenditure on operational activities for wine grape production on the property, along with the estimated costs of processing these grapes into consumable products, are used to quantify the potential impact on the regional, provincial, and national economies.

The impact refers to the ripple effect throughout the economy caused by expenditure to support specific economic sector/land use activities. This impact stretches beyond the jobs and income generated by the original project. To estimate the total socio-economic impact, the input-output model is employed.

3.4.1 Key Indicators and Inputs

The following section provides an overview of the key indicators and inputs used to inform the input-output model. The data used as input to the model assists with calculating the estimated operational expenses (OPEX) of the of the current agricultural production activities on the property as well as the likely expenditure undergone to process the produce of the farm into related products and consumables.

The following key indicators and inputs are based on information contained in the Agriculture Impact Assessment Report (2023) compiled by AGRIinformatics and supported by information from sources such as Vinpro (Cost Guide 2024/25) and SAWIS (South African Wine Industry Statistics (2023)).

Diagram 3.4: Modelling Key Indicators and Inputs - Proposed Development

Land Use Type	Yield (tons)	OPEX
Farm Wine Grape Production Costs	158.46	R2 185 331
Downstream Wine Grape Processing and Wine Manufacturing Costs	158.46	R375 280
Total		**R2 560 611**

Source: DEMACON Modelling, 2024

3.4.2 Impact Synopsis

Total Estimated Operational Expenditure

The total estimated annual operational expenditure (annualised on-site operational expenditure and market related processing of agricultural produce) of the development (Net Present Value for the current year) is R2.56 million.

Summary of Construction Phase Impacts

Because this impact assessment focusses on the operational activities of the farm given its commercial production of wine grapes, construction related expenditure has not been identified and has therefore been excluded.

Summary of Operational Impacts

Operational impacts are generated because of the operational activities of the farm and the resulting processing of produce produced by the farm for consumer goods. Impacts created during operations are "sustained" impacts. "Sustained impacts" are impacts that are continuously generated (i.e. created and then sustained annually).

The total OPEX (operational expenditure) of the farm and the processing of wine grapes into other products could annually add approximately R4.8 million in additional business sales, R1.97 million in additional GDP (contributes +0% to the provincial economy) and approximately 8 sustained jobs (formal and informal) throughout the Western Cape provincial economy. No additional formal small, medium and micro-enterprise opportunities could be created as a result of the current operational output of the farm.

Formal employment opportunities created as a result of the operational output of the farm represents 7 jobs (total direct, indirect and induced). Additional annual compensation paid to employees as a result of the operational output of the farm is estimated to be approximately R0.54 million.

It is estimated that approximately R0.46 million in additional taxes could be generated. The largest contributor to new taxes is as a result of personal income tax, contributing 39.34% to all taxes collected economywide.

Although the farm produces wine grapes, the yield generated by the farm does not generate substantial demand for additional goods and services throughout the provincial economy.

3.4.3 Operational Impacts

The following section provides a concise overview of impacts that arise during the operations of the agricultural activities of the farm. For a detailed breakdown of operational impacts, please refer to Annexure B. Please note that all effects of the operational phase are sustained meaning that impacts are continuously generated (i.e. created and then sustained annually).

Overarching Impacts

Total estimated **OPEX** of the project **R2.6 million**

- R4.8 million — Additional Business Sales
- R2.0 million — Additional GDP
- 8 jobs — Additional Formal and Informal Jobs

Estimated Number of New Enterprise Opportunities

Micro Enterprises (1 to 10 employees)	Small Enterprises (11 to 50 employees)	Medium Enterprises (51 to 200 employees)
0	0	0

Calculations indicate that the total estimated GDP impact of the construction phase could create 0 new SMME enterprise opportunities

0% of opportunities could be **black owned**

Social Amenities Potentially Required

No additional social amenities are required.

Formal Job Opportunities and Compensation

81.8% of total employment opportunities are **formal**

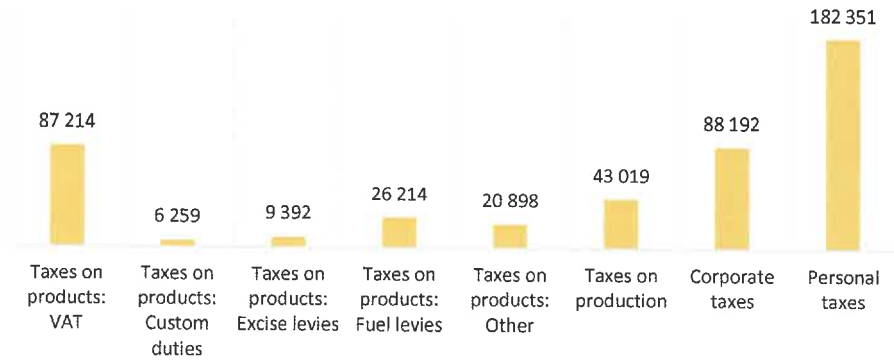
Skilled Jobs	15.1%
Semi-Skilled Jobs	30.6%
Low-Skilled Jobs	54.2%

Skilled Jobs	Semi-Skilled Jobs	Low-Skilled Jobs
1	2	4

Total Compensation for all Job Opportunities

R178 983	R176 678	R188 191

Impact on Taxation



Property taxes total approximately **R15 760** per annum

3.4.4 EFFECTS ON THE PROVINCIAL ECONOMY

The following illustrates the impact that the proposed development has on the Western Cape provincial economy by providing a graphical representation of the distribution of added GDP as a result of the agricultural operations on the subject property.



3.4.5 Cost and Benefit Analysis of the Impact

The following provides a concise perspective on the cost and benefit of the proposed development, taking into account the outcome of the preceding impact assessment.

Cost		Benefit (Impact)					
Construction Phase (CAPEX)		**Unsustained Impacts**		**Direct (e.g. Industry)**	**Indirect (e.g. Value Chain)**	**Induced (e.g. Consumption)**	**Total**
Land, Buildings and Infrastructure		Financial Impact	Additional Business Sales	No Impact			
			Total Production, Product and Operational Taxes (including VAT, Levies, Personal Income Tax, Corporate Taxes, etc.)				
			Property Rates and Taxes – Municipal				
		Economic Impact	Additional GDP (Market Prices)				
Furniture, Fittings and Related Services		Business Impact – New business opportunities and/or business employment expansion	Micro Enterprise (1 to 10)				
			Small Enterprises (11 to 50)				
			Medium Enterprises (51 to 200)				
Total CAPEX		Social Impact	Additional Jobs (Formal and Informal)				
			Total Compensation Benefits of New Jobs Created (Salaries and Wages)				
Operational Phase (OPEX)		**Sustained Impacts (annualised; at maturity)**		**Direct (e.g. Industry)**	**Indirect (e.g. Value Chain)**	**Induced (e.g. Consumption)**	**Total**
		Financial Impact	Additional Business Sales	R3.29 million	R0.37 million	R1.13 million	R4.8 million
			Total Production, Product and Operational Taxes (including VAT, Levies, Personal Income Tax, Corporate Taxes, etc.)	R0.29 million	R0.04 million	R0.13 million	R0.46 million
			Property Rates and Taxes – Municipal	R15 760			
Total OPEX	R2.56.5 million	Economic Impact	Additional GDP (Market Prices)	R1.21 million	R0.19 million	R0.57 million	R1.97 million
		Business Impact – New business opportunities and/or business employment expansion	Micro Enterprise (1 to 10)	0	0	0	0
			Small Enterprises (11 to 50)	0	0	0	0
			Medium Enterprises (51 to 200)	0	0	0	0
		Social Impact	Additional Jobs (Formal and Informal)	6	1	2	8
			Total Compensation Benefits of New Jobs Created (Salaries and Wages)	R0.27 million	R0.07 million	R0.21 million	R0.54 million

3.5 Impact Synopsis

The proposed mixed-use development is a scaled real estate development opportunity that aims to develop a mixture of residential, commercial, entertainment and education land uses as part of an integrated development in the Lynedoch area of Stellenbosch.

The proposed development is strategically positioned to not only contribute and support the optimal use of developable land within the current urban development boundary of the Stellenbosch administrative region, but also can unlock a myriad of long-term and sustained economic, socio-economic and fiscal benefits as a result of the projects' construction and operation.

At full maturity, the development will span 45 hectares of developable land, offering a diverse range of economically and fiscally productive land uses. It will feature over 800 residential units of varying densities, supporting a mixed-typology approach, while also incorporating complementary uses such as retail services, entertainment venues, and educational facilities.

However, it is important to note that the proposed site is currently used for commercial agriculture, specifically the production of wine grapes. The implementation of the proposed development would transform the property from its current agricultural use, leading to the removal of active agricultural land from the wine grape industry and the broader Western Cape agricultural sector. The agricultural potential of the property has been assessed as low and unviable for a range of agricultural activities, particularly for the current wine grape production, which, according to the Agricultural Impact Assessment (2023), is considered a temporary use.

Wine grape production on the farm is deemed temporary due to the declining yield from aging vineyards and the current market and input cost climate, which restricts investment in long-term sustainability. The Impact Assessment highlights that aging vineyards, limited capacity to replace end-of-life vineyards, and insufficient water resources for sustained irrigation have resulted in a current yield of 5.5 tons per hectare—significantly below the 15 tons per hectare needed for sustainable wine grape production. These factors indicate that, while the property does produce wine grapes, its commercial viability as a long-term agricultural asset is limited and under constant market pressure, diminishing the farm's ability to reinvest and maintain its commercial viability.

Given that the property currently serves an economic function through its agricultural output, it is crucial to weigh the economic benefits of its current state against those of the proposed mixed-use development. The socio-economic and fiscal impact assessment has focused on measuring the current and potential future economic and fiscal impacts of the property under both scenarios. The resulting quantification allows for a comparison of the economic and fiscal impacts of continued agricultural use versus the proposed development, determining the net economic benefit or cost associated with transforming the agricultural land.

The following table summarizes the socio-economic and fiscal impact assessment of the proposed development in comparison to the current agricultural use of the property.

Table 3.2: Summary of the Socio-Economic and Fiscal Impact Assessment of the Proposed Development in comparison to the Current Agricultural Use of the Property

	Proposed Development	Current Agricultural Use
Input Considerations		
Bulk m² and Other Considerations	65 419	Produces 158.5 tons of wine grapes per annum. Vineyards are reaching their end of life and current yields are below the required yield to sustain wine grape production
Construction Phase		

	Proposed Development	Current Agricultural Use
Input		
Construction Cost (includes land, infrastructure, furniture and fittings)	R1 595 867 019	
Impact		
Additional Business Sales	R3 496 988 265	
Additional GDP	R1 492 683 555	
Additional formal employment	4 111	No Impact
Estimated number of new enterprise opportunities	13	
Compensation of additional formal employment opportunities (annual)	R526 920 368	
Total additional taxation (Taxes on products and production, corporate taxes, personal income tax)	R428 932 116	
Operational Phase		
Input		
Operational Expenditure (land use specific)	R300 534 625	R2 560 611
Impact		
Additional Business Sales (per annum)	R561 723 704	R4 798 987
Additional GDP (per annum)	R317 017 638	R1 969 061
Additional formal employment	726	7
Estimated number of new enterprise opportunities	0	0
Compensation of additional formal employment opportunities (per annum)	R101 339 452	R543 851
Additional social amenities	9	0

	Proposed Development	Current Agricultural Use
Total additional taxation (Taxes on products and production, corporate taxes, personal income tax)	R62 418 141	R463 538
Total additional property taxation	R8 003 615	R15 760
Probability Rating		
Impact Prospects	**Moderate to High** The forecast impacts are likely to occur given the implementation of the proposed development. Take-up is forecast to accelerate as the development gains traction in the market.	**Low** The agricultural potential of the subject property for different types of agricultural production is assessed to be low and unviable.

Source: DEMACON Socio-Economic and Fiscal Impact Assessment Results

4 QUALITATIVE IMPACT ASSESSMENT

4.1 INTRODUCTION

The following chapter is focused on the qualitative impact assessment of the proposed mixed use development opportunity in the Lynedoch precinct of the Stellenbosch Local Municipality. The purpose of this assessment is to:

- identify potential impacts that may arise from the project during the construction and operational phase,
- assess identified impacts based on a scientific methodology in order to outline the extent, scale, magnitude, probability and significance of each impact, and
- to propose potential mitigation measures that can be implemented to minimize the severity of negative impacts and encourage greater output from positive impacts.

The chapter outlines the potential qualitative impacts that could arise during the construction and operational phases of the proposed development. The primary focus of the assessment is to identify the impact that the proposed development could have on the function of the local and regional economy within which the project is to operate.

The section outlines potential mitigation measures to ensure that negative impacts are minimised, and positive impacts are enhanced within the local community and economy.

4.2 IMPACT ASSESSMENT PROCEDURE

In order to adequately assess and evaluate the impacts and benefits associated with the project, it was necessary to develop a methodology that would scientifically achieve this and reduce the subjectivity involved in making such evaluations.

The evaluation of impacts is conducted in terms of a framework of criteria. The various socio-economic and fiscal impacts of the proposed project is measured in terms of the status, extent, duration, probability, and magnitude of the impact. By making use of the preceding measurements, a pre- and post-mitigation significance rating is calculated. Furthermore, the nature or status of the impact is determined by the conditions of the environment prior to construction and operation. A discussion on the status of the impact will include a description of what causes the effect, what will be affected and how it will be affected. The status of the impact can be described as negative, positive or neutral.

The following provides an outline and overview of the methodological elements described above.

Table 4.1: Criteria for Determining Impact Consequence

Aspect	Score	Definition
Status	+1	A benefit to the community
	0	No cost or benefit to the community
	-1	A cost to the community
Extent	1	Site-Specific (Occurs within the site boundary)
	2	Local (Extends beyond the site boundary - extending only as far as local community or urban area)
	3	Provincial / Regional (Extends far beyond the site boundary - Widespread effect)
	4	National (i.e. South Africa)
	5	Across International Borders
Duration	1	Immediate (less than a year)
	2	Short term (1-5 years)
	3	Medium-term (6-10 years)
	4	Long term (longer than 10 years)
	5	Permanent (no mitigation measures or natural process will reduce the impact after construction)
Magnitude	1	Where the impact affects the social and/or economic environment in such a way that neutral, cultural and social functions and processes are not affected
	2	Where the impact affects the social and/or economic environment in such a way that neutral, cultural and social functions and processes are slightly affected
	3	Where the impact affects the social and/or economic environment in such a way that neutral, cultural and social functions and processes continue albeit in a modified way

Aspect	Score	Definition
	4	Where the impact affects the social and/or economic environment in such a way that neutral, cultural and social functions and processes are altered to the extent that it will temporarily cease
	5	Where the impact affects the social and/or economic environment in such a way that neutral, cultural and social functions and processes are altered to the extent that it will permanently cease
Probability	1	The impact will not occur
	2	The possibility of the impact materialising is very low
	3	There is a possibility that the impact will occur
	4	The impact may occur
	5	It is expected that the impact will occur

Source: DEMACON, 2024

The following table provides an overview of the significance rating of each impact. the significance rating is calculated pre- and post-mitigation in order to determine the extent to which mitigation measures can mitigate the impacts of the project.

Table 4.2: Impact Significance Rating

Significance Rating	Description
0	The impact has limited influence, or the impact is unknown
Up to 15	Low - The impact does not have a direct influence on the decision to develop in the area
16 to 30	Low to Medium - There is an impact, but can be mitigated
31 to 45	Medium - The impact could influence the decision to develop in the area unless it is effectively mitigated
46 to 60	Medium to High - The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be difficult as well as expensive
Above 60	High - The impact will have a direct influence on whether to develop, but there is limited scope to mitigate these impacts

Source: DEMACON, 2024

4.3 Qualitative Impact Assessment

The purpose of the qualitative socio-economic and fiscal impact assessment is to complement and enhance the quantitative assessment by providing a comprehensive understanding of the broader range of potential impacts that could result from the proposed project. The purpose of the qualitative impact assessment is to:

- Assess each relevant impact identified based on an impact assessment framework that measures the risk of an impact based on factors such as nature, extent, duration, probability and magnitude and
- Determine a significance rating for each impact and based on the nature of the impact identify and provide mitigation measures and alternatives

The section outlines the potential qualitative impacts that could arise during the construction and operational phases of the proposed project. Additionally, potential mitigation measures to ensure that negative impacts are minimised, and positive impacts are enhanced within the local community and economy are identified.

The following sections will provide a qualitative impact assessment of potential impacts that may arise from the construction and operation of the proposed project. The assessment is based on the methodology outlined in Section 1.3 of this report.

4.3.1 Construction Phase Qualitative Impact Assessment

The following section provides an overview of the potential impacts that could arise during the construction phase of the proposed project and measures the identified impacts within the qualitative impact assessment framework. The section firstly focusses on identifying potential impacts and thereafter qualitatively measures each impact pre- and post-mitigation.

4.3.1.1 Impact Identification

This section focusses on identifying and outlining the key impacts that the proposed development could have on the receiving socio-economic environment during the construction phase.

The potential impacts arising from the construction of the proposed development span across diverse areas and encompass multiple core themes. Consequently, the subsequent section delineates these thematic categories, within which the

identified impacts are presented, showcasing the impacts associated with each individual theme.

Theme 1: Impact on the Local and Regional Business Base

The proposed development could, as per the quantitative impact assessment, have a measurable impact on the receiving demography and economy and the broader containing economic geographies during its construction phase - the quantitative analysis reveals that the capital expenditure during the construction phase of the project could be as much as R1.6 billion, stimulating nearly R1.5 billion in additional GDP and R3.5 billion in additional business sales. This additional output will be the result of expenditures across the entire value chain of the construction industry, including both backward and forward linkages. These expenditures will create direct, indirect, and induced effects, leading to increased economic production and the demand for related services and inputs.

While an augmented economic output has the potential to invigorate demand across the construction industry value chain, the influence and repercussions attributed to "construction mafia" entities could undermine the project's economic value. This in turn could curtail the project's capacity to contribute positively to local communities through avenues such as employment opportunities, business growth, and overall economic sustainability.

Theme 2: Stimulation of Employment Opportunities

The measurable economic potential of the proposed project's construction phase could also stimulate additional employment opportunities throughout the economy. Even though site-specific construction related employment opportunities will be created, increased economic output and demand for services and inputs throughout the construction sector's value chain could stimulate the need for additional employment opportunities to support increased demand and output requirements. The quantitative analysis of the construction phase identifies that nearly 5 300 additional unsustained employment opportunities could be created throughout the construction period of the project economy-wide (construction period is currently unknown).

Site-specific and value chain related employment opportunities could benefit the local community and, al be it temporary, contribute toward addressing the persistent unemployment rate of the receiving economy (14.5%).

Theme 3: Impact on Local Communities

As highlighted earlier, the construction phase of the project is poised to generate a multitude of on-site employment openings and holds the potential to ignite employment prospects within the recipient economy. These available job positions may, in part, be taken-up by local labourers, contributing to augmented household incomes and the betterment of livelihoods within the community.

Furthermore, the households experiencing heightened income levels might also foster increased demand for goods and services, potentially amplifying the need for social facilities. However, this surge in amenity demand might inadvertently place stress on the local supply capacity, potentially exacerbating prevailing supply shortages even though the project proposes the construction of a school and private healthcare facility.

The sudden increase in people on the development site and its immediate surrounds as a result of construction related activities and opportunity seekers could increase the prospect of crime in the immediate communities. As a result, an increase in construction related activities would require a concomitant increase in policing activity to maintain the safety and security of communities.

Lastly, the heightened movement activity associated with construction operations could disrupt existing traffic patterns around the project site and along major routes connecting key nodes, economic zones, and settlements. The increased daily movement of labourers to and from the construction site could disrupt normal traffic flow and established movement patterns.

Theme 4: Infrastructure and Utilities

The period of construction of the proposed project is currently unknown – market demand estimations suggest that the take-up of the proposed development could occur over a 10-year period. During this time, however, construction activities as well as heightened economic activity could place additional demand on existing transportation infrastructure (primarily roads). As a result, an increased maintenance burden is placed on the authority administrating local and regional roads that will be impacted by the proposed project's construction activity movement.

Additionally, the increased labour in the receiving environment accompanied by increased livelihoods in the local community and the construction activities could create additional demand for bulk utilities – electricity, water, sanitation, etc., in

light of the prevailing moderate- to high-levels of access to bulk and related infrastructure and services in the area.

Because the project is changing the use of the property upon which it is being built, state revenue is increased through additional rates and taxes. These additional rates and taxes could contribute toward addressing inter alia infrastructure supply and maintenance demands.

Theme 5: Natural Environment and Agriculture

The duration and extent of construction activities on the proposed development site could create air, noise and pollutant exposure that could impact on existing local communities by contributing to their existing burden of disease.

The proposed development will result in a change in land use for the property on which it is being built, transitioning from agricultural to a mixed-use area comprising residential, business, healthcare, education, entertainment, open space, and infrastructure. Currently, the property is used for commercial agriculture, primarily for growing wine grapes. However, an Agriculture Impact Assessment conducted for the property indicates that its agricultural potential is low, and in some cases, unviable.

The assessment notes that wine grape production on the property is significantly below the level required to sustain commercial agriculture. The vineyards are nearing the end of their productive life, and factors such as aging vines, limited irrigation, reliance on rainfed crops, and rising input costs make vineyard replacement economically unfeasible. As a result, the productivity of the property is anticipated to decline in the short to medium term, rendering it insufficient to support commercial wine grape production. This trend aligns with current market conditions in the Stellenbosch wine grape production area.

Quantitative analysis of the farm's current output shows that the property generates R2.6 million in operational expenditure through wine grape production and processing. This activity supports approximately 8 jobs, contributes nearly R2 million to GDP, and generates less than R5 million in additional business sales. In comparison, the proposed development will have a much greater economic impact. The property currently represents a limited production unit with minimal potential for economic expansion, and its economic value will continue to decline as productivity decreases due to aging vineyards, limited irrigation, and increasing input costs.

Agricultural activities such as irrigated cultivation, dryland farming, and livestock operations are also considered low-potential due to insufficient irrigation, the small size of the property, topographical challenges, and low to medium soil quality.

While the transformation of the property will remove farmland used for wine grape production, contributing to the reduction of available agricultural land in South Africa's broader wine-producing area, the current output of the property is only about 150 tons of grapes annually - ±0.2% of the total Stellenbosch annual yield. This contribution to the local and regional economy is minor, and the current agricultural activities are well below the threshold for sustainable production.

Given the low viability of continued agricultural use, the transformation of the property into a mixed-use development will enable more productive land uses, contributing positively to the local economy, urban development, and socio-economic conditions.

Table 4.3: Construction Phase Impacts Identified

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
Impact on Local and Regional Business Base	**Impact** • The construction phase of the project will generate demand for goods and services necessary to sustain construction activities. This sustained demand over the construction phase could lead to additional business sales throughout the construction industry's value chain (increased economic output, production and gross value added). **Mitigation Measures** • The sourcing of construction inputs by the implementing agent should, as far as possible, be sourced from the receiving economy, i.e., business within the receiving economy capable of servicing the construction activity.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	• Prior to construction, implementers should engage with local businesses and suppliers to determine the capability and financial viability of sourcing from local businesses. **Cumulative Impacts** • The overall impact will create value throughout the backward linking industries required to support construction efforts and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local and Regional Business Base	**Impact** • The demand for goods and services required to sustain construction activities may not be fully serviced by the local economy's existing construction sector value chain and as a result would need to source goods and services from outside the local economy. **Mitigation Measures** • Should it be required that goods and services be sourced from outside the receiving economy, value chain development initiatives could be drafted between the implementer of the project and local suppliers and businesses to assist local businesses with expanding their access to the broader value chain and its markets. **Cumulative Impacts** • The overall impact will create value throughout the backward linking industries required to support construction efforts and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local and Regional Business Base	**Impact** • Increased economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created. **Mitigation Measures** • The sourcing of goods and services should be prioritised within the receiving economy. • Agencies such as the Stellenbosch Business Forum, National Empowerment Fund, Wesgro, etc., should extend their support to local businesses. This could involve offering guidance and supplementary business support measures, all aimed at empowering the businesses that experience gains throughout the construction phase. This assistance would enable these local and regional enterprises to not only thrive during the immediate term but also to foster sustainable business practices for the long run. **Cumulative Impacts** • The overall impact will create value throughout the backward linking industries required to support growing businesses and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local and Regional Business Base	**Impact** • The effective execution of the proposed project might face hindrance due to the presence of local 'construction mafias'. The possibility exists that these entities intimidate external labour sources, disrupt the local community, and consequently causes delays in project completion.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	Mitigation Measures • It is important that the necessary community/business community engagement is undertaken to, as far as possible, source supply chain inputs from local businesses, entrepreneurs and construction agents (includes labour). **Cumulative Impacts** • Such a scenario could potentially lead to significant disruptions in the project's punctual completion and delivery. Moreover, it has the potential to undermine the intended outcome of the project, influence investor appetite, enable nodal and local growth potential and reduce community orientated socio-economic benefits.. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local and Regional Business Base	**Impact** • The labour force involved in the construction of the intended project could drive a surge in demand for lodging facilities and related services within the host economy. This heightened demand arises from the need to accommodate workers who aren't native to the area. This situation presents an opportunity for local lodging providers to experience extended periods of high occupancy, consequently leading to increased revenue streams. **Mitigation Measures** • It's important to proactively identify potential local accommodation service providers. In instances of scarcity, it becomes crucial to locate alternative lodging options and, if deemed necessary, establish plans for temporary accommodations. **Cumulative Impacts** • The overall impact will create value throughout the backward linking industries required to support the residential industry and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • The construction of the proposed project will create temporary construction related employment opportunities on-site (across the skills spectrum). **Mitigation Measures** • Labour to be employed at the proposed project should so far as possible be sourced from local markets. • The sourcing of employment from the local market will be dependent on the availability of skills. Should the necessary skills not be available, skilled labour should be sourced from beyond the receiving economy. • The sourcing of labour should also consider the role of woman and other previously disadvantaged communities. **Cumulative Impacts** • The overall impact will create employment opportunities that will temporarily contribute to easing the high unemployment rate of the receiving socio-economic environment. These employment opportunities also contribute to improved household livelihoods **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • New employment opportunities throughout the construction industry's value chain could be stimulated as a result of the increased demand generated by the construction of the proposed project. **Mitigation Measures**

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	• No mitigation is required. **Cumulative Impacts** • The overall impact will create employment opportunities that in turn will induce economic effects such as increased household incomes and consumer spending. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • It might be necessary to temporarily import various tiers of skilled labour to the region to effectively carry out construction activities. **Mitigation Measures** • To mitigate the potential 'importation' of labour due to insufficient skills in the local labour force, consideration should be given to skills training in the local community. • Employment during the construction phase should also be focused on local procurement as far as possible. • Additionally, should the import of labour from outside the current labour pool be necessary, the focus should be temporary imports until such time that the local labour force has sufficient skills to undertake construction activities. **Cumulative Impacts** • The overall impact could remove employment opportunities from the receiving socio-economic environment and limit the potential of local communities to benefit from employment opportunities created. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • Employment opportunities created on-site by the project during the construction phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities. **Mitigation Measures** • By procuring employment from local communities, a rise in household income would be created and directly affect the livelihood of local communities. • The procurement of local labourers would be dependent on the availability of necessary skills **Cumulative Impacts** • The overall impact could see an improvement in household livelihoods which could lead to the increased demand for goods, services and social amenities. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods during the construction phase. This could place an additional burden on existing social amenities and services due to an increase in demand. **Mitigation Measures** • Local authorities in conjunction with the implementing agent should undertake appropriate studies to determine the possible extent of demand generated for social amenities and services during the construction phase.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	• Sufficient knowledge regarding potential short-falls could allow for the expansion of, or implementation of, additional services to accommodate short-term demand as well as function as mitigation measures for medium- to long-term demand. **Cumulative Impacts** • The overall impact could see a widening in the social amenities and services supply gap and could exasperate existing supply inefficiencies. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • Where labour is sourced from beyond the receiving economy the receiving socio-economic environment's labour absorption capacity is diminished and the spending of money earned locally is reduced – remittances to homesteads. In the event that labour must be sourced from outside the local area, these migrants could be viewed as temporary. **Mitigation Measures** • To mitigate the effects of large-scale in-migration to the socio-economic receiving environment, necessary planning and research should be undertaken. • A local migration plan by the local government and the implementing agent should be considered in order to identify the potential size of migration to the area, potential locations for settlement and the additional strain placed on the local economy, services and infrastructure. • The migration plan should be done in conjunction to spatial planning policies of local government in order to ensure sustainable and efficient spatial remedies and objectives. **Cumulative Impacts** • Migration into the socio-economic receiving environment is low and could be adjusted upward due to the construction of the proposed project. Sudden in-migration to the area and the concomitant increase of population could place stress on existing services and amenities. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • An influx of population to the receiving economy (employed or job-seekers) may lead to increased crime activity. Job-seekers that do not find employment may turn to crime and in turn influence community safety. The introduction of persons outside the local labour market (i.e. sourcing from other economic regions for instance) could introduce a criminal element. Additionally, contractors undertaking construction of the proposed development may also, due to bad behaviour, influence community safety through inappropriate actions. **Mitigation Measures** • Working hours should be kept to day-light hours. • Appointment of security services at the construction site. • Implement necessary health and safety standards and procedures. • Ensure local law enforcement monitors local communities for increased crime related to the construction of the project. **Cumulative Impacts** • The overall impact could see the increase in crime in the socio-economic receiving environment and as a consequence could influence the quality and safety of local communities. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
Impact on Local Communities	**Impact** • Due to construction activities, labour is transported to and from the construction site, i.e. from home to work and vice versa. Additionally, construction related transportation of goods and services will also occur. The daily movement of construction workers and related activities increases the load on the local transport network – influencing travel times and congestion. **Mitigation Measures** • The following could be considered: o Establish working hours that would assist with mitigating local community impacts and ensure operational efficiency o Avoid heavy trucks during peak traffic hours o The provision of adequate and strategically positioned traffic warning signs **Cumulative Impacts** • The overall impact could disrupt normal traffic flows on major routes and as a result impact on the efficiency of surrounding businesses (i.e. retailers, local farmers, etc.) **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Infrastructure and Utilities	**Impact** • Road infrastructure may experience increased pressure due to project related construction activities as well as the increased transportation of economic goods and services. Construction activities may generate vehicles in support of construction efforts. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area. **Mitigation Measures** • Monitor and maintain infrastructure regularly used by construction vehicles and transporters for economic goods during the construction phase. **Cumulative Impacts** • The overall impact could impact on the quality of road infrastructure and as a result influence the capacity of local roads to be used by other industries (i.e. local retailers and farmers, etc.) **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Infrastructure and Utilities	**Impact** • Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities. **Mitigation Measures** • An infrastructure management plan should be developed in order to monitor and implement maintenance required to uphold transport infrastructure capacity. **Cumulative Impacts** • The overall impact could reduce the budget available to local authorities to implement or expand service delivery in other sectors and industries. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources

Impact on Infrastructure and Utilities	**Impact**
	• An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, construction activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts:
	  o Negative impacts relate to increased maintenance burden
	  o Positive impacts relate to increased revenue collection from service delivery
	Mitigation Measures
	• An infrastructure management plan should be developed in order to monitor and implement maintenance required to uphold utility infrastructure capacity.
	Cumulative Impacts
	• The overall impact could reduce the budget available to local authorities to implement or expand service delivery in other sectors and industries.
	Irreplaceable Loss of Resources
	• The impact is unlikely to result in irreplaceable loss of resources.

Impact on Infrastructure and Utilities	**Impact** • The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof. **Mitigation Measures** • Revenue generated through increase usage of utilities and increased property taxes collected should be applied to ensure maintenance and service delivery enhancement **Cumulative Impacts** • Improved maintenance could ensure sustainable delivery of municipal services. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on the Natural Environment and Agriculture	**Impact** • The construction phase will give rise to environmental factors that can impact health both on-site and in nearby communities. Common environmental factors, including elevated noise levels, increased dust and associated air pollutants, as well as visual impacts, may occur. **Mitigation Measures** • Appropriate environmental and pollutant mitigation measures must be implemented during construction. These measures should encompass: dust control; noise control; clear indications, signs, and buffers for hazardous areas; screenings and suitable buffers; and so forth **Cumulative Impacts** • The overall impact could contribute to the community's existing burden of disease, al be it temporary. **Irreplaceable Loss of Resources** • The impact could slightly alter the use of environmental resources.
Impact on the Natural Environment and Agriculture	**Impact** • The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation existing agricultural land is removed from the total inventory of agricultural land used for wine grape production and the broader wine production industry.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	Mitigation Measures • Although the property currently produces agricultural output, an assessment shows that its potential for commercial agricultural use is very low. The output is expected to decline over time due to high input costs, limited irrigation potential, and aging vineyards. Mitigating the loss of productivity would require substantial capital investment and a fundamental change in the growth rate of input costs—both of which are deemed unattainable. As a result, the property is likely to become unproductive over time and would benefit from alternative land uses that support future urban growth and sustainable economic activity. **Cumulative Impacts** • Overall reduces the available land for wine grape production. **Irreplaceable Loss of Resources** • The impact could slightly alter the use of environmental resources.
Impact on the Natural Environment and Agriculture	**Impact** • The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation the existing wine grape production on the property will cease and as a result less wine grapes will be available to support the broader wine and related product manufacturing value chain. **Mitigation Measures** • Although the property currently produces agricultural output, an assessment shows that its potential for commercial agricultural use is very low. The output is expected to deteriorate over time due to high input costs, limited irrigation potential, and aging vineyards. It should be noted that the wine grapes produced on the property account for less than 0.2% of the total wine grape production in the Stellenbosch area, indicating the minimal impact that repurposing the property would have on the region's overall production. If the property were capable of sustaining output levels sufficient for long-term agricultural viability, continued use for agriculture could be considered. However, with declining output, no prospects for vineyard replacement, and escalating production costs, the opportunity for the property to remain a commercially viable agricultural unit is limited. Therefore, alternative land uses present a more favourable investment. **Cumulative Impacts** • Overall reduces the available wine grape yield available to wine and related product producers. **Irreplaceable Loss of Resources** • The impact could slightly alter the use of environmental resources.

Source: DEMACON, 2024

4.3.1.2 MEASUREMENT OF IMPACTS

The preceding section discussed and identified socio-economic and fiscal impacts that may arise during the construction phase of the proposed project. The sections explored different socio-economic impacts as part of several impact themes and identified the cumulative and loss of resource potential of the different impact themes. Mitigation measures were also identified.

Considering the preceding, the following table provides information regarding the measurement of construction phase socio-economic and fiscal impacts within the qualitative impact assessment framework. Information provided by the table include:

- A description of the relevant impact theme and the socio-economic impacts that relate to the impact theme
- The phase in which the impact will likely occur
- The measurement of the impact in accordance with the qualitative impact assessment framework pre-mitigation
- The measurement of the impact in accordance with the qualitative impact assessment framework post-mitigation

Table 4.4: Measurement of Construction Phase Impacts

			Pre-Mitigation						Post-Mitigation					
Theme	Impact	Phase	Extent	Duration	Magnitude	Status	Probability	Pre-Mitigation Environmental Risk	Extent	Duration	Magnitude	Status	Probability	Post-Mitigation Environmental Risk
Impact on Local and Regional Business Base	The construction phase of the project will generate demand for goods and services necessary to sustain construction activities. This sustained demand over the construction phase could lead to additional business sales throughout the construction industry's value chain (increased economic output, production and gross value added).	Construction Phase	4	3	3	1	4	40	4	3	3	1	4	40
Impact on Local and Regional Business Base	The demand for goods and services required to sustain construction activities may not be fully serviced by the local economy's existing construction sector value chain and as a result would need to source goods and services from outside the local economy.	Construction Phase	4	3	3	-1	4	-40	4	3	3	-1	3	-30
Impact on Local and Regional Business Base	Increased economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Construction Phase	2	3	3	1	3	24	2	3	4	1	3	27
Impact on Local and Regional Business Base	The effective execution of the proposed project might face hindrance due to the presence of local 'construction mafias'. The possibility exists that these entities intimidate external labour sources, disrupt the local community, and consequently causes delays in project completion.	Construction Phase	1	3	4	-1	3	-24	1	3	3	-1	2	-14
Impact on Local and Regional Business Base	The labour force involved in the construction of the intended project could drive a surge in demand for lodging facilities and related services within the host economy. This heightened demand arises from the need to accommodate workers who aren't native to the area. This situation presents an opportunity for local lodging providers to experience extended periods of high occupancy, consequently leading to increased revenue streams.	Construction Phase	2	3	2	1	3	21	2	3	3	1	3	24
Stimulation of Employment Opportunities	The construction of the proposed project will create temporary construction related employment opportunities on-site (across the skills spectrum).	Construction Phase	2	3	2	1	3	21	2	3	3	1	4	32
Stimulation of Employment Opportunities	New employment opportunities throughout the construction industry's value chain could be stimulated as a result of the increased demand generated by the construction of the proposed project.	Construction Phase	4	3	4	1	3	33	4	3	4	1	3	33

			Pre-Mitigation						Post-Mitigation					
Theme	**Impact**	**Phase**	Extent	Duration	Magnitude	Status	Probability	**Pre-Mitigation Environmental Risk**	Extent	Duration	Magnitude	Status	Probability	**Post-Mitigation Environmental Risk**
Stimulation of Employment Opportunities	It might be necessary to temporarily import various tiers of skilled labour to the region to effectively carry out construction activities.	Construction Phase	3	3	4	-1	4	-40	3	3	3	-1	3	-27
Impact on Local Communities	Employment opportunities created on-site by the project during the construction phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Construction Phase	2	3	3	1	4	32	3	3	4	1	4	40
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods during the construction phase. This could place an additional burden on existing social amenities and services due to an increase in demand.	Construction Phase	2	3	3	-1	3	-24	2	3	2	-1	3	-21
Impact on Local Communities	Where labour is sourced from beyond the receiving economy the receiving socio-economic environment's labour absorption capacity is diminished and the spending of money earned locally is reduced – remittances to homesteads. In the event that labour must be sourced from outside the local area, these migrants could be viewed as temporary.	Construction Phase	3	3	4	-1	4	-40	3	3	3	-1	4	-36
Impact on Local Communities	An influx of population to the receiving economy (employed or job-seekers) may lead to increased crime activity. Job-seekers that do not find employment may turn to crime and in turn influence community safety. The introduction of persons outside the local labour market (i.e. sourcing from other economic regions for instance) could introduce a criminal element. Additionally, contractors undertaking construction of the proposed development may also, due to bad behaviour, influence community safety through inappropriate actions.	Construction Phase	2	3	3	-1	3	-24	2	3	2	-1	2	-14
Impact on Local Communities	Due to construction activities, labour is transported to and from the construction site, i.e. from home to work and vice versa. Additionally, construction related transportation of goods and services will also occur. The daily movement of construction workers and related activities increases the load on the local transport network – influencing travel times and congestion.	Construction Phase	2	3	2	-1	3	-21	2	3	2	-1	2	-14
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to project related construction activities as well as the increased transportation of economic goods and services. Construction activities may generate vehicles in support of construction efforts. Likewise, increased economic activity could drive augmented	Construction Phase	2	3	3	-1	3	-24	2	3	3	-1	2	-16

Theme	Impact	Phase	Pre-Mitigation						Post-Mitigation					
			Extent	Duration	Magnitude	Status	Probability	Pre-Mitigation Environmental Risk	Extent	Duration	Magnitude	Status	Probability	Post-Mitigation Environmental Risk
	demand for goods and services. The increased demand could require increased transportation of goods and services to the area.													
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Construction Phase	3	3	3	-1	3	-27	3	3	2	-1	3	-24
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, construction activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden • Positive impacts relate to increased revenue collection from service delivery	Construction Phase	3	3	2	-1	3	-24	3	3	2	-1	3	-24
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.	Construction Phase	3	3	2	1	3	24	3	3	3	1	4	36
Impact on the Natural Environment	The construction phase will give rise to environmental factors that can impact health both on-site and in nearby communities. Common environmental factors, including elevated noise levels, increased dust and associated air pollutants, as well as visual impacts, may occur.	Construction Phase	2	3	2	-1	2	-14	2	3	1	-1	1	-6
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation existing agricultural land is removed from the total inventory of agricultural land used for wine grape production and the broader wine production industry.	Construction Phase	3	5	2	-1	5	-50	3	5	2	-1	5	-50
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation the existing wine grape production on the property will cease and as a result less wine grapes will be available to support the broader wine and related product manufacturing value chain.	Construction Phase	2	5	2	-1	5	-45	2	5	2	-1	5	-45

Source: DEMACON, 2024

4.3.2 Operational Phase Qualitative Impact Assessment

The following section provides an overview of the potential impacts that could arise during the operational phase of the proposed project and measures the identified impacts within the qualitative impact assessment framework. The section firstly focusses on identifying potential impacts and thereafter qualitatively measures each impact pre- and post-mitigation.

4.3.2.1 Impact Identification

This section focusses on identifying and outlining the key impacts that the proposed project could have on the receiving socio-economic and fiscal environment during the operational phase.

The potential impacts arising from the operation of the proposed project span across diverse areas and encompass multiple core themes. Consequently, the subsequent section delineates these thematic categories, within which the identified impacts are presented, showcasing the impacts associated with each individual theme.

Theme 1: Impact on the Local and Regional Business Base

The proposed project could, as per the quantitative impact assessment, have a distinct impact on the receiving economy and the broader containing economic geographies during its operational phase - the quantitative analysis reveals that the annual operational revenue of the project could be as much as R301 million, stimulating nearly R62.4 million in additional GDP and R561.7 million in additional business sales. This additional output will be the result of expenditures across the entire value chain of the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project, including both backward and forward linkages. These expenditures will create direct, indirect, and induced effects, leading to increased economic production and the demand for related services and inputs.

Theme 2: Stimulation of Employment Opportunities

Due to the economic activity that will be generated across the entire value chain of the proposed project, encompassing local, regional, provincial, and national levels, the heightened and sustained demand for economic output has the potential to catalyse additional job opportunities within the economy. Beyond the employment opportunities directly tied to the project site, the ripple effect could result in job creation within industries connected to the project's value chain, thereby triggering a multiplier effect of increased economic demand.

Furthermore, it's important to note that the receiving economy is currently constrained in terms of its capacity to generate employment opportunities, and that the bulk of residents in the receiving socio-economic environment have not completed a secondary education or tertiary education. Thus, the existing workforce and skill sets may prove inadequate for the operational demands of the proposed project. This might necessitate the importation of labour to fulfil operational needs, or it could serve as a foundation to initiate skill development initiatives that cater to the long-term skill requirements of the project.

Theme 3: Impact on Local Communities

The operational phase of the project carries a prolonged impact on the economic and socio-economic landscape of the receiving environment. This enduring operational capacity has the potential to yield profound changes and opportunities within local communities, businesses across the value chain, and the overall socio-economic receiving framework, thereby enhancing the capacity of the receiving economy to uplift livelihoods.

The project's employment prospects, combined with the ripple effect of job creation throughout the value chain, hold the promise of establishing consistent income sources for households. This, in turn, could significantly influence the improvement of households' livelihoods. As livelihoods improve, there arises a heightened demand for essential services, economic offerings, products, and related personal services.

Moreover, the proposed development will offer mor than 800 residential units to households, creating a basis upon which a low-density area will experience a sizeable increase in households. Such influxes could potentially strain existing infrastructure and utility services, adding pressure to local communities.

Theme 4: Infrastructure and Utilities

The operational phase of the proposed project will create sustained economic activities not only as a direct result of the proposed project and its day-to-day operational needs, but also as a result of increased economic activity throughout the education, healthcare, retail and wholesale trade, property management industries, and within increased economic activities associated with businesses

and related industries that cater to demand for economic services and products from households.

These sustained economic activities will require consistent and frequent transportation of additional labour, goods, and services. As a consequence, transportation infrastructure may be subjected to increased usage and as a result be accompanied by an increased maintenance burden.

In conjunction, the proposed project will increase the demand for utility infrastructure such as water, sanitation and refuse removal. Likewise, an increase in the livelihoods of local communities and households throughout the value chain could place further stresses on existing bulk infrastructure. The increased and sustained demand could impact on the need and desirability to expand on existing bulk infrastructure supply.

Theme 5: Expansion of Productive and Rateable Fixed Assets

The proposed project will influence the land use category assigned to the development property on the municipal valuation roll. The Tariffs Policy of the local municipality identifies that the operator of the property would be paying an increased property rates amount. The increased rates amount adds additional revenue to the local authority which can be used to address socio-economic or infrastructure maintenance issues. It is, however, important to note that the fiscal benefit that the proposed development offers when compared to the current use of the property. At present the agricultural use of the property generates slightly more than R15 000 in fiscal benefits from property taxation. The introduction of the proposed development will expand the rates base and generate revenue from the sale of bulk services.

Table 4.5: Operational Phase Impacts Identified

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
Impact on Local and Regional Business Base	**Impact** • The operational phase of the project will generate sustained demand for goods and services necessary to maintain operational efficiency of all land uses included in the project. This sustained demand over the operational phase could lead to additional business sales throughout the education, healthcare, retail and wholesale trade industry value chains – also includes expenditure by households residing in the project (increased economic output, production and gross value added). **Mitigation Measures** • The sourcing of operational inputs should, as far as possible, be sourced from the receiving economy, i.e., business within the receiving economy capable of servicing operational requirements. • Prior to operations, operators should engage with local businesses and suppliers to determine the capability and financial viability of sourcing from local businesses. **Cumulative Impacts** • The overall impact will create value throughout the backward linking industries required to support operational activities and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local and Regional Business Base	**Impact** • The demand for goods and services required to sustain operational activities may not be fully serviced by the local economy's existing industries and as a result would need to source goods and services from outside the local economy. **Mitigation Measures** • Should it be required that goods and services be sourced from outside the receiving economy, value chain development initiatives could be drafted between the operator of the project and local suppliers and businesses to assist local businesses with expanding their access to the broader value chain and its markets. **Cumulative Impacts**

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	• The overall impact will create value throughout the backward linking industries required to support operational activities and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local and Regional Business Base	**Impact** • Increased and sustained economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created. **Mitigation Measures** • The sourcing of goods and services should be prioritised within the receiving economy. • Agencies such as the Stellenbosch Business Forum, National Empowerment Fund, Wesgro, etc., should extend their support to local businesses. This could involve offering guidance and supplementary business support measures, all aimed at empowering the businesses that experience gains as a result of the operation of the proposed project. This assistance would enable these local and regional enterprises to not only establish a basis for long-term growth but also to foster sustainable business practices for the long run. **Cumulative Impacts** • The overall impact will create value throughout the backward linking industries required to support growing businesses and therefore could generate additional economic benefits to the receiving, provincial and national economy and its socio-economic environment. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • The proposed project will create permanent operational employment opportunities on-site (across the skills spectrum). **Mitigation Measures** • Labour to be employed at the proposed project (i.e., at retail, education and healthcare facilities) should so far as possible be sourced from local markets. • The sourcing of employment from the local market will be dependent on the availability of skills. Should the necessary skills not be available, skilled labour should be sourced from beyond the receiving economy. • The sourcing of labour should also consider the role of woman and other previously disadvantaged communities. **Cumulative Impacts** • The overall impact will create employment opportunities that will contribute to easing the high unemployment rate of the receiving socio-economic environment. These employment opportunities also contribute to improved household livelihoods **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • New employment opportunities throughout the education, healthcare and retail industry value chains could be stimulated as a result of the increased demand generated by the operation of the proposed project. Household expenditure also contributes to the stimulation of economic activity and could influence the demand for employment opportunities. **Mitigation Measures** • No mitigation is required.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	Cumulative Impacts • The overall impact will create employment opportunities that in turn will induce economic effects such as increased household incomes and consumer spending. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • The local economy faces constraints in terms of its available skilled labour force. This localised supply-side limitation could potentially result in a disparity between the required number of labourers with diverse skill levels needed for the operation of the services and amenities offered within the proposed project. **Mitigation Measures** • To mitigate possible localised labour supply side constraints during the operational phase, due consideration should be given to creating programmes that undertake either: o Generic skills training, o Targeted training in specific skills, o Targeted training for specific skills shortages, or o Training in firm-specific skills in/by companies • Pro-active mitigation could focus on training of employed and unemployed persons through skills development programmes targeting specific sectors at TVET and other colleges or localised programmes. **Cumulative Impacts** • The overall impact could see an increase of labour with skills across the skills spectrum. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Stimulation of Employment Opportunities	**Impact** • Given the localised and industry specific labour supply constraint that could arise during the operational phase, it might be necessary to import various tiers of skilled labour to the region to effectively carry out operational activities. **Mitigation Measures** • To mitigate the potential 'importation' of labour due to insufficient skills in the local labour force, consideration should be given to skills training in the local community. • Employment during the operational phase should also be focused on local procurement as far as possible. • Additionally, should the import of labour from outside the current labour pool be necessary, the focus should be temporary imports until such time that the local labour force has sufficient skills to undertake operational activities. **Cumulative Impacts** • The overall impact could remove employment opportunities from the receiving socio-economic environment and limit the potential of local communities to benefit from employment opportunities created. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • Employment opportunities created on-site by the project during the operational phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	Mitigation Measures • By procuring employment from local communities, a rise in household income would be created and directly affect the livelihood of local communities. • The procurement of local labourers would be dependent on the availability of necessary skills **Cumulative Impacts** • The overall impact could see an improvement in household livelihoods which could lead to the increased demand for goods, services and social amenities. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods. This could place an additional burden on existing social amenities and services due to an increase in demand. **Mitigation Measures** • Local authorities in conjunction with the implementing agent should undertake appropriate studies to determine the possible extent of demand generated for social amenities and services over the life of the project. Although the project will offer additional healthcare and educational opportunities, the influx of people to area could negate the increased supply of social amenities. • Sufficient knowledge regarding potential short-falls could allow for the expansion of, or implementation of, additional services to accommodate short-term demand as well as function as mitigation measures for medium- to long-term demand. **Cumulative Impacts** • The overall impact could see a widening in the social amenities and services supply gap and could exasperate existing supply inefficiencies. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Local Communities	**Impact** • Without meticulous planning, the proposed project runs the risk of influencing the inherent "sense of place" within the immediate community. The proposed changes might potentially reshape the local environment's importance to the community, which, over time, could potentially impact how the community perceives and values the natural resource setting. **Mitigation Measures** • The design of the project should seek to enhance the environmental qualities of its immediate surrounds and should aim to incorporate proposed developments in a natural and functional manner. **Cumulative Impacts** • The overall impact could see the loss of "sense of place" which could divest communities from the value of the local environment. **Irreplaceable Loss of Resources** • The impact will result in a small loss of resources.
Impact on Local Communities	**Impact** • Due to operational activities, labour at the proposed project will move to and from the project site, i.e. from home to work and vice versa. Additionally, the transportation of goods and services required for operational activities will also occur. Furthermore, the movement of households to and from their places of residence contribute to traffic increases. The daily movement of employees and related activities increases the load on the local transport network – influencing travel times and congestion.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	Mitigation Measures • The following could be considered: ○ Establish working hours that would assist with mitigating local community impacts and ensure operational efficiency **Cumulative Impacts** • The overall impact could disrupt normal traffic flows on major routes and as a result impact on the efficiency of surrounding businesses (i.e. local businesses, residents, farmers, etc.) **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Infrastructure and Utilities	**Impact** • Road infrastructure may experience increased pressure due to the operational activities of the project as well as the increased transportation of economic goods and services. Operational activities (i.e., accessing of healthcare services, access to schools, access to retail amenities, etc.) may generate vehicles in support of operations. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area. **Mitigation Measures** • Monitor and maintain infrastructure regularly used by construction vehicles and transporters for economic goods during the operational phase. **Cumulative Impacts** • The overall impact could impact on the quality of road infrastructure and as a result influence the capacity of local roads to be used by other industries (i.e. tourism, mining, etc.) **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Infrastructure and Utilities	**Impact** • Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities. **Mitigation Measures** • An infrastructure management plan should be developed in order to monitor and implement maintenance required to uphold transport infrastructure capacity. **Cumulative Impacts** • The overall impact could reduce the budget available to local authorities to implement or expand service delivery in other sectors and industries. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.

Impact on Infrastructure and Utilities	**Impact**
	• An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, operational activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts:
	  ○ Negative impacts relate to increased maintenance burden
	  ○ Positive impacts relate to increased revenue collection from service delivery
	Mitigation Measures
	• An infrastructure management plan should be developed in order to monitor and implement maintenance required to uphold utility infrastructure capacity.

Theme	Impact, Mitigation Measures, Cumulative Impacts and Irreplaceable Loss of Resources
	Cumulative Impacts • The overall impact could reduce the budget available to local authorities to implement or expand service delivery in other sectors and industries. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.
Impact on Infrastructure and Utilities	**Impact** • The land use change of the proposed development area could lead to additional rates and taxes generated during the operational phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof. **Mitigation Measures** • Revenue generated through increase usage of utilities and increased property taxes collected should be applied to ensure maintenance and service delivery enhancement **Cumulative Impacts** • Improved maintenance could ensure sustainable delivery of municipal services. **Irreplaceable Loss of Resources** • The impact is unlikely to result in irreplaceable loss of resources.

Source: DEMACON, 2024

4.3.2.2 MEASUREMENT OF IMPACTS

The preceding section discussed and identified socio-economic impacts that may arise during the operational phase of the proposed project. The sections explored different socio-economic impacts as part of several impact themes and identified the cumulative and loss of resource potential of the different impact themes. Mitigation measures were also identified.

Considering the preceding, the following table provides information regarding the measurement of construction phase socio-economic impacts within the qualitative impact assessment framework. Information provided by the table include:

- A description of the relevant impact theme and the socio-economic impacts that relate to the impact theme
- The phase in which the impact will likely occur
- The measurement of the impact in accordance with the qualitative impact assessment framework pre-mitigation
- The measurement of the impact in accordance with the qualitative impact assessment framework post-mitigation

Table 4.6: Measurement of Operational Phase Impacts

			Pre-Mitigation						Post-Mitigation					
Theme	**Impact**	**Phase**	Extent	Duration	Magnitude	Status	Probability	**Pre-Mitigation Environmental Risk**	Extent	Duration	Magnitude	Status	Probability	**Post-Mitigation Environmental Risk**
Impact on Local and Regional Business Base	The operational phase of the project will generate sustained demand for goods and services necessary to maintain operational efficiency. This sustained demand over the operational phase could lead to	Operational Phase	4	4	2	1	4	40	4	4	3	1	4	44

Theme	Impact	Phase	Pre-Mitigation						Post-Mitigation					
			Extent	Duration	Magnitude	Status	Probability	Pre-Mitigation Environmental Risk	Extent	Duration	Magnitude	Status	Probability	Post-Mitigation Environmental Risk
	additional business sales throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project (increased economic output, production and gross value added).													
Impact on Local and Regional Business Base	The demand for goods and services required to sustain operational activities may not be fully serviced by the local economy's existing industries and as a result would need to source goods and services from outside the local economy.	Operational Phase	4	4	2	-1	4	-40	4	4	1	-1	3	-27
Impact on Local and Regional Business Base	Increased and sustained economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Operational Phase	2	4	2	1	3	24	2	4	3	1	4	36
Stimulation of Employment Opportunities	The proposed project will create permanent operational employment opportunities on-site (across the skills spectrum).	Operational Phase	1	4	2	1	5	35	1	4	3	1	5	40
Stimulation of Employment Opportunities	New employment opportunities throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project could be stimulated as a result of the increased demand generated by the operation of the proposed project.	Operational Phase	4	4	4	1	3	36	4	4	4	1	3	36
Stimulation of Employment Opportunities	The local economy faces constraints both in terms of its size, reflected in its economic output, and its available labour force. This localised supply-side limitation could potentially result in a disparity between the required number of labourers with diverse skill levels needed for the operation of the proposed project.	Operational Phase	2	4	3	-1	4	-36	2	4	2	-1	3	-24
Stimulation of Employment Opportunities	Given the localised and industry specific labour supply constraint that could arise during the operational phase, it might be necessary to import various tiers of skilled labour to the region to effectively carry out operational activities.	Operational Phase	3	4	3	-1	4	-40	3	4	2	-1	3	-27
Impact on Local Communities	Employment opportunities created on-site by the project during the operational phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Operational Phase	2	4	3	1	3	27	2	4	4	1	4	40
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people	Operational Phase	2	4	2	-1	3	-24	2	4	2	-1	2	-16

Theme	Impact	Phase	Pre-Mitigation						Post-Mitigation					
			Extent	Duration	Magnitude	Status	Probability	Pre-Mitigation Environmental Risk	Extent	Duration	Magnitude	Status	Probability	Post-Mitigation Environmental Risk
	in the area and the improvement of local household livelihoods. This could place an additional burden on existing social amenities and services due to an increase in demand.													
Impact on Local Communities	Without meticulous planning, the proposed project runs the risk of influencing the inherent "sense of place" within the immediate community. The proposed changes might potentially reshape the local environment's importance to the community, which, over time, could potentially impact how the community perceives and values the natural resource setting.	Operational Phase	2	4	3	-1	3	-27	2	4	2	-1	2	-16
Impact on Local Communities	Due to operational activities, labour at the proposed project will move to and from the project site, i.e. from home to work and vice versa. Additionally, the transportation of goods and services required for operational activities will also occur. The daily movement of employees and related activities increases the load on the local transport network – influencing travel times and congestion.	Operational Phase	2	4	2	-1	3	-24	2	4	1	-1	2	-14
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to the operational activities of the project as well as the increased transportation of economic goods and services. Operational activities may generate vehicles in support of operations. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area.	Operational Phase	2	4	3	-1	3	-27	2	4	2	-1	3	-24
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Operational Phase	3	4	3	-1	3	-30	3	4	2	-1	3	-27
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, operational activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden • Positive impacts relate to increased revenue collection from service delivery	Operational Phase	3	4	2	-1	3	-27	3	4	2	-1	3	-27
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local	Operational Phase	3	4	2	1	3	27	3	4	3	1	4	40

Theme	Impact	Phase	Pre-Mitigation						Post-Mitigation					
			Extent	Duration	Magnitude	Status	Probability	Pre-Mitigation Environmental Risk	Extent	Duration	Magnitude	Status	Probability	Post-Mitigation Environmental Risk
	budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.													

Source: DEMACON, 2024

4.4 SYNTHESIS

The purpose of the chapter is to evaluate the socio-economic and fiscal impact that may arise from the proposed project by identifying socio-economic and fiscal impacts relevant to the project and measuring these impacts within a qualitative impact assessment methodology.

The potential impacts arising from the construction and operation of the proposed project span across diverse areas and encompass multiple core themes.

The first theme encompasses the project's impact on the local and regional business landscape. Through quantitative analysis across its construction and operational phases, it becomes evident that the proposed project could exert a substantial influence on not only the immediate economy but also the provincial and national scales. The construction phase injects a significant yet temporary surge into the economy, coursing through the construction industry's value chain. Conversely, the operational phase sustains a more moderate but continuous effect via several value chains (i.e., healthcare, education, retail, property management, household expenditure, etc.). This augmented economic output stems from capital and operational expenditures spanning the construction and personal services, business services and wholesale and retail trade sectors, encompassing both forward and backward linkages. These expenditures set in motion direct, indirect, and induced effects, fostering escalated economic production and spurring demand for correlated services and inputs.

However, the qualitative impact assessment acknowledges a potential hindrance to timely construction – the presence of "construction mafias." This poses a tangible risk to project completion and, subsequently, the initiation of sustainable impacts during the operational phase.

The second theme delves into the project's employment impact, both direct and indirect. Directly, the project's construction and operation phases generate on-site employment prospects, though the precise number remains unspecified as of this report's finalisation. This spectrum of employment opportunities caters to various skill levels and is intrinsically linked to the project's nature. Nevertheless, the assessment identifies a potential deficiency in local labour resources possessing the required skills for construction and operation, thereby necessitating the importation of skilled labour. Alternative mitigation avenues, such as skills development and training initiatives, might prove advantageous during the operational phase.

Indirectly, the project has the potential to stimulate employment demands within the construction, retail, healthcare, education and personal services value chains, manifesting across both its construction and operational timelines. The quantitative analysis highlights the potential generation of nearly 5 300 temporary employment opportunities and approximately 888 sustained employment opportunities throughout the project's respective phases.

It's important to recognize that both local and external employment opportunities contribute to ameliorating the region's unemployment challenge. Additionally, these opportunities augment household incomes and elevate overall livelihoods within the community. The third theme represents the impact that the proposed project could have on local communities. The theme identifies that the project's construction and operational phase employment prospects, combined with the ripple effect of job creation throughout construction, education, healthcare, retail, business services and personal services value chains, hold the promise of

establishing consistent income sources for households. This, in turn, could significantly influence the improvement of households' livelihoods. As livelihoods improve, there arises a heightened demand for essential services, economic offerings, products, and related personal services.

The sudden increase in people on the development site and its immediate surrounds as a result of construction related activities and opportunity seekers could increase the prospect of crime in the immediate communities. As a result, an increase in construction related activities would require a concomitant increase in policing activity to maintain the safety and security of communities.

The fourth theme identifies that the construction and operational phases of the project could impact on the supply and usage of infrastructure and utilities.

During the construction period of the proposed project, heightened economic activity and construction operations could exert additional demands on the region's transportation infrastructure, particularly its roads. Consequently, this could lead to increased maintenance requirements for local and regional road authorities affected by the project's construction-related movement.

Simultaneously, the influx of labour into the receiving environment, coupled with improved livelihoods within the local community, alongside ongoing construction activities, might contribute to a surge in demand for essential utilities such as electricity, water, and sanitation services.

As the project transforms the purpose of the development site, additional rates and taxes are generated, boosting state revenue. This increased revenue potential could be channelled to address infrastructure supply and maintenance needs in various sectors.

Moreover, the operational phase of the project is poised to sustain economic activities. This sustainability arises not only from the project's direct operational needs but also from the broader ripple effect across the education, healthcare, retail, business services and personal services value chains and related industries catering to economic services and products for households.

To facilitate these sustained activities, transportation of labour, goods, and services will remain consistent and essential. Consequently, transportation infrastructure could encounter heightened usage, leading to an amplified maintenance burden.

Additionally, the project's ongoing operations will contribute to an increased demand for utility infrastructure like water, sanitation, and waste removal. The upswing in livelihoods within local communities and households, combined with ongoing demand from the value chain, might further strain existing bulk infrastructure. This sustained demand might prompt a need for expansion and enhancement of existing infrastructure supplies to ensure their effective provisioning.

The fifth theme identifies the impact that the proposed project could have on the natural environment, agriculture and business activities that make use of the environment's qualities.

Construction activities may create air, noise and visual pollution that may influence the burden of disease of the community. The effective management of these impacts may reduce the potential of these impacts to cause environmental and community related impacts.

Moreover, transforming the property from its current agricultural use to alternative land uses will reduce the amount of land dedicated to wine grape production in the Western Cape and reduce the wine grape yields that contribute to intermediate and final product manufacturing. While this change moves the property away from agricultural activities, it also positions the development site as a long-term sustainable opportunity. The existing agricultural operations have a limited viable future due to the lack of reinvestment in vineyards, driven by escalating capital costs. This challenge is further exacerbated by insufficient irrigation, rising operational costs and the need for higher yields to maintain commercial viability. Considering the opportunity cost of the proposed development versus the current agricultural use of the property suggests that the transformation of the property will generate greater economic, socio-economic, and fiscal value compared to its current and future agricultural use.

Lastly, within the sixth theme, it becomes evident that the proposed project will trigger a revaluation of the land use classifications assigned to properties within the study area, as documented in the municipal valuation roll. According to the Tariffs Policy of the local municipality, property operators would experience an elevation in their property rates. This uptick in rates translates into supplementary revenue for the local authority, providing an avenue to tackle socio-economic challenges and invest in vital infrastructure maintenance.

Given the analyses provided in this chapter, the data suggests that the proposed project could create net benefits to the receiving socio-economic environment and as result offer enhanced economic and social output and development. The negative effects created by the project in the receiving socio-economic environment could be minimised through effective and coordinated planning, mitigation measures and environmental management plans (which includes coordinated planning with interested and affected parties). Furthermore, the opportunity cost of the project versus current agricultural production identifies that the proposed development could allow for long-term sustainable economic, socio-economic and fiscal benefits to the economy, community and municipality.

The following table presents an overview of the final significance rating per socio-economic impact identified along with its descriptive context

.

Table 4.7: Overview of the Final Impact Significance Rating of Each Impact Measured

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Local and Regional Business Base	The construction phase of the project will generate demand for goods and services necessary to sustain construction activities. This sustained demand over the construction phase could lead to additional business sales throughout the construction industry's value chain (increased economic output, production and gross value added).	Construction Phase	40	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Impact on Local and Regional Business Base	The demand for goods and services required to sustain construction activities may not be fully serviced by the local economy's existing construction sector value chain and as a result would need to source goods and services from outside the local economy.	Construction Phase	30	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	Increased economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Construction Phase	27	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	The effective execution of the proposed project might face hindrance due to the presence of local 'construction mafias'. The possibility exists that these entities intimidate external labour sources, disrupt the local community, and consequently causes delays in project completion.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop in the area
Impact on Local and Regional Business Base	The labour force involved in the construction of the intended project could drive a surge in demand for lodging facilities and related services within the host economy. This heightened demand arises from the need to accommodate workers who aren't native to the area. This situation presents an opportunity for local lodging providers to experience extended periods of high occupancy, consequently leading to increased revenue streams.	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Stimulation of Employment Opportunities	The construction of the proposed project will create temporary construction related employment opportunities on-site (across the skills spectrum).	Construction Phase	32	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Stimulation of Employment Opportunities	New employment opportunities throughout the construction industry's value chain could be stimulated as a result of the increased demand generated by the construction of the proposed project.	Construction Phase	33	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Stimulation of Employment Opportunities	It might be necessary to temporarily import various tiers of skilled labour to the region to effectively carry out construction activities.	Construction Phase	27	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Employment opportunities created on-site by the project during the construction phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Construction Phase	40	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods during the construction phase. This could place an additional burden on existing social amenities and services due to an increase in demand.	Construction Phase	21	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Where labour is sourced from beyond the receiving economy the receiving socio-economic environment's labour absorption capacity is diminished and the spending of money earned locally is reduced – remittances to homesteads. In the event that labour must be sourced from outside the local area, these migrants could be viewed as temporary.	Construction Phase	36	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Impact on Local Communities	An influx of population to the receiving economy (employed or job-seekers) may lead to increased crime activity. Job-seekers that do not find employment may turn to crime and in turn influence community safety. The introduction of persons outside the local labour market (i.e. sourcing from other economic regions for instance) could introduce a criminal element. Additionally, contractors undertaking construction of the proposed development may also, due to bad behaviour, influence community safety through inappropriate actions.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop in the area
Impact on Local Communities	Due to construction activities, labour is transported to and from the construction site, i.e. from home to work and vice versa. Additionally, construction related transportation of goods and services will also occur. The daily movement of construction workers and related activities increases the load on the local transport network – influencing travel times and congestion.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop in the area
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to project related construction activities as well as the increased transportation of economic goods and services. Construction activities may generate vehicles in support of construction efforts. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area.	Construction Phase	16	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, construction activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden • Positive impacts relate to increased revenue collection from service delivery	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.	Construction Phase	36	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Impact on the Natural Environment	The construction phase will give rise to environmental factors that can impact health both on-site and in nearby communities. Common environmental factors, including elevated noise levels, increased dust and associated air pollutants, as well as visual impacts, may occur.	Construction Phase	6	Low	The impact does not have a direct influence on the decision to develop in the area
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation existing agricultural land is removed from the total inventory of agricultural land used for wine grape production and the broader wine production industry.	Construction Phase	50	Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be difficult as well as expensive
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation the existing wine grape production on the property will cease and as a result less wine grapes will be available to support the broader wine and related product manufacturing value chain.	Construction Phase	45	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Impact on Local and Regional Business Base	The operational phase of the project will generate sustained demand for goods and services necessary to maintain operational efficiency. This sustained demand over the operational phase could lead to additional business sales throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project (increased economic output, production and gross value added).	Operational Phase	48	Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be difficult as well as expensive
Impact on Local and Regional Business Base	The demand for goods and services required to sustain operational activities may not be fully serviced by the local economy's existing industries and as a result would need to source goods and services from outside the local economy.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	Increased and sustained economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base	Operational Phase	40	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
	could expand current production, services and products or the necessary demand required for establishing new businesses could be created.				
Stimulation of Employment Opportunities	The proposed project will create permanent operational employment opportunities on-site (across the skills spectrum).	Operational Phase	45	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Stimulation of Employment Opportunities	New employment opportunities throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project could be stimulated as a result of the increased demand generated by the operation of the proposed project.	Operational Phase	39	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Stimulation of Employment Opportunities	The local economy faces constraints both in terms of its size, reflected in its economic output, and its available labour force. This localised supply-side limitation could potentially result in a disparity between the required number of labourers with diverse skill levels needed for the operation of the proposed project.	Operational Phase	-27	Low to Medium	There is an impact, but can be mitigated
Stimulation of Employment Opportunities	Given the localised and industry specific labour supply constraint that could arise during the operational phase, it might be necessary to import various tiers of skilled labour to the region to effectively carry out operational activities.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Employment opportunities created on-site by the project during the operational phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Operational Phase	44	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods. This could place an additional burden on existing social amenities and services due to an increase in demand.	Operational Phase	-18	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Without meticulous planning, the proposed project runs the risk of influencing the inherent "sense of place" within the immediate community. The proposed changes might potentially reshape the local environment's importance to the community, which, over time, could potentially impact how the community perceives and values the natural resource setting.	Operational Phase	-18	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Due to operational activities, labour at the proposed project will move to and from the project site, i.e. from home to work and vice versa. Additionally, the transportation of goods and services required for operational activities will also occur. The daily movement of employees and related activities increases the load on the local transport network – influencing travel times and congestion.	Operational Phase	-16	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to the operational activities of the project as well as the increased transportation of economic goods and services. Operational activities may generate vehicles in support of operations. Likewise, increased economic activity could drive augmented demand for goods and services. The increased	Operational Phase	-27	Low to Medium	There is an impact, but can be mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
	demand could require increased transportation of goods and services to the area.				
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, operational activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden • Positive impacts relate to increased revenue collection from service delivery	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.	Operational Phase	44	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated

Source: DEMACON, 2024

5 OVERVIEW AND CONCLUSIONS

5.1 INTRODUCTION

The purpose of the study is to undertake an impact assessment of the receiving environment within which the proposed Lyndoch Mixed-Use Development will be located in order to determine the likely effect that the proposed project could have on the receiving environment's overarching socio-economic, economic and fiscal context. The assessment, therefore, assists with the quantification of the overall socio-economic impact of the project by measuring impacts that could impact on the established socio-economic ecosystem of the project's receiving environment.

The study explored the purpose and function of the project. The report also focused on defining and profiling the receiving socio-economic environment that the proposed project will likely impact whilst also considering the potential socio-economic functions and/or qualities that the proposed project could influence, thereby allowing for the identification of socio-economic impacts.

By making use of a quantitative and qualitative socio-economic impact assessment framework, the identified impacts are measured within a socio-economic context in order to establish the extent with which the proposed project could impact on the receiving socio-economic environment. The assessment allows for the identification of mitigation measures that focus on either enhancing positive impacts or limiting negative impacts.

The purpose of this chapter is to provide a conclusion of the analyses contained in the report and provide a concise summary of the outcomes related to the socio-economic and fiscal impact assessment.

5.2 SOCIO-ECONOMIC AND FISCAL IMPACT ASSESSMENT CONCLUSION AND KEY OUTCOMES

The proposed Lynedoch mixed-use development is a large-scale real estate project aimed at implementing various land uses to support an integrated development concept. At full maturity, it will provide a diverse range of productive land uses that will contribute to the local and regional economies through direct, indirect, and induced economic, socio-economic, and fiscal impacts. Approximately 45 hectares of developable land will be utilised to establish over 800 residential units of varying densities and configurations, while also incorporating complementary uses such as retail spaces, entertainment venues, educational facilities, public open spaces, and supporting bulk infrastructure.

The integrated real estate development will transform commercial agricultural land, currently used for wine grape production, to accommodate the proposed land uses. This transition will affect the economic function of the property, shifting from agricultural use to more diverse productive land uses. It is necessary to consider the opportunity cost of transitioning from the existing agricultural value of the property to the proposed development. In essence, the economic benefit or cost of the proposed development is weighed against the current agricultural use of the property.

An analysis of the agricultural use of the property reveals that, under current yields, the property generates positive economic, socio-economic, and fiscal impacts. The operational expenditure of approximately R2.6 million from farming and related processing activities stimulates approximately R4.8 million in business sales, R2.0 million in GDP, and supports eight employment opportunities across the Western Cape economy. These positive impacts stem from the wine grape production on the property, as well as the operational expenditures necessary to generate this output.

The positive economic effects generated by the property as a commercial agricultural unit may not be sustainable in the long term. According to the Agriculture Impact Assessment (2023), the current vineyard production is highly dependent on yields in order to cover essential production costs. The ageing vineyards on the farm, coupled with limited capacity for replacement and insufficient water resources, have resulted in an achievable yield of only 5.5 tons per hectare—significantly below the 15 tons per hectare required for sustainable wine grape production. As such, the farm faces dwindling commercial viability, hampered by high input costs, limited irrigation potential, and the absence of an economic rational to reinvest in newer vineyards on a comparatively small land holding.

Although the property still produces agricultural output (approximately 32.5 hectares of the property have historically been farmed, but due to the progressively aging vines, more than 3.2 hectares have become unproductive

and were lost to uprooting), the Agriculture Impact Assessment (2023) indicates that the potential for long-term commercial agricultural use is low. The decline in profitability due to rising costs, aging vineyards, and market pressures is eroding the capacity of the farm to remain a viable agricultural unit. These challenges reflect broader industry trends affecting wine grape production in South Africa, leading to a shift to specialised entities (away from smaller scale/recreational farming units) and the conversion of less productive units to alternative uses (dictated by location dynamics).

Given these circumstances, the agricultural functions of the property could become unproductive over time, representing a suboptimal use of the potential economic value of the land. The current agricultural activities have limited prospects for economic expansion, as the productivity of the property declines due to aging vineyards, unaffordable replacement costs, and rising input costs.

In contrast, the proposed development offers the potential for economic benefits that far exceed those generated by the current agricultural use of the property. The mixed-use development can generate substantial short-term economic value during construction and long-term value once the productive land uses are fully operational, addressing market demand and urban development pressures.

According to the quantitative impact assessment, the proposed development, with a R1.5 billion capital investment, could generate between R1.5 billion and R3.5 billion in additional GDP and business sales during construction. Moreover, nearly 5,300 temporary employment opportunities could be created. In the operational phase, household and operational expenditures are estimated to contribute R301 million, unlocking as much as R317 million in additional sustained GDP, while supporting nearly 890 sustained employment opportunities.

In comparing the potential economic, socio-economic, and fiscal impacts of the proposed development to the loss generating agricultural use, the impact assessment indicates that the proposed development stands to create a considerable net benefit to the local economy, not least of which would be additional rates and taxes. The long-term and sustained economic value generated by the mixed-use development far exceeds the declining economic value of the current agricultural use of the property. Therefore, the proposed development represents a greater economic benefit to the local economy by establishing long-term value, in contrast to the diminishing returns of continued wine grape production.

Table 5.1: Quantitative Economic Impact Assessment Comparison during the Operational Phases of Each Use

Economic Impact Name	Current Agricultural Production – Wine Grape Farming	Proposed Mixed-Use Development	Net Economic Benefit
Economic Value Added/Subtracted by Each Property Use	R2 560 611	R300 534 625	**R297 974 01**
Additional Business Sales	R4 798 987	R561 723 704	**R556 924 717**
Additional Gross Domestic Product	R1 969 061	R317 017 638	**R315 048 577**
Additional Taxes	R463 538	R62 418 141	**R61 954 603**
Additional Property Taxes	R15 760	R8 003 615	**R7 987 855**
Additional Formal Employment Compensation	R543 851	R101 339 452	**R100 795 601**
Additional Formal Employment	7	726	**719**
Additional SMME Opportunities	0	0	**0**
Additional SMME Opportunities (Black Owned)	0	0	**0**

Source: DEMACON, 2023

Aside from the inherent quantitative socio-economic and fiscal benefits of the proposed development, the construction and operation of the proposed development could generate a plethora of impacts that influence the underlying functions and socio-economic characteristics of the receiving economy during construction and operational activities. The qualitative impact assessment therefore considers impacts that are not necessarily quantitatively quantifiable and therefore must be identified and measured within a qualitative analysis framework.

The qualitative impact assessment revealed the following outcomes:

- **Economic Impact:**
  - **Key Outputs:** The project will significantly boost the local, provincial, and national economy during both its construction and operational phases. The construction phase will create a temporary surge in economic activity, while the operational phase will have sustained effects through multiple value chains (healthcare, education, retail, property management, etc.).
  - **Risks:** The presence of "construction mafias" may delay construction and the realization of economic benefits.
- **Employment Impact:**
  - **Key Outputs:** Nearly 5,300 temporary and 888 sustained employment opportunities will be created. Direct and indirect jobs span construction, retail, healthcare, and more, providing a significant source of income in a high-unemployment region.
  - **Challenges:** A potential shortage of skilled local labour may require importing talent. Mitigation efforts, such as local skills training, could address this gap.
- **Community Impact:**
  - **Key Outputs:** Job creation will improve household livelihoods, leading to increased demand for services and products. The increase of population, onsite during construction efforts and during the operational phase where residents occupy the development could influence aspects such as crime.
  - **Challenges:** The influx of people may strain housing and services, necessitating infrastructure expansion and stronger community policing.
- **Infrastructure and Utility Impact:**
  - **Key Outputs:** The project will put pressure on local transportation infrastructure and utilities, such as electricity, water, and sanitation. However, it will also generate increased rates and taxes, providing additional revenue for infrastructure improvements.
  - **Challenges:** Sustained demand for utility infrastructure and transportation services may strain existing systems, necessitating expansion.
- **Environmental and Agricultural Impact:**
  - **Key Outputs:** The project will reduce land dedicated to wine grape production but offers a sustainable development opportunity. Air, noise, and visual pollution from construction could impact community health if not properly managed.
  - **Challenges:** Loss of agricultural land and yields could affect the regional wine industry, though current agricultural use is deemed unsustainable.
- **Property Valuation and Revenue Impact:**
  - **Key Outputs:** The development will lead to a revaluation of land in the area, resulting in higher property rates and increased revenue for the local authority. This could help address socio-economic challenges and support infrastructure investments.
  - **Challenges:** The increased property rates could affect landowners but would provide necessary funding for municipal improvements.

Table 5.2: Overview of the Final Impact Significance Rating of Each Impact Measured Qualitatively

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
Impact on Local and Regional Business Base	The construction phase of the project will generate demand for goods and services necessary to sustain construction activities. This sustained demand over the construction phase could lead to additional business sales throughout the construction industry's value chain (increased economic output, production and gross value added).	Construction Phase	40	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local and Regional Business Base	The demand for goods and services required to sustain construction activities may not be fully serviced by the local economy's existing construction sector value chain and as a result would need to source goods and services from outside the local economy.	Construction Phase	30	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	Increased economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Construction Phase	27	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	The effective execution of the proposed project might face hindrance due to the presence of local 'construction mafias'. The possibility exists that these entities intimidate external labour sources, disrupt the local community, and consequently causes delays in project completion.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop
Impact on Local and Regional Business Base	The labour force involved in the construction of the intended project could drive a surge in demand for lodging facilities and related services within the host economy. This heightened demand arises from the need to accommodate workers who aren't native to the area. This situation presents an opportunity for local lodging providers to experience extended periods of high occupancy, consequently leading to increased revenue streams.	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Stimulation of Employment Opportunities	The construction of the proposed project will create temporary construction related employment opportunities on-site (across the skills spectrum).	Construction Phase	32	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	New employment opportunities throughout the construction industry's value chain could be stimulated as a result of the increased demand generated by the construction of the proposed project.	Construction Phase	33	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	It might be necessary to temporarily import various tiers of skilled labour to the region to effectively carry out construction activities.	Construction Phase	27	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Employment opportunities created on-site by the project during the construction phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Construction Phase	40	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods during the construction	Construction Phase	21	Low to Medium	There is an impact, but can be mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
	phase. This could place an additional burden on existing social amenities and services due to an increase in demand.				
Impact on Local Communities	Where labour is sourced from beyond the receiving economy the receiving socio-economic environment's labour absorption capacity is diminished and the spending of money earned locally is reduced – remittances to homesteads. In the event that labour must be sourced from outside the local area, these migrants could be viewed as temporary.	Construction Phase	36	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local Communities	An influx of population to the receiving economy (employed or job-seekers) may lead to increased crime activity. Job-seekers that do not find employment may turn to crime and in turn influence community safety. The introduction of persons outside the local labour market (i.e. sourcing from other economic regions for instance) could introduce a criminal element. Additionally, contractors undertaking construction of the proposed development may also, due to bad behaviour, influence community safety through inappropriate actions.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop
Impact on Local Communities	Due to construction activities, labour is transported to and from the construction site, i.e. from home to work and vice versa. Additionally, construction related transportation of goods and services will also occur. The daily movement of construction workers and related activities increases the load on the local transport network – influencing travel times and congestion.	Construction Phase	14	Low	The impact does not have a direct influence on the decision to develop
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to project related construction activities as well as the increased transportation of economic goods and services. Construction activities may generate vehicles in support of construction efforts. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area.	Construction Phase	16	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, construction activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden • Positive impacts relate to increased revenue collection from service delivery	Construction Phase	24	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be	Construction Phase	36	Medium	The impact could influence the decision to develop unless it is effectively mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
	utilised to support maintenance of infrastructure and improve the supply thereof.				
Impact on the Natural Environment	The construction phase will give rise to environmental factors that can impact health both on-site and in nearby communities. Common environmental factors, including elevated noise levels, increased dust and associated air pollutants, as well as visual impacts, may occur.	Construction Phase	6	Low	The impact does not have a direct influence on the decision to develop
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation existing agricultural land is removed from the total inventory of agricultural land used for wine grape production and the broader wine production industry.	Construction Phase	50	Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be costly and challenging
Impact on the Natural Environment	The land use change of the proposed development area will transform agricultural land to alternative uses. Because of this transformation the existing wine grape production on the property will cease and as a result less wine grapes will be available to support the broader wine and related product manufacturing value chain.	Construction Phase	45	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local and Regional Business Base	The operational phase of the project will generate sustained demand for goods and services necessary to maintain operational efficiency. This sustained demand over the operational phase could lead to additional business sales throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project (increased economic output, production and gross value added).	Operational Phase	48	Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact, although these may be costly and challenging
Impact on Local and Regional Business Base	The demand for goods and services required to sustain operational activities may not be fully serviced by the local economy's existing industries and as a result would need to source goods and services from outside the local economy.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Local and Regional Business Base	Increased and sustained economic activity in the receiving socio-economic environment could induce additional demand for goods and services within the receiving economy. As a result, the existing business base could expand current production, services and products or the necessary demand required for establishing new businesses could be created.	Operational Phase	40	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	The proposed project will create permanent operational employment opportunities on-site (across the skills spectrum).	Operational Phase	45	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	New employment opportunities throughout the education, healthcare, retail and wholesale trade, property management industries, as well as expenditure by households in the project could be stimulated as a result of the increased demand generated by the operation of the proposed project.	Operational Phase	39	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Stimulation of Employment Opportunities	The local economy faces constraints both in terms of its size, reflected in its economic output, and its available labour force. This localised supply-side limitation could potentially result in a disparity between the required	Operational Phase	-27	Low to Medium	There is an impact, but can be mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
	number of labourers with diverse skill levels needed for the operation of the proposed project.				
Stimulation of Employment Opportunities	Given the localised and industry specific labour supply constraint that could arise during the operational phase, it might be necessary to import various tiers of skilled labour to the region to effectively carry out operational activities.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Employment opportunities created on-site by the project during the operational phase will provide compensation to employees that will contribute toward household livelihoods and their access to services and amenities.	Operational Phase	44	Medium	The impact could influence the decision to develop unless it is effectively mitigated
Impact on Local Communities	Social facilities and amenities (e.g. healthcare, policing, postal services, etc) demand could be influenced by an increase of people in the area and the improvement of local household livelihoods. This could place an additional burden on existing social amenities and services due to an increase in demand.	Operational Phase	-18	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Without meticulous planning, the proposed project runs the risk of influencing the inherent "sense of place" within the immediate community. The proposed changes might potentially reshape the local environment's importance to the community, which, over time, could potentially impact how the community perceives and values the natural resource setting.	Operational Phase	-18	Low to Medium	There is an impact, but can be mitigated
Impact on Local Communities	Due to operational activities, labour at the proposed project will move to and from the project site, i.e. from home to work and vice versa. Additionally, the transportation of goods and services required for operational activities will also occur. The daily movement of employees and related activities increases the load on the local transport network – influencing travel times and congestion.	Operational Phase	-16	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Road infrastructure may experience increased pressure due to the operational activities of the project as well as the increased transportation of economic goods and services. Operational activities may generate vehicles in support of operations. Likewise, increased economic activity could drive augmented demand for goods and services. The increased demand could require increased transportation of goods and services to the area.	Operational Phase	-27	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	Additional demand on transport infrastructure generally impacts on the frequency of maintenance required to maintain infrastructure at an acceptable usage level. The increased maintenance burden influences public sector fiscal responsibilities.	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated
Impact on Infrastructure and Utilities	An increase in labour in the local economy accompanied by increased livelihoods could influence the need for utilities and related infrastructure. Likewise, operational activities could influence demand from existing utilities infrastructure. The increased demand generates negative and positive fiscal and economic impacts: • Negative impacts relate to increased maintenance burden	Operational Phase	-30	Low to Medium	There is an impact, but can be mitigated

Theme	Impact	Phase	Final Significance Rating	Impact Significance Rating Description	
	• Positive impacts relate to increased revenue collection from service delivery				
Impact on Infrastructure and Utilities	The land use change of the proposed development area could lead to additional rates and taxes generated during the construction phase. Furthermore, increased demand for utilities from local consumers could also add to local authority budgets. The increase in local budgets could be utilised to support maintenance of infrastructure and improve the supply thereof.	Operational Phase	44	Medium	The impact could influence the decision to develop unless it is effectively mitigated

Source: DEMACON, 2024

The proposed development presents significant net benefits to the socio-economic environment through job creation, increased revenue, and long-term sustainable economic growth. Negative impacts, such as pressure on infrastructure and environmental concerns, can be mitigated through effective planning and coordination.

In addition to the previous points, government systems in urban, and particularly metropolitan, areas place increasing pressure on property owners to optimize property use to align with policy goals related to densification, unlocking economic and socio-economic potential, and maximizing fiscal value through property taxation and rates. These pressures are driven by high and increasing rates of urbanization and inter-provincial migration. The Western Cape Province, second only to Gauteng, is one of the fastest-growing regions, primarily due to continuous migration to the province's key metropolitan areas and major towns. Smaller, marginal agricultural parcels, which have become sub-optimal production units, are particularly affected by these development-related pressures. These pressures also affect both property owners and developers, requiring constant evaluation to ensure that properties are positioned to address the expansion of urban systems while meeting government objectives regarding optimal land use, productive development, sustainable practices, and the unlocking of fiscal value in well-located areas.

Therefore, the proposed development, in light of the aforementioned and previous analyses, represents an opportunity to utilise property that is currently underperforming economically. The land produces agricultural yields that are below commercially sustainable levels and has limited future prospects for achieving sustainability. It does not represent a long-term or viable use of strategically located land. The agricultural potential of the property is assessed to be very low, with current agricultural practices identified as temporary due to factors such as limited irrigation, high input costs, lack of capital for vineyard reestablishment, aging vineyards, and declining yields. These issues limit the capacity of the property for long-term wine grape production. Furthermore, the property has minimal potential for alternative agricultural activities and does not contribute to food security in South Africa. Given these circumstances, the proposed development represents the highest opportunity cost as an alternative use of the property, leveraging its inherent real estate value.

ANNEXURE A: DEVELOPMENT FRAMEWORK SOCIO-ECONOMIC AND FISCAL IMPACT REPORT

Prepared For:
UNiQON

September 2024

Lyndoch Mixed Use Development

Development Framework Fiscal and Socio-Economic Impact Model

DEMACON **LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT**

Market Studies
Retail Studies | Centre Repositioning | Consumer Surveys

Special Projects
Mixed Use Developments | Inclusionary Housing Projects | Economic Impact Assessments

Africa
Real Estate Feasibility Studies | Economic Assessments | Socio-Economic Surveys | Impact Assessments

Incorporating GIS Technology for Advanced **Geo-Spatial Analysis**

DEMACON

Table of Contents

Chapter 1: Project Information	5
Chapter 2: Synopsis	9
Chapter 3: Construction Phase Economic Impacts	17
Chapter 4: Operational Phase Economic Impacts	22
Chapter 5: Estimated Number of Formal SMME Opportunities	27
Chapter 6: Formal Jobs Created per Skills Level	29
Chapter 7: Impact on Compensation	31
Chapter 8: Impact on Social Facilities	33
Chapter 9: Impact on Taxation	35
Chapter 10: Sector Profiling	37

Index and Glossary

Direct Impacts	Those economic effects caused by the new investment or proposed project
Indirect Impacts	Occurs to industries in the backward linked industries that supply goods and services to the proposed project. Economic activity triggered by the purchases made as a result of the initial round of project expenditure
Induced Impacts	Result from households spending some of the additional income they receive on goods and services within the local, regional and provincial economy
Construction Phase	Focuses on the period during which the proposed project is constructed
Operational Phase	Focuses on the period after construction has completed and operations are started
Capital Investment	The investment by public and private sector stakeholders in land, infrastructure, top structures and other items required to undertake and complete the construction of a project
Annual Turn Over	Estimated annual turn over expected by the project due to normal day to day operations
Gross Domestic Product	Gross domestic product (GDP) at market prices (value added originating) is the value that the production processes and services rendered in the economy adds to the value of goods sold or services delivered (Gross domestic product (GDP) at market prices = Gross value added at basic prices + Net indirect taxes on products (by government))
Formal Employment	Employment figures indicate the number of paid employees and include casual, seasonal and informal workers. Employment consists of three main categories, namely skilled, semi-skilled, low skilled and informal labour
Informal Employment	Number of paid employees that are employed by informal buisnesses - informal businesses are businesses not registered as a formal enterprise
Compensation	The compensation of employees is equal to the income received by employees, i.e. wages and salaries
SMME	Small, Medium and Micro Enterprises

Taxes on Products	Indirect taxes on products include all indirect taxes levied by the government on products. These taxes include the following: Value added tax (VAT) and customs and excise duties
Taxes on Production	Taxes on production are the value of all the money paid by producers to the government, in respect to taxes on their production
Corporate Taxes	Corporate taxes
Personal Taxes	Personal taxes include UIF and PAYE



Chapter 1
Project Information

The following section of the report is focused on providing an overview of the project modeled by the fiscal and socio-economic impact model. The purpose of the section is to introduce the project, highlight the broad land uses of the project, identify capital investment and operational expenditure frameworks and timeframes, and to highlight the intended target market.

1 Project Information

1.1 Project Description

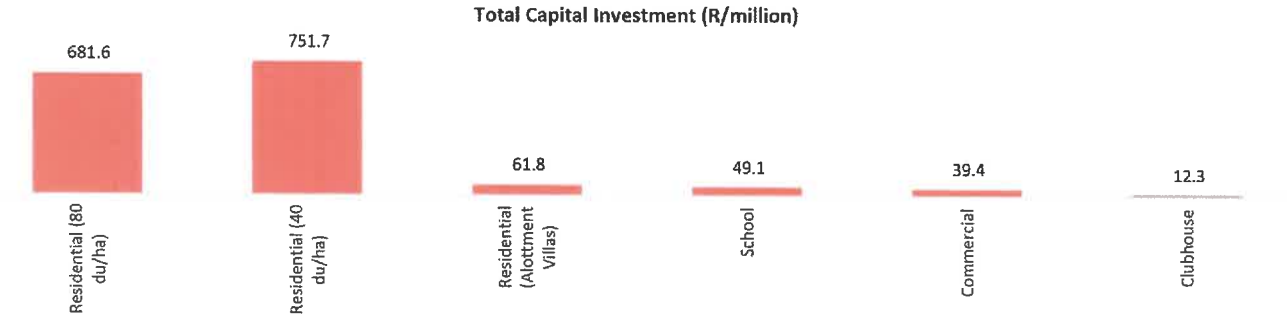
Project Name:	Lyndoch Mixed Use Development	**Project Description:**	Review of impacts that could arise as a result of the implmentation of the project

1.2 Land Use and Bulk Overview

Land Use Description	Number of Units / Keys / Seats	Bulk m²	% Contribution
Residential (80 du/ha)	515	25 750	39.4%
Residential (40 du/ha)	355	28 400	43.4%
Residential (Alottment Villas)	14	3 500	5.4%
School	400	4 000	6.1%
Commercial		2 869	4.4%
Clubhouse		900	1.4%
Total		**65 419**	

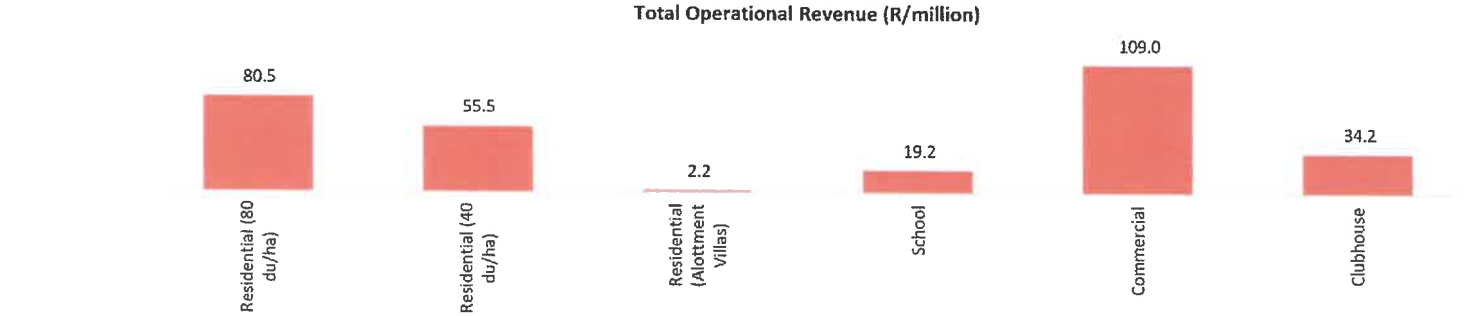
1.3 Capital Investment Overview

Land Use Description	Buildings	Infrastructure, Land & Furniture, Fittings & Fixtures	Total Capital Investment	% Contribution
Residential (80 du/ha)	592 687 750	88 903 163	681 590 913	42.7%
Residential (40 du/ha)	653 682 800	98 052 420	751 735 220	47.1%
Residential (Alottment Villas)	53 707 500	8 056 125	61 763 625	3.9%
School	42 672 000	6 400 800	49 072 800	3.1%
Commercial	34 224 301	5 133 645	39 357 946	2.5%
Clubhouse	10 736 100	1 610 415	12 346 515	0.8%
Total	**1 387 710 451**	**208 156 568**	**1 595 867 019**	



1.4 Operational Revenue Overview

Land Use Description	Total Operational Revenue	% Contribution
Residential (80 du/ha)	80 461 540	5.0%
Residential (40 du/ha)	55 463 780	3.5%
Residential (Alottment Villas)	2 187 305	0.1%
School	19 200 000	1.2%
Commercial	109 022 000	6.8%
Clubhouse	34 200 000	2.1%
Total	**300 534 625**	





Chapter 2
Synopsis

This section of the report focuses on providing a concise and digestable overview of the outcomes of the socio-economic impact model. The purpose is to highlight key outcomes and considerations from the impact analysis. The Section also serves as an introduction to the remainder of the report which, from Secion 2 onwards, provide detailed information regarding every impact modeled.

2 Synopsis

2.1 Impact Outcome Synopsis

2.1.1 Total Estimated Capital Investment (CAPEX and Operational Revenue (OPEX)

The total estimted capital investment of the Lyndoch Mixed Use Development (Net Present Value for the current year) is R1.6 billion - It should be noted that the Total CAPEX includes expenditure on furniture, fixtures, fittings and related services.

The total estimated operational revenue (annualised on-site business sales or turnover) of the development (Net Present Value for the current year) is R300.53 million.

2.1.2 Summary of Construction Phase Impacts

Impacts generated during the construction phase of the project are once-off and are sustained for as long as construction occurs. These impacts dwindle as construction activity comes to an end and the development becomes operational – then operational impacts, which are created and sustained annually, are activated.

The total CAPEX (Capital Investment) of the project could temporarily add approximately R3.5 billion in additional business sales, R1.49 billion in additional GDP (contributes +1.49% to the provincial economy) and approximately 5 253 once-off jobs (formal and informal) throughout the Western Cape provincial economy.

An estimated 13 formal small, medium and micro-enterprise opportunities could be created. Black-owned SMMEs would potentially represent 61.54% of new formal SMME opportunities, given the prevailing legislative environment.

Formal employment during the construction phase represents 4 111 jobs (total direct, indirect and induced). Approximately 21.31% of formal employment opportunities are expected to be filled by skilled labourers compared to 56.75% semi-skilled labourers and 21.94% low-skilled labourers.

Additional compensation paid to employees during the construction phase is estimated to be approximately R526.92 million.

It is estimated that approximately R428.93 million in additional taxes could be generated during the construction phase. The largest contributor to new taxes is as a result of corporate taxes, contributing 33.44% to all taxes collected economywide.

2.1.3 Summary of Operational Phase Impacts

Operational phase impacts are generated when the productive-land uses of the development commence with operations. Impacts created during the operational phase are "sustained" impacts. "Sustained impacts" are impacts that are continuously generated (i.e. created and then sustained annually) as soon as the full operation of the project commences (long-term impacts).

The total OPEX (operational revenue) of the project could annually add approximately R561.72 million in additional business sales, R317.02 million in additional GDP (contributes +0.32% to the provincial economy) and approximately 888 sustained jobs (formal and informal) throughout the Western Cape provincial economy.

An estimated 0 formal small, medium and micro-enterprise opportunities could be created throughout the lifetime of the project. Black-owned SMMEs would potentially represent 0% of new formal SMME opportunities, given the prevailing legislative environment.

Formal employment opportunities created throughout the lifetime of the project represents 725 jobs (total direct, indirect and induced). Approximately 34.34% of formal employment opportunities are expected to be filled by skilled labourers compared to 45.24% semi-skilled labourers and 20.41% low-skilled labourers. Additional annual compensation paid to employees during the operational phase is estimated to be approximately R101.34 million.

It is estimated that approximately R62.42 million in additional taxes could be generated during the operational phase. The largest contributor to new taxes is as a result of personal income tax, contributing 48.43% to all taxes collected economywide.

2.1.4 Overall Outcome

Overall, the construction and operational phase of the project would have a measurable positive effect on the Western Cape provincial economy, generating sizeable GDP over the short- to long-term, high additional business sales and new business formation and a considerable number of new employment opportunities - across all skill levels. Additional taxes can contribute to national and local treasuries and households across the province can increase their livelihoods.

The increased demand for social amenities will influence the fiscus and operation of public sector entities. The increased pressure on the fiscus is offset by the addition of productive rateable assets through the envisaged capital investment in the project.

2.2 Construction Phase Economic Impacts

Construction Phase CAPEX
1 595 867 019

Additional Business Sales	3 496 988 265
Additional GDP	1 492 683 555
Additional Employment (Formal and Informal)	5 253

2.3 Operational Phase Economic Impacts

Operational Phase OPEX
300 534 625

Additional Business Sales	561 723 704
Additional GDP	317 017 638
Additional Employment (Formal and Informal)	888

2.4 SMME Opportunities

Enterprise Type	Construction Phase	Operational Phase
Micro Enterprises (1 to 10 employees)	6	0
Small Enterprises (11 to 50 employees)	5	0
Medium Enterprises (51 to 200 employees)	2	0
Estimated Number of New Enterprise Opportunities	13	0
Estimated Number of New Black Owned SMME Opportunities	8	0
	61.5%	**0.0%**
	of new business opportunities could be black owned	of new business opportunities could be black owned



LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT
DEMACON

2.5 Formal Jobs Created by Skill Level - Construction Phase Economic Impacts

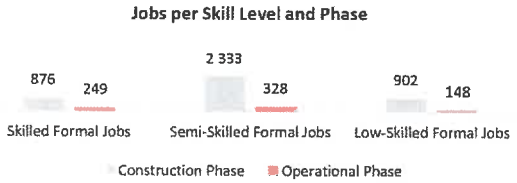
Construction Phase CAPEX
1 595 867 019

Skilled Formal Jobs	876
Semi-Skilled Formal Jobs	2 333
Low-Skilled Formal Jobs	902

2.6 Formal Jobs Created by Skill Level - Operational Phase Economic Impacts

Operational Phase OPEX
300 534 625

Skilled Formal Jobs	249
Semi-Skilled Formal Jobs	328
Low-Skilled Formal Jobs	148



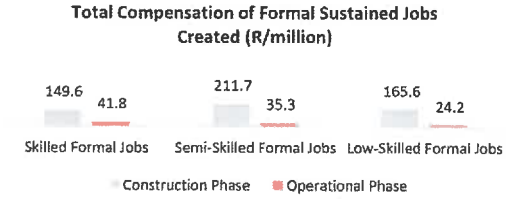


2.7 Impact on Compensation of Formal Jobs per Skill Level

Job Typer per Skill Level	Construction Phase	Operational Phase
Skilled Formal Jobs	149 620 428	41 835 047
Semi-Skilled Formal Jobs	211 749 531	35 286 279
Low-Skilled Formal Jobs	165 550 409	24 218 126
Total	526 920 368	101 339 452

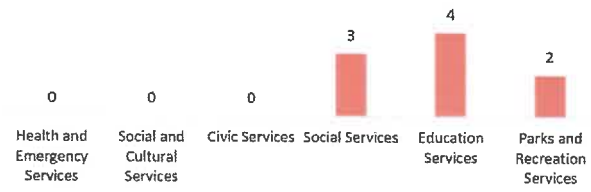
Average Annual Compensation per Formal Job Created

Construction Phase	Operational Phase
128 160	139 598



2.8 Additional Social Facilities Required

Social Facility Type (Main Category)	Additional Facilities Required (Sustained)
Health and Emergency Services	0
Social and Cultural Services	0
Civic Services	0
Social Services	3
Education Services	4
Parks and Recreation Services	2
Total	**9**

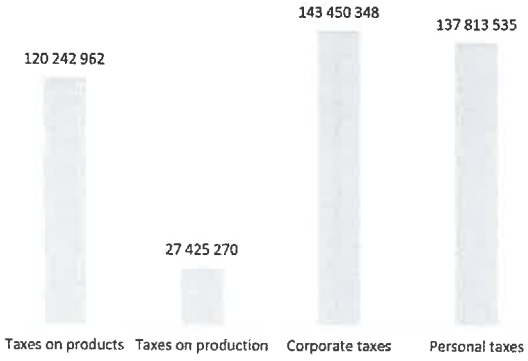


2.9 Additional Taxes Generated

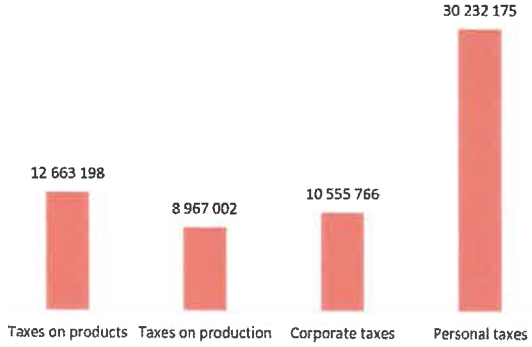
Taxation Type	Construction Phase	Operational Phase
Taxes on products	120 242 962	12 663 198
Taxes on production	27 425 270	8 967 002
Corporate taxes	143 450 348	10 555 766
Personal taxes	137 813 535	30 232 175
Total Tax Impact	428 932 116	62 418 141

Property Taxation	Property Rates per Annum
Total Property Taxes (i.e. Taxable Property Types)	8 003 615
Total Property Taxes Foregone by Local Municipality (i.e. Subsidy Housing Programmes, etc.)	0
Total	8 003 615

Construction Phase



Operational Phase



2.10 Sector Profiling

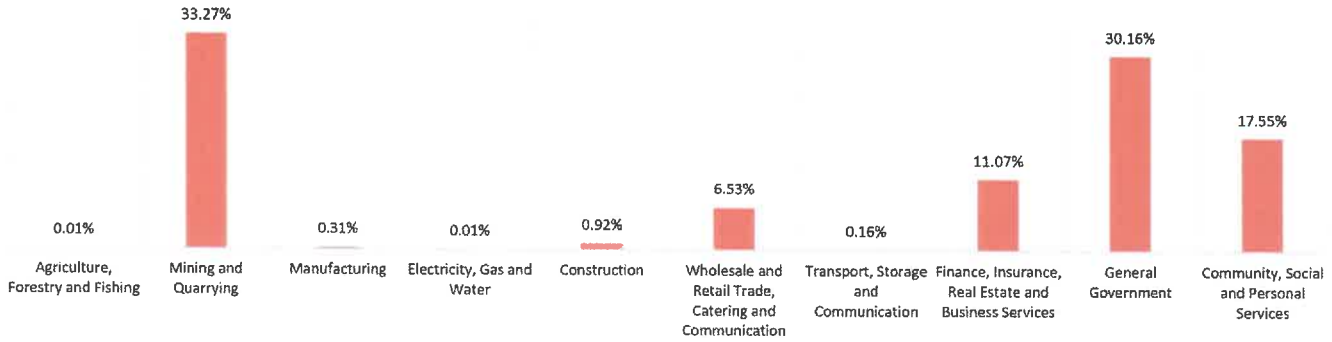
Impact on GDP during the Construction Phase (Different Economic Geographies)

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000	1 375 194 075	1 310 066 606 075	0.10%
Cape Winelands Regional Economy	84 321 214 000		85 696 408 075	1.60%
Stellenbosch Sub-Regional Economy	20 380 502 000		21 755 696 075	6.32%

Top Economic Sectors that Benefit from Increased GDP

1	National and Provincial government	406 910 412	6	Coal	48 551 888
2	Metals	330 823 677	7	Gold	45 718 795
3	Education (Private)	173 786 097	8	Health and social work (Private)	33 849 696
4	Professional business services	127 672 334	9	Other community, social and personal services	29 182 233
5	Wholesale and retail trade	65 368 630	10	Other mining and quarrying	23 879 078

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector



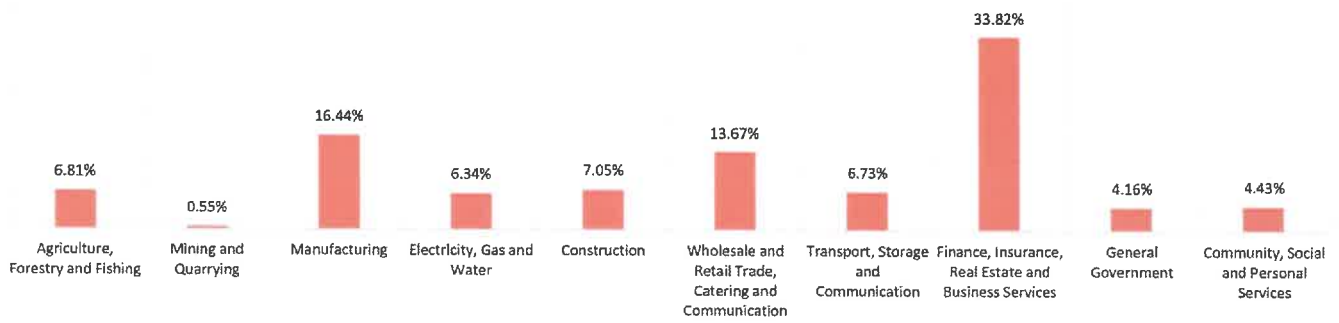
Impact on GDP during the Operational Phase (Different Economic Geographies)

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000		1 308 996 087 212	0.02%
Cape Winelands Regional Economy	84 321 214 000	304 675 212	84 625 889 212	0.36%
Stellenbosch Sub-Regional Economy	20 380 502 000		20 685 177 212	1.47%

Top Economic Sectors that Benefit from Increased GDP

1	Finance and insurance	62 223 053	6	Business activities n.e.c.	18 633 214
2	Wholesale and retail trade	34 297 307	7	Transport and storage	18 196 584
3	Professional business services	22 178 574	8	Electricity and gas	18 132 392
4	Construction	21 470 296	9	National and Provincial government	12 678 552
5	Agriculture	18 677 976	10	Beverages and tobacco	8 510 742

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector





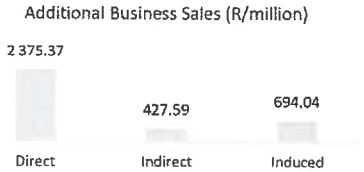
Chapter 3
Construction Phase Economic Impacts

This section of the report is focused on providing an overview of potential economic and socio-economic impacts that may arise during the construction phase of the proposed project. Impacts generated during this phase are not sustained impacts because the construction phase of a project only lasts up until the necessary land improvements, buildings, bulk infrastructure, other infrastructure, fittings and furnishings and operational machinery etc. have been constructed and completed.

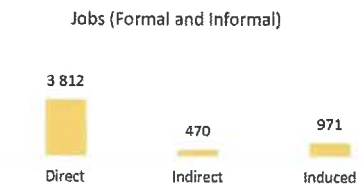
3 Construction Phase Economic Impacts

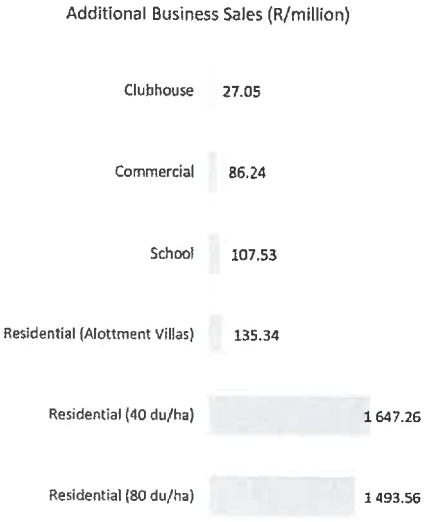
TOTAL estimated **CAPEX** of the project **1.60** billion

Additional Business Sales (Unsustained)	3.5 billion
Additional GDP - Market Prices (Unsustained)	1.49 billion
Additional Jobs - Formal & Informal (Unsustained)	5 253 jobs

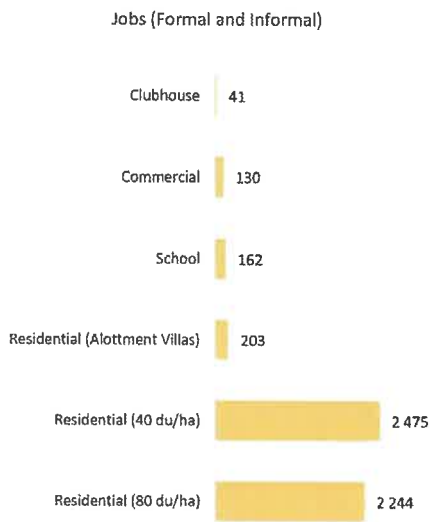






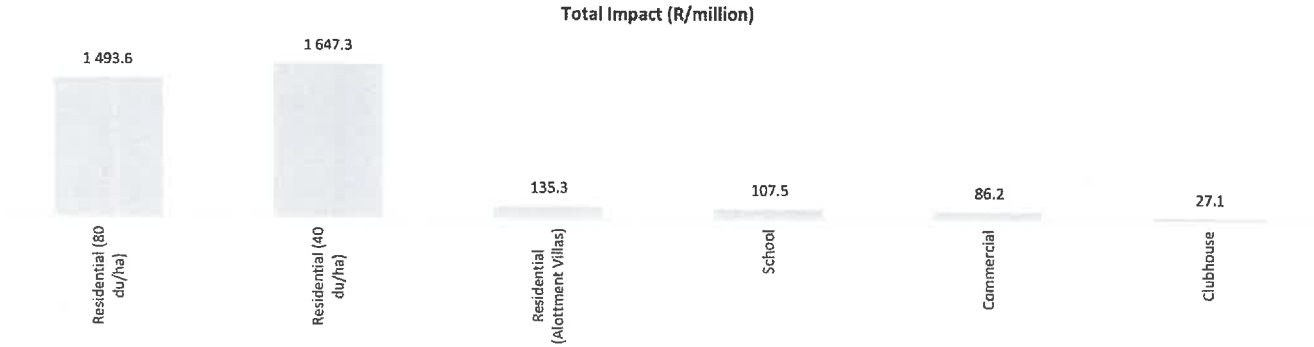






3.1 Impact on Additional Business Sales

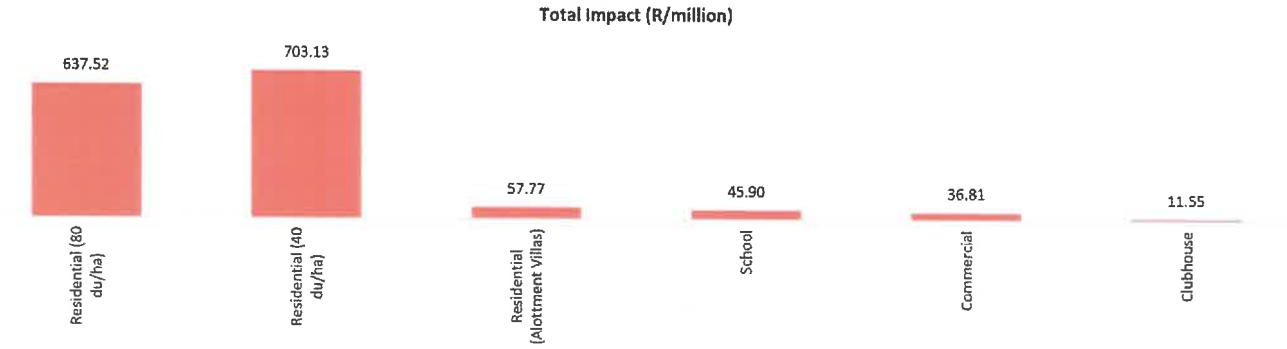
Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Residential (80 du/ha)	1 014 512 800	182 621 377	296 420 985	1 493 555 161
Residential (40 du/ha)	1 118 918 972	201 415 421	326 926 445	1 647 260 838
Residential (Alottment Villas)	91 931 959	16 548 575	26 860 737	135 341 272
School	73 042 323	13 148 271	21 341 552	107 532 146
Commercial	58 582 266	10 545 332	17 116 603	86 244 201
Clubhouse	18 377 149	3 308 051	5 369 447	27 054 647
Total	**2 375 365 469**	**427 587 027**	**694 035 769**	**3 496 988 265**



LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT
DEMACON

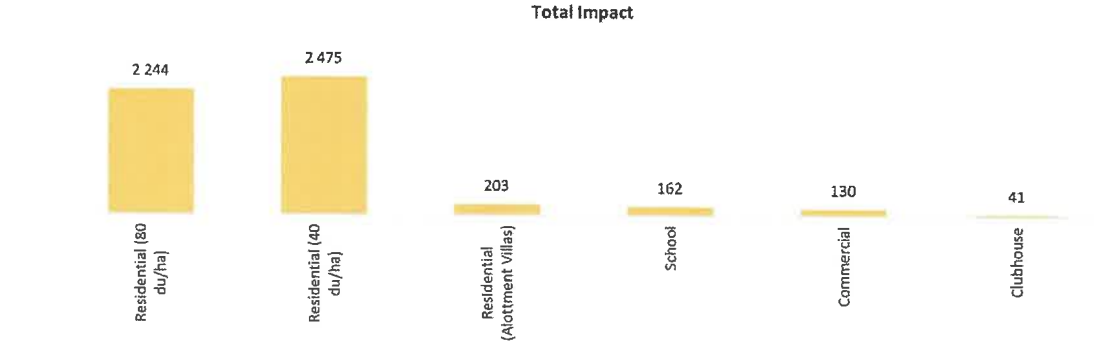
3.2 Impact on Gross Domestic Product

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Residential (80 du/ha)	408 091 817	81 273 243	148 156 447	637 521 507
Residential (40 du/ha)	450 089 616	89 637 285	163 403 615	703 130 516
Residential (Alottment Villas)	36 979 997	7 364 726	13 425 471	57 770 194
School	29 381 566	5 851 465	10 666 885	45 899 916
Commercial	23 564 950	4 693 061	8 555 181	36 813 192
Clubhouse	7 392 281	1 472 205	2 683 744	11 548 230
Total	**955 500 227**	**190 291 985**	**346 891 343**	**1 492 683 555**



3.2 Impact on Employment

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Residential (80 du/ha)	1 628	201	415	2 244
Residential (40 du/ha)	1 796	221	458	2 475
Residential (Alottment Villas)	148	18	38	203
School	117	14	30	162
Commercial	94	12	24	130
Clubhouse	29	4	8	41
Total	**3 812**	**470**	**971**	**5 253**



Distribution between the Formal and Informal Economy	
Total Number of Formal Jobs Created	4 111
Total Number of Informal Jobs Created	1 142





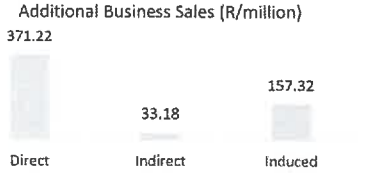
Chapter 4
Operational Phase Economic Impacts

This section of the report is focused on providing an overview of potential economic and socio-economic impacts that may arise during the operational phase of the proposed project. Impacts generated during this phase are sustained impacts meaning, impacts generated are sustained for the duration of the the project lifecycle given that annual turn over remains constant.

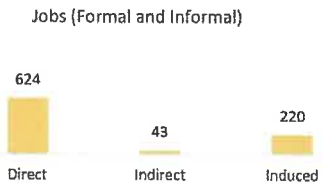
4 Operational Phase Economic Impacts

TOTAL estimated **OPEX** of the project **300.53** million

Additional Business Sales (Unsustained)	561.72 million
Additional GDP - Market Prices (Unsustained)	317.02 million
Additional Jobs - Formal & Informal (Unsustained)	888 jobs

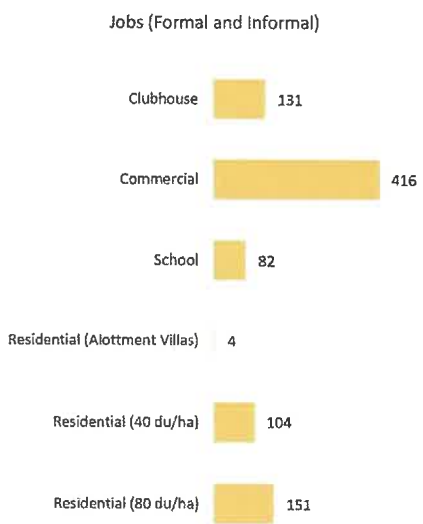






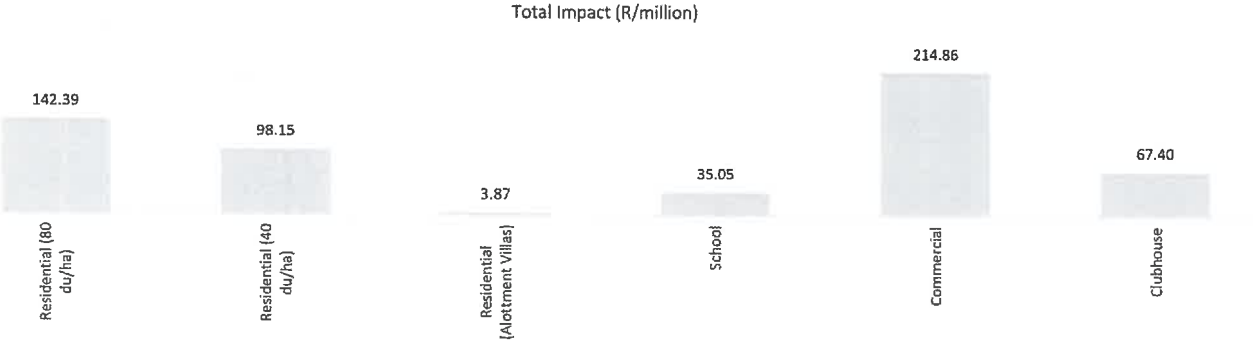






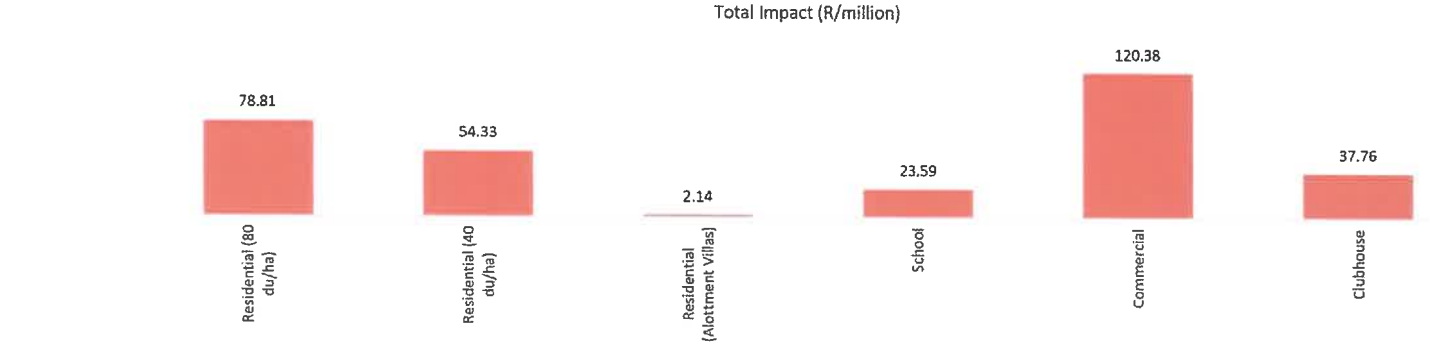
4.1 Impact on Additional Business Sales

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Residential (80 du/ha)	93 826 883	7 401 103	41 163 083	142 391 069
Residential (40 du/ha)	64 676 783	5 101 731	28 374 553	98 153 067
Residential (Alottment Villas)	2 550 635	201 195	1 118 997	3 870 828
School	21 858 871	1 700 011	11 488 766	35 047 648
Commercial	143 342 545	14 293 258	57 224 128	214 859 931
Clubhouse	44 966 291	4 483 769	17 951 103	67 401 163
Total	**371 222 008**	**33 181 066**	**157 320 630**	**561 723 704**



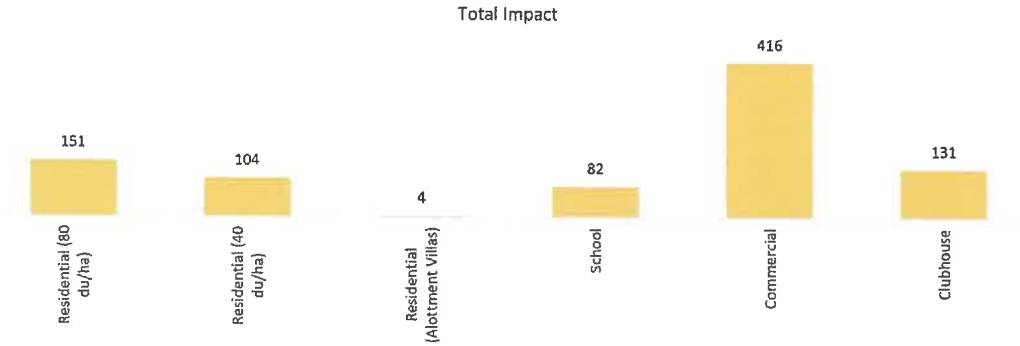
4.2 Impact on Gross Domestic Product

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Residential (80 du/ha)	54 405 393	3 831 804	20 574 037	78 811 234
Residential (40 du/ha)	37 502 747	2 641 341	14 182 103	54 326 191
Residential (Alottment Villas)	1 478 983	104 166	559 295	2 142 443
School	17 019 010	832 879	5 742 288	23 594 177
Commercial	84 629 448	7 149 386	28 601 630	120 380 464
Clubhouse	26 548 101	2 242 749	8 972 279	37 763 129
Total	**221 583 682**	**16 802 325**	**78 631 631**	**317 017 638**



4.3 Impact on Employment

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Residential (80 du/ha)	82	11	58	151
Residential (40 du/ha)	57	7	40	104
Residential (Alottment Villas)	2	0	2	4
School	64	2	16	82
Commercial	319	17	80	416
Clubhouse	100	5	25	131
Total	**624**	**43**	**220**	**888**



Distribution between the Formal and Informal Economy	
Total Number of Formal Jobs Created	726
Total Number of Informal Jobs Created	162





Chapter 5
Estimated Number of Formal SMME Opportunities

This section of the report is focused on providing an overview of potential number of new small, medium or micro enterprises that could become operational as a result of the added GDP generated during the construction and operational phases. The impact considers the current impact (includes an historic perspective) that changes in the GDP of the regional economy has had on the number of SMME's operational and formally registered with SARS. The section thus estimates the number of potential new SMME's that could be established due to changes in the provincial economy's GDP and the segment that could potentially be black owned.

5 Estimated Number of Formal SMME Opportunities

5.1 Construction Phase Enterprise Opportunities

TOTAL estimated **CAPEX** of the project **1.60** billion

Micro Enterprises (1 to 10 employees)	6 enterprises
Small Enterprises (11 to 50 employees)	5 enterprises
Medium Enterprises (51 to 200 employees)	2 enterprises

Enterprise Type	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Micro Enterprise Opportunities	4	0	2	6
Small Enterprise Opportunities	3	0	2	5
Medium Enterprise Opportunities	2	0	0	2
Estimated Number of New Enterprise Opportunities	**9**	**0**	**4**	**13**
Estimated Number of New Black Owned Entrprise Opportunities				**8**

Calculations indicate that the total estimated GDP impact of the construction phase could create 13 new SMME enterprise opportunities. Approximately 61.5% of opportunities could be black owned.

5.1 Operational Phase Enterprise Opportunities

TOTAL estimated **OPEX** of the project **300.53** million

Micro Enterprises (1 to 10 employees)	0 enterprises
Small Enterprises (11 to 50 employees)	0 enterprises
Medium Enterprises (51 to 200 employees)	0 enterprises

Enterprise Type	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Micro Enterprise Opportunities	0	0	0	0
Small Enterprise Opportunities	0	0	0	0
Medium Enterprise Opportunities	0	0	0	0
Estimated Number of New Enterprise Opportunities	**0**	**0**	**0**	**0**
Estimated Number of New Black Owned Entrprise Opportunities				**0**

#DIV/0!



Chapter 6
Formal Jobs Created per Skill Level

This section of the report focuses on providing an overview of the impact on formal job creation per skill level during the construction and operational phases of the proposed project. The purpose of the section is to estimate the potential number of new jobs created throughout the provincial economy and the distribution of those jobs per skill level required.

The information provides an indication as to the extent to which the implementation of the proposed project could influence the growth and demand for new skilled labourers. The information also provides a contextual background as to the opportunity to develop skills in the provincial economy.

6 Formal Jobs Created per Skill Level

6.1 Construction Phase Skills Demand

TOTAL estimated **CAPEX** of the project **1.60** billion



Skilled Jobs	876 jobs
Semi-Skilled Jobs	2 333 jobs
Low-Skilled Jobs	902 jobs

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	511	105	260	876
Semi-Skilled Jobs	1 815	182	336	2 333
Low-Skild Jobs	578	98	226	902
Estimated Number of New Employment Opportunities	**2 904**	**385**	**822**	**4 111**

The data shows that the majority of employment opportunities generated as a result of the project primarily consist of semi-skilled job opportunities.

6.2 Operational Phase Skills Demand

TOTAL estimated **OPEX** of the project **0.30** billion



Skilled Jobs	250 jobs
Semi-Skilled Jobs	328 jobs
Low-Skilled Jobs	148 jobs

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	178	13	59	250
Semi-Skilled Jobs	235	17	76	328
Low-Skild Jobs	90	7	51	148
Estimated Number of New Employment Opportunities	**503**	**37**	**186**	**726**

The data shows that the majority of employment opportunities generated as a result of the project primarily consist of semi-skilled job opportunities.

Chapter 7
Impact on Compensation

This section of the report focuses on providing an overview of the impact on employee compensation for potentially new formally employed persons during the construction and operational phases of the proposed project. The purpose of the section is to identify the additional compensation that could be generated as a result of additional employment.

7 Impact on Compensation

7.1 Construction Phase Impact on Compensation

TOTAL estimated **CAPEX** of the project **1.60** billion

Skilled Jobs Total Compensation	149 620 427
Semi-Skilled Jobs Total Compensation	211 749 531
Low-Skilled Jobs Total Compensation	165 550 409

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	78 962 525	19 260 454	51 397 448	149 620 427
Semi-Skilled Jobs	149 022 704	20 404 247	42 322 580	211 749 531
Low-Skild Jobs	115 824 308	15 915 860	33 810 241	165 550 409
Estimated Number of New Employment Opportunities	**343 809 537**	**55 580 561**	**127 530 269**	**526 920 367**
Average Annual Compensation per Job Created	118 392	144 365	155 146	128 173

7.2 Operational Phase Impact on Compensation

TOTAL estimated **OPEX** of the project **0.30** billion

Skilled Jobs Total Annual Compensation	41 835 047
Semi-Skilled Jobs Total Annual Compensation	35 286 279
Low-Skilled Jobs Total Annual Compensation	24 218 126

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	27 863 462	2 321 063	11 650 522	41 835 047
Semi-Skilled Jobs	23 830 509	1 862 295	9 593 475	35 286 279
Low-Skild Jobs	15 268 531	1 285 655	7 663 940	24 218 126
Estimated Number of New Employment Opportunities	**66 962 502**	**5 469 013**	**28 907 937**	**101 339 452**
Average Annual Compensation per Job Created	133 126	147 811	155 419	139 586



Chapter 8
Impact on Social Facilities

This section of the report focuses on providing an overview of the impact on social amenities as a result of the growth of new employment in the provincial economy due to the construction and operation of the proposed project. The purpose of the section is to illustrate the range of social amentities that could be required should the added employment generated within the provincial economy become a reality.

8 Impact on Social Facilities

8.1 Operational Phase Impact on Social Facilities

Primary Category	Secondary Category	Additional Amenities
Health and Emergency Services	Tertiary Hospital	0
	Regional Hospital	0
	District Hospital	0
	Community Health Centre	0
	Primary Health Clinic	0
	Small- to Medium-Sized Clinic	0
	Large Clinic	0
	Extra Large Clinic	0
	Fire Station	0
	Police Station	0
Social and Cultural Services	Performing Arts Centre	0
	Museum	0
	Local Library	0
	Regional Library	0
Civic Services	Civic Centre	0
	Major Public Event Venue	0
	Home Affairs Office	0
	Regional Home Affairs Office	0
	District Office	0
	Permanent Service Point	0
	Thusong Service Centre	0
Social Services	Community Hall	0
	ICT Access Point	0
	Post Office / Agency and Post Boxes	0
	Large Cemetery	0
	Medium Cemetery	0
	Small Cemetery	0
	Very Small Cemetery	1
	Local Market	1
	Place of Worship	1

Primary Category	Secondary Category	Additional Amenities
Education Services	University	0
	Colleges	0
	Secondary School	0
	Primary School	0
	Grade R ECD	3
	Creche ECD	1
	Resource Hub and Xare Centre ECD	0
Parks and Recreation Services	Small Park	1
	Large Park	0
	Community Parks	0
	Neighbourhood Sports Fields	1
	Community / Sub-District Sports Field	0
	District / Sub-Regional Sports Field	0
	Metro / Regional Sports Field	0
	Multi-Purpose Sports Halls	0
	Swimming Pools	0
	Sports Complexes	0
	Sports Stadiums	0
	Regional Sports Arenas	0
	Interntional Sports Complex	0

Primary Category	Additional Amenities
Health and Emergency Services	0
Social and Cultural Services	0
Civic Services	0
Social Services	3
Education Services	4
Parks and Recreation Services	2
Total	**9**



Chapter 9
Impact on Taxation

This section of the report focuses on providing an overview of the possible taxation and related impacts that could arise during the construction and operational phase of the proposed project. The purpose of the analysis is to estimate the impact, be it direct, indirect or induced, that the construction and operation of the proposed project could have on the provincial economy.

The data provides an informative basis from which to consider the range of tax related revenue that could be generated throughout the provincial economy and as a result of the value chain of the proposed project. Tax related revenue could include taxation of production, products, corporate taxes and personal income taxes.

9 Impact on Taxation

9.1 Construction Phase Impact on Taxation

Tax Type	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impact
Value Added Tax	52 394 735	8 473 194	11 918 379	72 786 308
Custom Duties	7 170 967	399 626	819 185	8 389 778
Excise Levies	152 481	71 007	582 447	805 935
Fuel Levies	17 676 542	3 204 752	3 623 296	24 504 590
Other Taxes	9 350 485	1 841 597	2 564 268	13 756 350
Taxes on Production	13 698 593	5 348 982	8 377 695	27 425 270
Corporate Taxes	114 167 149	10 181 488	19 101 710	143 450 347
Personal Income Tax	87 590 114	17 532 225	32 691 196	137 813 535
Total Impact	302 201 066	47 052 871	79 678 176	428 932 113

9.2 Operational Phase Impact on Taxation

Tax Type	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impact
Value Added Tax	5 020 099	573 426	2 701 600	8 295 125
Custom Duties	88 257	28 350	185 689	302 296
Excise Levies	29 593	6 615	132 026	168 234
Fuel Levies	978 300	241 630	821 311	2 041 241
Other Taxes	1 152 922	122 124	581 256	1 856 302
Taxes on Production	6 580 969	487 018	1 899 015	8 967 002
Corporate Taxes	5 528 415	697 468	4 329 882	10 555 765
Personal Income Tax	21 249 533	1 572 362	7 410 280	30 232 175
Total Impact	40 628 088	3 728 993	18 061 059	62 418 140

9.3 Operational Phase Property Taxation

Property Taxation	Total Annual Property Taxes
Total Property Taxes (i.e. Taxable Property Types)	8 003 615
Total Property Taxes Foregone by Local Municipality (i.e. Subsidy Housing Programmes, etc.)	0





Chapter 10
Sector Profiling

This section of the report focuses on the value chain reaction created within the sectoral profile (50 sub-sectors) of the provincial economy by the construction and operational impact of the proposed mixed-use project.

Ultimately, the profile provides an overview as to where within the provincial economy construction and operational phase impacts will generate added GDP and employment. The data is used to illustrate the value chain impact that the proposed project could have on the economy and where in the economy changes and benefits can be expected.

10 Sector Profiling

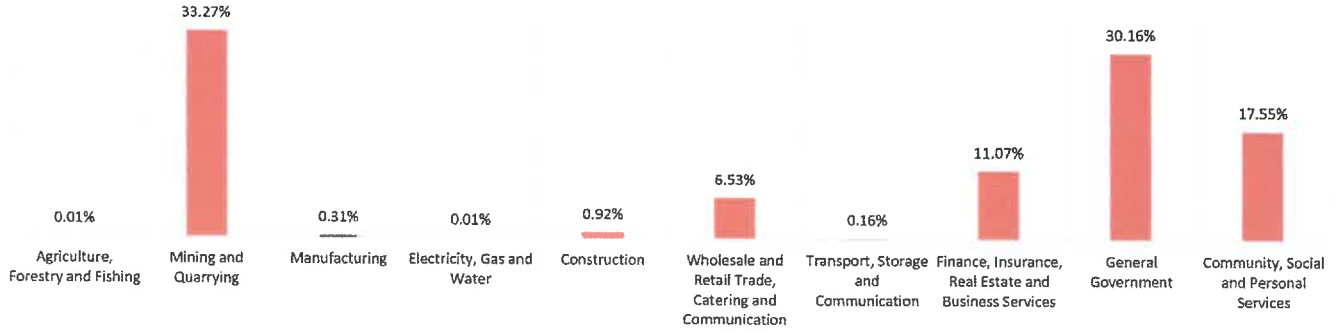
10.1 Construction Phase Sector Profiling Impact

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000	1 375 194 075	1 310 066 606 075	0.10%
Cape Winelands Regional Economy	84 321 214 000		85 696 408 075	1.60%
Stellenbosch Sub-Regional Economy	20 380 502 000		21 755 696 075	6.32%

Top Economic Sectors that Benefit from Increased GDP

1	National and Provincial government	406 910 412	6	Coal	48 551 888
2	Metals	330 823 677	7	Gold	45 718 795
3	Education (Private)	173 786 097	8	Health and social work (Private)	33 849 696
4	Professional business services	127 672 334	9	Other community, social and personal services	29 182 233
5	Wholesale and retail trade	65 368 630	10	Other mining and quarrying	23 879 078

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector



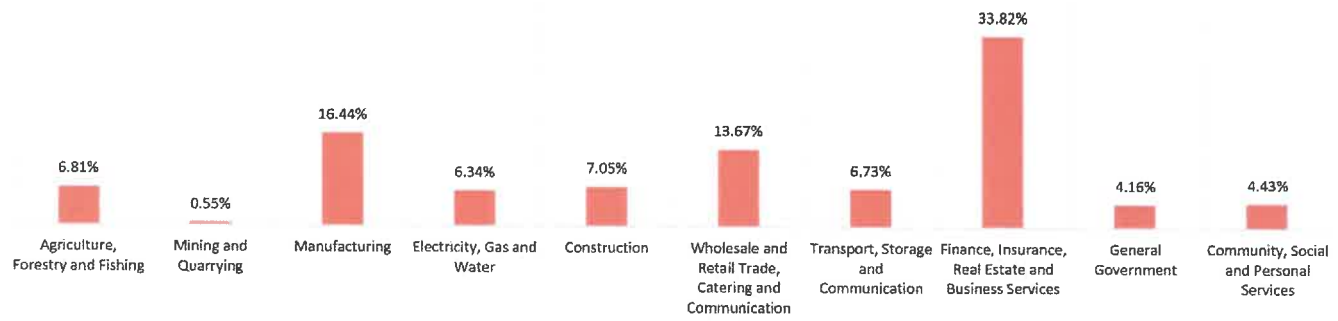
10.2 Operational Phase Sector Profiling Impact

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000	304 675 212	1 308 996 087 212	0.02%
Cape Winelands Regional Economy	84 321 214 000		84 625 889 212	0.36%
Stellenbosch Sub-Regional Economy	20 380 502 000		20 685 177 212	1.47%

Top Economic Sectors that Benefit from Increased GDP

1	Finance and insurance	62 223 053	6	Business activities n.e.c.	18 633 214
2	Wholesale and retail trade	34 297 307	7	Transport and storage	18 196 584
3	Professional business services	22 178 574	8	Electricity and gas	18 132 392
4	Construction	21 470 296	9	National and Provincial government	12 678 552
5	Agriculture	18 677 976	10	Beverages and tobacco	8 510 742

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector



10.3 Detailed Added GDP Breakdown

Economic Sector	Actual Sector GDP (at Basic Prices)	Construction Phase GDP Impact	Operational Phase GDP Impact	Distribution (Operational
Agriculture	22 522 083 000	191 319	18 677 976	
Forestry	575 365 000	0	77 134	
Fishing	14 365 971 000	4 361	1 984 144	
Coal	0	48 551 888	0	
Gold	0	45 718 795	0	
Metals	162 378 000	330 823 677	71 688	
Other mining and quarrying	3 292 175 000	23 879 078	1 602 348	
Food	30 995 475 000	164 244	6 049 874	
Beverages and tobacco	22 143 021 000	221 626	8 510 742	
Textiles	3 603 622 000	28 879	472 354	
Wearing apparel	4 941 307 000	100 964	1 135 506	
Leather and leather products	363 383 000	6 475	141 606	
Footwear	495 566 000	286 946	242 721	
Wood and wood products	2 800 914 000	14 500	69 919	
Paper and paper products	8 730 823 000	163 524	1 686 910	
Printing , recorded media	11 464 457 000	653 860	2 510 319	
Coke, petroleum products and nuclear fuel	18 806 712 000	55 804	1 087 889	
Basic chemicals	5 128 976 000	71 364	2 207 251	
Other chemical products	9 449 321 000	489 662	3 471 752	
Rubber products	934 989 000	85 779	304 590	
Plastic products	5 446 268 000	146 247	1 454 504	
Glass and glass products	995 868 000	8 152	994	
Non-metallic mineral products	3 374 224 000	207 516	915 108	
Basic iron and steel products; casting of metal	2 694 565 000	3 001	4 173 521	
Non-ferrous metal products	2 265 260 000	787	192 045	
Structural metal products	2 700 220 000	127 071	532 175	
Other fabricated metal products	6 340 519 000	15 124	3 313 893	
Machinery and equipment	13 013 007 000	134 356	3 030 075	
Electrical machinery	3 004 959 000	4 634	36 756	
Radio, television and communication apparatus	467 769 000	32 152	379 581	
Professional equipment	1 394 954 000	550 501	515 652	
Motor vehicles, parts and accessories	9 718 287 000	16 771	5 392 826	
Other transport equipment	3 592 352 000	39 001	1 122 542	
Furniture	1 275 043 000	533 285	705 565	
Other manufacturing groups	19 696 777 000	4 067	429 130	

Economic Sector	Actual Sector GDP (at Basic Prices)	Construction Phase GDP Impact	Operational Phase GDP Impact	Distribution (Operational
Electricity and gas	25 044 354 000	32 453	18 132 392	
Water	5 576 456 000	104 678	1 192 655	
Construction	44 914 547 000	12 418 365	21 470 296	
Wholesale and retail trade	187 123 870 000	65 368 630	34 297 307	
Catering and accommodation services	16 154 835 000	22 717 863	7 366 872	
Transport and storage	67 739 522 000	767 611	18 196 584	
Communication	36 090 722 000	1 398 501	2 321 447	
Finance and insurance	93 707 260 000	20 674 970	62 223 053	
Professional business services	273 289 664 000	127 672 334	22 178 574	
Business activities n.e.c.	40 586 807 000	1 066 714	18 633 214	
National and Provincial government	88 609 414 000	406 910 412	12 678 552	
Local government	44 231 750 000	24 222	0	
Education (Private)	68 570 162 000	173 786 097	720 770	
Health and social work (Private)	49 364 548 000	33 849 696	6 641 803	
Other community, social and personal services	30 930 891 000	29 182 233	6 122 604	
Total	**1 308 691 412 000**	**1 349 310 190**	**304 675 212**	

Detailed Distribution of Economic Impacts per Economic Sector



10.4 Detailed Added Jobs Breakdown

Economic Sector	Actual Sector Jobs	Construction Phase Jobs Impact	Operational Phase Jobs Impact	Distribution (Operational
Agriculture	195 143	1	54	
Forestry	11 155	0	0	
Fishing	64 007	0	6	
Coal	0	189	0	
Gold	0	178	0	
Metals	48	1 288	0	
Other mining and quarrying	2 061	93	5	
Food	74 806	1	18	
Beverages and tobacco	17 511	1	25	
Textiles	12 363	0	1	
Wearing apparel	18 375	0	3	
Leather and leather products	1 405	0	0	
Footwear	2 880	1	1	
Wood and wood products	13 136	0	0	
Paper and paper products	9 052	1	5	
Printing , recorded media	25 772	3	7	
Coke, petroleum products and nuclear fuel	6 199	0	3	
Basic chemicals	5 745	0	6	
Other chemical products	15 462	2	10	
Rubber products	2 719	0	1	
Plastic products	22 111	1	4	
Glass and glass products	3 691	0	0	
Non-metallic mineral products	10 219	1	3	
Basic iron and steel products; casting of metal	4 605	0	12	
Non-ferrous metal products	1 456	0	1	
Structural metal products	10 259	0	2	
Other fabricated metal products	19 883	0	10	
Machinery and equipment	36 391	1	9	
Electrical machinery	12 319	0	0	
Radio, television and communication apparatus	2 178	0	1	
Professional equipment	4 576	2	2	
Motor vehicles, parts and accessories	25 946	0	16	
Other transport equipment	8 535	0	3	
Furniture	7 842	2	2	
Other manufacturing groups	14 310	0	1	

Economic Sector	Actual Sector GDP (at Basic Prices)	Construction Phase GDP Impact	Operational Phase GDP Impact	Distribution (Operational
Electricity and gas	10 919	0	53	
Water	3 013	0	3	
Construction	213 755	48	63	
Wholesale and retail trade	739 147	255	100	
Catering and accommodation services	106 612	88	21	
Transport and storage	129 691	3	53	
Communication	30 123	5	7	
Finance and insurance	122 653	80	181	
Professional business services	319 157	497	65	
Business activities n.e.c.	363 028	4	54	
National and Provincial government	156 546	1 584	37	
Local government	105 446	0	0	
Education (Private)	247 752	677	2	
Health and social work (Private)	176 278	132	19	
Other community, social and personal services	378 696	114	18	
Total	**3 764 976**	**5 253**	**888**	



Fiscal and socio-economic impact model developed by DEMACON Market Studies.

Should you have any questions, please contact Hein du Toit on:

Telephone: +27 12 460 7009'
Cellphone: +27 82 898 8667
E-mail: hein@demacon.co.za

Or visit our website at:
www.demacon.co.za

ANNEXURE B: EXISTING FARM SOCIO-ECONOMIC AND FISCAL IMPACT REPORT

Prepared For:
UNiQON

September 2024

Lyndoch Mixed Use Development

Existing Farm Fiscal and Socio-Economic Impact Model

DEMACON **LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT**

Market Studies
Retail Studies | Centre Repositioning | Consumer Surveys

Special Projects
Mixed Use Developments | Inclusionary Housing Projects | Economic Impact Assessments

Africa
Real Estate Feasibility Studies | Economic Assessments | Socio-Economic Surveys | Impact Assessments

Incorporating GIS Technology for Advanced **Geo-Spatial Analysis**

DEMACON

Table of Contents

Chapter 1: Project Information	5
Chapter 2: Synopsis	9
Chapter 3: Construction Phase Economic Impacts	17
Chapter 4: Operational Phase Economic Impacts	22
Chapter 5: Estimated Number of Formal SMME Opportunities	27
Chapter 6: Formal Jobs Created per Skills Level	29
Chapter 7: Impact on Compensation	31
Chapter 8: Impact on Social Facilities	33
Chapter 9: Impact on Taxation	35
Chapter 10: Sector Profiling	37

Index and Glossary

Direct Impacts	Those economic effects caused by the new investment or proposed project
Indirect Impacts	Occurs to industries in the backward linked industries that supply goods and services to the proposed project. Economic activity triggered by the purchases made as a result of the initial round of project expenditure
Induced Impacts	Result from households spending some of the additional income they receive on goods and services within the local, regional and provincial economy
Construction Phase	Focuses on the period during which the proposed project is constructed
Operational Phase	Focuses on the period after construction has completed and operations are started
Capital Investment	The investment by public and private sector stakeholders in land, infrastructure, top structures and other items required to undertake and complete the construction of a project
Annual Turn Over	Estimated annual turn over expected by the project due to normal day to day operations
Gross Domestic Product	Gross domestic product (GDP) at market prices (value added originating) is the value that the production processes and services rendered in the economy adds to the value of goods sold or services delivered (Gross domestic product (GDP) at market prices = Gross value added at basic prices + Net indirect taxes on products (by government))
Formal Employment	Employment figures indicate the number of paid employees and include casual, seasonal and informal workers. Employment consists of three main categories, namely skilled, semi-skilled, low skilled and informal labour
Informal Employment	Number of paid employees that are employed by informal buisnesses - informal businesses are businesses not registered as a formal enterprise
Compensation	The compensation of employees is equal to the income received by employees, i.e. wages and salaries
SMME	Small, Medium and Micro Enterprises

Taxes on Products	Indirect taxes on products include all indirect taxes levied by the government on products. These taxes include the following: Value added tax (VAT) and customs and excise duties
Taxes on Production	Taxes on production are the value of all the money paid by producers to the government, in respect to taxes on their production
Corporate Taxes	Corporate taxes
Personal Taxes	Personal taxes include UIF and PAYE



Chapter 1
Project Information

The following section of the report is focused on providing an overview of the project modeled by the fiscal and socio-economic impact model. The purpose of the section is to introduce the project, highlight the broad land uses of the project, identify capital investment and operational expenditure frameworks and timeframes, and to highlight the intended target market.

1 Project Information

1.1 Project Description

Project Name:	Portion 28 of the Farm 468 Current Wine Grape Production	**Project Description:**	Review of impacts that are generated by the existing use of the property

1.2 Land Use and Bulk Overview

Farm Information	Indicator	Value
Current Farm Extent		45.4 ha
Portion of the Farm used for Vineyards		28.9 ha
Farrow Lands		9.9 ha
Farmyards		0.8 ha
Fall-Out Areas and Farm Roads		5.9 ha
Average Annual Vineyard Grape Yield		158.46 ton
Types of Cultivar Planted	Chenin Blanc	13.7 ha
	Merlot	3.6 ha
	Sauvignon Blanc	5.5 ha
	Cabernet Sauvignon	5.2 ha
Wine Grape Yield per ha	Chenin Blanc	6.1 t/ha
	Merlot	4.6 t/ha
	Sauvignon Blanc	6.6 t/ha
	Cabernet Sauvignon	4.1 t/ha
	Total	5.5 t/ha

1.3 Capital Investment Overview

Land Use Description	Buildings	Infrastructure, Land & Furniture, Fittings & Fixtures	Total Capital Investment	% Contribution
Wine Grape Production Costs	0	0	0	
Wine Manufacturing Costs	0	0	0	
Total	**0**	**0**	**0**	



1.4 Operational Revenue Overview

Land Use Description	Total Annual Operational Expenses	% Contribution
Wine Grape Production Costs	2 185 331	85.3%
Wine Manufacturing Costs	375 280	14.7%
Total	**2 560 611**	





Chapter 2
Synopsis

This section of the report focuses on providing a concise and digestable overview of the outcomes of the socio-economic impact model. The purpose is to highlight key outcomes and considerations from the impact analysis. The Section also serves as an introduction to the remainder of the report which, from Secion 2 onwards, provide detailed information regarding every impact modeled.

2 Synopsis

2.1 Impact Outcome Synopsis

2.1.1 Total Estimated Capital Investment (CAPEX and Operational Revenue (OPEX)

The total estimated operational xpenditure (annualised on-site expenditure) of the development (Net Present Value for the current year) is R2.56 million.

2.1.2 Summary of Construction Phase Impacts

No Construction Phase Impacts

2.1.3 Summary of Operational Phase Impacts

Operational phase impacts are generated when the productive-land uses of the development commence with operations. Impacts created during the operational phase are "sustained" impacts. "Sustained impacts" are impacts that are continuously generated (i.e. created and then sustained annually) as soon as the full operation of the project commences (long-term impacts).

The total OPEX (operational expenditure) of the property could annually add approximately R4.8 million in additional business sales, R1.97 million in additional GDP (contributes +0% to the provincial economy) and approximately 8 sustained jobs (formal and informal) throughout the Western Cape provincial economy.

An estimated 0 formal small, medium and micro-enterprise opportunities could be created throughout the lifetime of agricultural production. Black-owned SMMEs would potentially represent 0% of new formal SMME opportunities, given the prevailing legislative environment.

Formal employment opportunities created throughout the lifetime of the agricultural use of the property 7 jobs (total direct, indirect and induced). Approximately 14.29% of formal employment opportunities are expected to be filled by skilled labourers compared to 28.57% semi-skilled labourers and 57.14% low-skilled labourers. Additional annual compensation paid to employees during the operational phase is estimated to be approximately R0.54 million.

It is estimated that approximately R0.46 million in additional taxes could be generated during the operational phase. The largest contributor to new taxes is as a result of personal income tax, contributing 39.34% to all taxes collected economywide.

2.1.4 Overall Outcome

Overall, the operational phase of the agricultural us of the property would have a positive effect on the Western Cape provincial economy, generating GDP over the short- to long-term, additional business sales and sveral new employment opportunities - across all skill levels. Additional taxes can contribute to national and local treasuries and households across the province can increase their livelihoods.

The property currently contributes to the fiscus and operation of public sector entities.

2.2 Construction Phase Economic Impacts

Construction Phase CAPEX
0

Additional Business Sales	0
Additional GDP	0
Additional Employment (Formal and Informal)	0

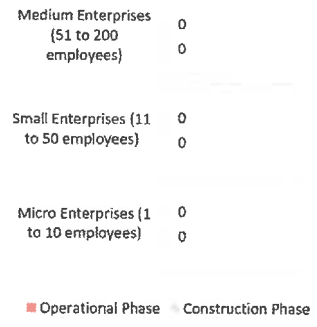
2.3 Operational Phase Economic Impacts

Operational Phase OPEX
2 560 611

Additional Business Sales	4 798 987
Additional GDP	1 969 061
Additional Employment (Formal and Informal)	8

2.4 SMME Opportunities

Enterprise Type	Construction Phase	Operational Phase
Micro Enterprises (1 to 10 employees)	0	0
Small Enterprises (11 to 50 employees)	0	0
Medium Enterprises (51 to 200 employees)	0	0
Estimated Number of New Enterprise Opportunities	0	0
Estimated Number of New Black Owned SMME Opportunities	0	0
	0.0%	0.0%
	of new business opportunities could be black owned	of new business opportunities could be black owned



2.5 Formal Jobs Created by Skill Level - Construction Phase Economic Impacts

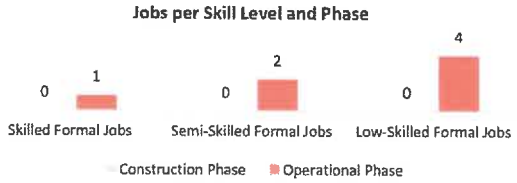
Construction Phase CAPEX
0

Skilled Formal Jobs	0
Semi-Skilled Formal Jobs	0
Low-Skilled Formal Jobs	0

2.6 Formal Jobs Created by Skill Level - Operational Phase Economic Impacts

Operational Phase OPEX
2 560 611

Skilled Formal Jobs	1
Semi-Skilled Formal Jobs	2
Low-Skilled Formal Jobs	4



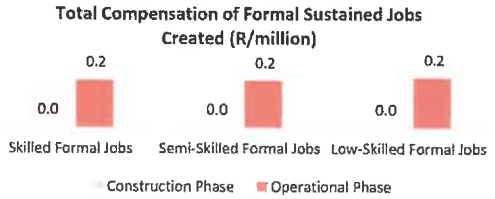


2.7 Impact on Compensation of Formal Jobs per Skill Level

Job Typer per Skill Level	Construction Phase	Operational Phase
Skilled Formal Jobs	0	178 983
Semi-Skilled Formal Jobs	0	176 678
Low-Skilled Formal Jobs	0	188 191
Total	0	543 851

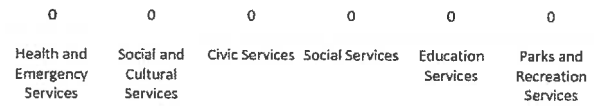
Average Annual Compensation per Formal Job Created

#DIV/0! 80 627



2.8 Additional Social Facilities Required

Social Facility Type (Main Category)	Additional Facilities Required (Sustained)
Health and Emergency Services	0
Social and Cultural Services	0
Civic Services	0
Social Services	0
Education Services	0
Parks and Recreation Services	0
Total	**0**

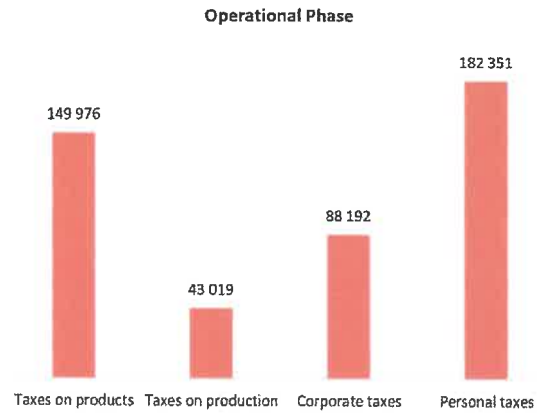


2.9 Additional Taxes Generated

Taxation Type	Construction Phase	Operational Phase
Taxes on products	0	149 976
Taxes on production	0	43 019
Corporate taxes	0	88 192
Personal taxes	0	182 351
Total Tax Impact	**0**	**463 538**

Property Taxation	Property Rates per Annum
Total Property Taxes (i.e. Taxable Property Types)	15 760
Total Property Taxes Foregone by Local Municipality (i.e. Subsidy Housing Programmes, etc.)	0
Total	**15 760**





2.10 Sector Profiling

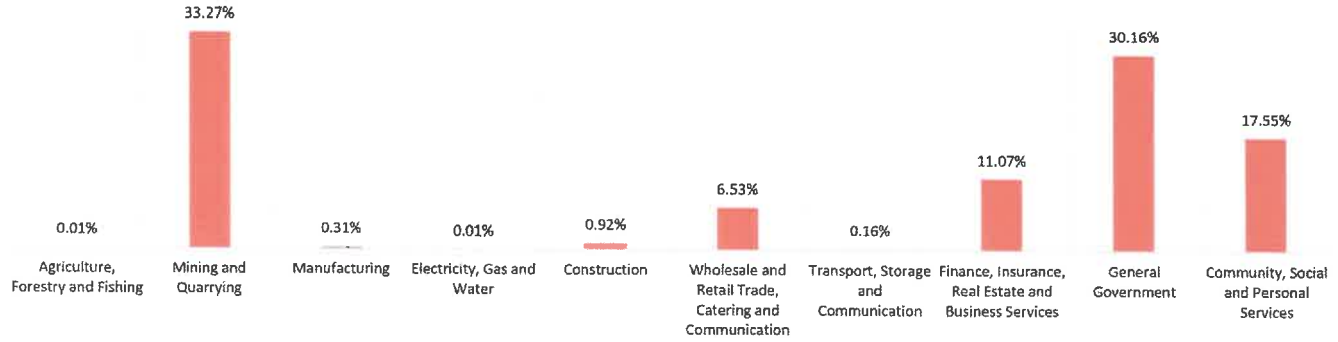
Impact on GDP during the Construction Phase (Different Economic Geographies)

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000	0	1 308 691 412 000	0.00%
Cape Winelands Regional Economy	84 321 214 000		84 321 214 000	0.00%
Stellenbosch Sub-Regional Economy	20 380 502 000		20 380 502 000	0.00%

Top Economic Sectors that Benefit from Increased GDP

1	Agriculture	0	6	#N/A	#N/A
2	#N/A	#N/A	7	#N/A	#N/A
3	#N/A	#N/A	8	#N/A	#N/A
4	#N/A	#N/A	9	#N/A	#N/A
5	#N/A	#N/A	10	#N/A	#N/A

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector



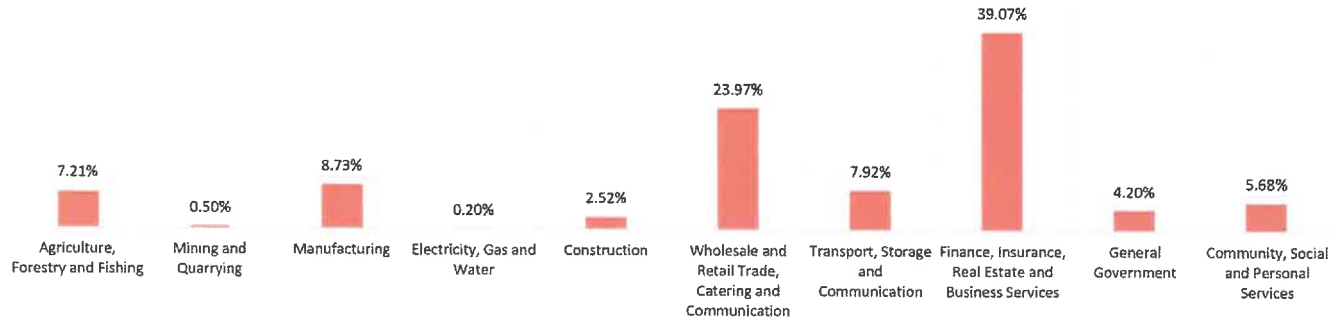
Impact on GDP during the Operational Phase (Different Economic Geographies)

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000		1 308 693 235 185	0.00%
Cape Winelands Regional Economy	84 321 214 000	1 823 185	84 323 037 185	0.00%
Stellenbosch Sub-Regional Economy	20 380 502 000		20 382 325 185	0.01%

Top Economic Sectors that Benefit from Increased GDP

1	Wholesale and retail trade	391 126	6	Business activities n.e.c.	112 275
2	Finance and insurance	358 287	7	National and Provincial government	76 619
3	Professional business services	241 816	8	Health and social work (Private)	56 090
4	Transport and storage	127 675	9	Construction	45 912
5	Agriculture	125 396	10	Catering and accommodation services	45 846

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector





Chapter 3
Construction Phase Economic Impacts

This section of the report is focused on providing an overview of potential economic and socio-economic impacts that may arise during the construction phase of the proposed project. Impacts generated during this phase are not sustained impacts because the construction phase of a project only lasts up until the necessary land improvements, buildings, bulk infrastructure, other infrastructure, fittings and furnishings and operational machinery etc. have been constructed and completed.

3 Construction Phase Economic Impacts

TOTAL estimated **CAPEX** of the project **0.00** million

Additional Business Sales (Unsustained)	0 million
Additional GDP - Market Prices (Unsustained)	0 million
Additional Jobs - Formal & Informal (Unsustained)	0 jobs

Additional Business Sales (R/million)

Direct	Indirect	Induced
0.00	0.00	0.00

Additional GDP (R/million)

Direct	Indirect	Induced
0.00	0.00	0.00

Jobs (Formal and Informal)

Direct	Indirect	Induced
0	0	0

Additional Business Sales (R/million)

Wine Manufacturing Costs	0.00
Wine Grape Production Costs	0.00

Additional GDP (R/million)

Wine Manufacturing Costs	0.00
Wine Grape Production Costs	0.00

Jobs (Formal and Informal)

Wine Manufacturing Costs	0
Wine Grape Production Costs	0

3.1 Impact on Additional Business Sales

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Wine Grape Production Costs				
Wine Manufacturing Costs				
Total				



3.2 Impact on Gross Domestic Product

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Wine Grape Production Costs				
Wine Manufacturing Costs				
Total				



3.2 Impact on Employment

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Wine Grape Production Costs				
Wine Manufacturing Costs				
Total				

Total Impact



Distribution between the Formal and Informal Economy	
Total Number of Formal Jobs Created	0
Total Number of Informal Jobs Created	0





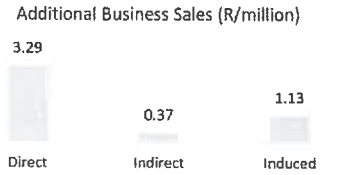
Chapter 4
Operational Phase Economic Impacts

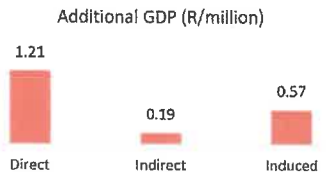
This section of the report is focused on providing an overview of potential economic and socio-economic impacts that may arise during the operational phase of the proposed project. Impacts generated during this phase are sustained impacts meaning, impacts generated are sustained for the duration of the the project lifecycle given that annual turn over remains constant.

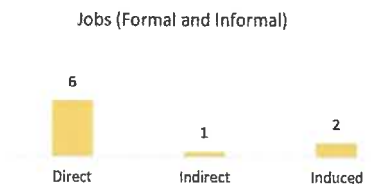
4 Operational Phase Economic Impacts

TOTAL estimated **OPEX** of the project **2.56** million

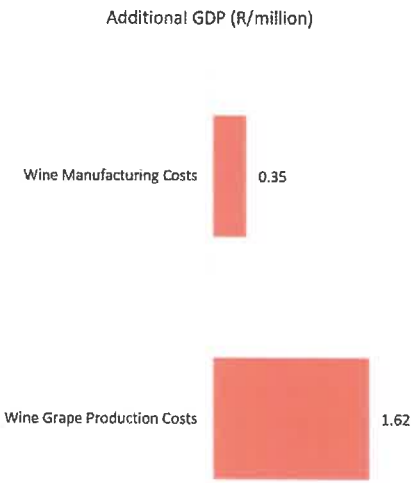
Additional Business Sales (Unsustained)	4.8 million
Additional GDP - Market Prices (Unsustained)	1.97 million
Additional Jobs - Formal & Informal (Unsustained)	8 jobs













4.1 Impact on Additional Business Sales

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Wine Grape Production Costs	2 784 516	301 788	960 373	4 046 677
Wine Manufacturing Costs	509 241	70 951	172 118	752 310
Total	**3 293 757**	**372 739**	**1 132 491**	**4 798 987**



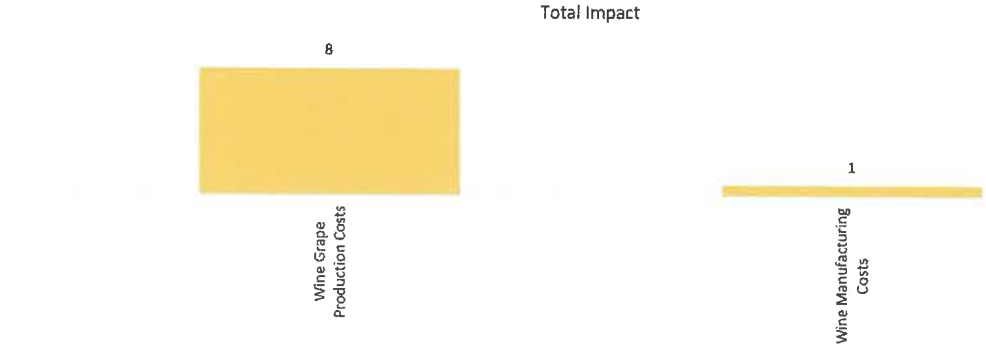
4.2 Impact on Gross Domestic Product

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Wine Grape Production Costs	980 905	159 092	480 011	1 620 008
Wine Manufacturing Costs	229 216	33 809	86 028	349 053
Total	**1 210 121**	**192 901**	**566 039**	**1 969 061**



4.3 Impact on Employment

Land Use	Direct Impacts	Indirect Impacts	Induced Impacs	Total Impacts
Wine Grape Production Costs	6	0	1	8
Wine Manufacturing Costs	0	0	0	1
Total	**6**	**1**	**2**	**8**



Distribution between the Formal and Informal Economy	
Total Number of Formal Jobs Created	7
Total Number of Informal Jobs Created	2



Chapter 5
Estimated Number of Formal SMME Opportunities

This section of the report is focused on providing an overview of potential number of new small, medium or micro enterprises that could become operational as a result of the added GDP generated during the construction and operational phases. The impact considers the current impact (includes an historic perspective) that changes in the GDP of the regional economy has had on the number of SMME's operational and formally registered with SARS. The section thus estimates the number of potential new SMME's that could be established due to changes in the provincial economy's GDP and the segment that could potentially be black owned.

5 Estimated Number of Formal SMME Opportunities

5.1 Construction Phase Enterprise Opportunities

TOTAL estimated **CAPEX** of the project **0.00** million

Micro Enterprises (1 to 10 employees)	0 enterprises
Small Enterprises (11 to 50 employees)	0 enterprises
Medium Enterprises (51 to 200 employees)	0 enterprises

Enterprise Type	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Micro Enterprise Opportunities	0	0	0	0
Small Enterprise Opportunities	0	0	0	0
Medium Enterprise Opportunities	0	0	0	0
Estimated Number of New Enterprise Opportunities	**0**	**0**	**0**	**0**
Estimated Number of New Black Owned Entrprise Opportunities				**0**

#DIV/0!

5.1 Operational Phase Enterprise Opportunities

TOTAL estimated **OPEX** of the project **2.56** million

Micro Enterprises (1 to 10 employees)	0 enterprises
Small Enterprises (11 to 50 employees)	0 enterprises
Medium Enterprises (51 to 200 employees)	0 enterprises

Enterprise Type	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Micro Enterprise Opportunities	0	0	0	0
Small Enterprise Opportunities	0	0	0	0
Medium Enterprise Opportunities	0	0	0	0
Estimated Number of New Enterprise Opportunities	**0**	**0**	**0**	**0**
Estimated Number of New Black Owned Entrprise Opportunities				**0**

#DIV/0!



Chapter 6
Formal Jobs Created per Skill Level

This section of the report focuses on providing an overview of the impact on formal job creation per skill level during the construction and operational phases of the proposed project. The purpose of the section is to estimate the potential number of new jobs created throughout the provincial economy and the distribution of those jobs per skill level required.

The information provides an indication as to the extent to which the implementation of the proposed project could influence the growth and demand for new skilled labourers. The information also provides a contextual background as to the opportunity to develop skills in the provincial economy.

6 Formal Jobs Created per Skill Level

6.1 Construction Phase Skills Demand

TOTAL estimated **CAPEX** of the project **0.00** million



Skilled Jobs	0 jobs
Semi-Skilled Jobs	0 jobs
Low-Skilled Jobs	0 jobs

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	0	0	0	0
Semi-Skilled Jobs	0	0	0	0
Low-Skild Jobs	0	0	0	0
Estimated Number of New Employment Opportunities	**0**	**0**	**0**	**0**

The data shows that the majority of employment opportunities generated as a result of the project primarily consist of skilled job opportunities.

6.2 Operational Phase Skills Demand

TOTAL estimated **OPEX** of the project **2.56** million



Skilled Jobs	0.452182594539795 jobs
Semi-Skilled Jobs	1.28159843047221 jobs
Low-Skilled Jobs	3.18047801162034 jobs

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	0	0	0	1
Semi-Skilled Jobs	1	1	1	4
Low-Skild Jobs	3	3	3	10
Estimated Number of New Employment Opportunities	**5**	**5**	**5**	**15**

The data shows that the majority of employment opportunities generated as a result of the project primarily consist of low-skilled job opportunities.

Chapter 7
Impact on Compensation

This section of the report focuses on providing an overview of the impact on employee compensation for potentially new formally employed persons during the construction and operational phases of the proposed project. The purpose of the section is to identify the additional compensation that could be generated as a result of additional employment.

7 Impact on Compensation

7.1 Construction Phase Impact on Compensation

TOTAL estimated **CAPEX** of the project

0.00 million

Skilled Jobs Total Compensation	0
Semi-Skilled Jobs Total Compensation	0
Low-Skilled Jobs Total Compensation	0

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	0	0	0	0
Semi-Skilled Jobs	0	0	0	0
Low-Skild Jobs	0	0	0	0
Estimated Number of New Employment Opportunities	**0**	**0**	**0**	**0**
Average Annual Compensation per Job Created	0	0	0	#DIV/0!

7.2 Operational Phase Impact on Compensation

TOTAL estimated **OPEX** of the project

2.56 million

Skilled Jobs Total Annual Compensation	178 982
Semi-Skilled Jobs Total Annual Compensation	176 677
Low-Skilled Jobs Total Annual Compensation	188 191

Skill Level	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Skilled Jobs	69 402	25 712	83 868	178 982
Semi-Skilled Jobs	83 841	23 776	69 060	176 677
Low-Skild Jobs	116 109	16 912	55 170	188 191
Estimated Number of New Employment Opportunities	**269 352**	**66 400**	**208 098**	**543 850**
Average Annual Compensation per Job Created	53 870	13 280	41 620	108 770



Chapter 8
Impact on Social Facilities

This section of the report focuses on providing an overview of the impact on social amenities as a result of the growth of new employment in the provincial economy due to the construction and operation of the proposed project. The purpose of the section is to illustrate the range of social amentities that could be required should the added employment generated within the provincial economy become a reality.

8 Impact on Social Facilities

8.1 Operational Phase Impact on Social Facilities

Primary Category	Secondary Category	Additional Amenities
Health and Emergency Services	Tertiary Hospital	0
	Regional Hospital	0
	District Hospital	0
	Community Health Centre	0
	Primary Health Clinic	0
	Small- to Medium-Sized Clinic	0
	Large Clinic	0
	Extra Large Clinic	0
	Fire Station	0
	Police Station	0
Social and Cultural Services	Performing Arts Centre	0
	Museum	0
	Local Library	0
	Regional Library	0
Civic Services	Civic Centre	0
	Major Public Event Venue	0
	Home Affairs Office	0
	Regional Home Affairs Office	0
	District Office	0
	Permanent Service Point	0
	Thusong Service Centre	0
Social Services	Community Hall	0
	ICT Access Point	0
	Post Office / Agency and Post Boxes	0
	Large Cemetery	0
	Medium Cemetery	0
	Small Cemetery	0
	Very Small Cemetery	0
	Local Market	0
	Place of Worship	0

Primary Category	Secondary Category	Additional Amenities
Education Services	University	0
	Colleges	0
	Secondary School	0
	Primary School	0
	Grade R ECD	0
	Creche ECD	0
	Resource Hub and Xare Centre ECD	0
Parks and Recreation Services	Small Park	0
	Large Park	0
	Community Parks	0
	Neighbourhood Sports Fields	0
	Community / Sub-District Sports Field	0
	District / Sub-Regional Sports Field	0
	Metro / Regional Sports Field	0
	Multi-Purpose Sports Halls	0
	Swimming Pools	0
	Sports Complexes	0
	Sports Stadiums	0
	Regional Sports Arenas	0
	Interntional Sports Complex	0

Primary Category	Additional Amenities
Health and Emergency Services	0
Social and Cultural Services	0
Civic Services	0
Social Services	0
Education Services	0
Parks and Recreation Services	0
Total	**0**



Chapter 9
Impact on Taxation

This section of the report focuses on providing an overview of the possible taxation and related impacts that could arise during the construction and operational phase of the proposed project. The purpose of the analysis is to estimate the impact, be it direct, indirect or induced, that the construction and operation of the proposed project could have on the provincial economy.

The data provides an informative basis from which to consider the range of tax related revenue that could be generated throughout the provincial economy and as a result of the value chain of the proposed project. Tax related revenue could include taxation of production, products, corporate taxes and personal income taxes.

9 Impact on Taxation

9.1 Construction Phase Impact on Taxation

Tax Type	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impact
Value Added Tax	0	0	0	0
Custom Duties	0	0	0	0
Excise Levies	0	0	0	0
Fuel Levies	0	0	0	0
Other Taxes	0	0	0	0
Taxes on Production	0	0	0	0
Corporate Taxes	0	0	0	0
Personal Income Tax	0	0	0	0
Total Impact	0	0	0	0

9.2 Operational Phase Impact on Taxation

Tax Type	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impact
Value Added Tax	61 475	6 291	19 448	87 214
Custom Duties	4 639	283	1 337	6 259
Excise Levies	8 365	77	950	9 392
Fuel Levies	18 271	2 031	5 912	26 214
Other Taxes	15 353	1 361	4 184	20 898
Taxes on Production	24 362	4 987	13 670	43 019
Corporate Taxes	49 091	7 932	31 169	88 192
Personal Income Tax	110 785	18 222	53 344	182 351
Total Impact	292 341	41 184	130 014	463 539

9.3 Operational Phase Property Taxation

Property Taxation	Total Annual Property Taxes
Total Property Taxes (i.e. Taxable Property Types)	15 760
Total Property Taxes Foregone by Local Municipality (i.e. Subsidy Housing Programmes, etc.)	0





Chapter 10
Sector Profiling

This section of the report focuses on the value chain reaction created within the sectoral profile (50 sub-sectors) of the provincial economy by the construction and operational impact of the proposed mixed-use project.

Ultimately, the profile provides an overview as to where within the provincial economy construction and operational phase impacts will generate added GDP and employment. The data is used to illustrate the value chain impact that the proposed project could have on the economy and where in the economy changes and benefits can be expected.

10 Sector Profiling

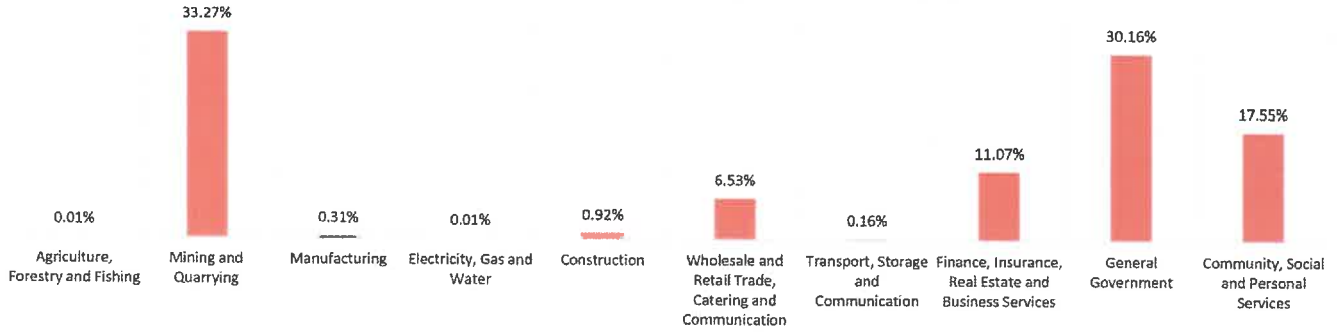
10.1 Construction Phase Sector Profiling Impact

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000	0	1 308 691 412 000	0.00%
Cape Winelands Regional Economy	84 321 214 000		84 321 214 000	0.00%
Stellenbosch Sub-Regional Economy	20 380 502 000		20 380 502 000	0.00%

Top Economic Sectors that Benefit from Increased GDP

1	Agriculture	0	6	#N/A	#N/A
2	#N/A	#N/A	7	#N/A	#N/A
3	#N/A	#N/A	8	#N/A	#N/A
4	#N/A	#N/A	9	#N/A	#N/A
5	#N/A	#N/A	10	#N/A	#N/A

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector



10.2 Operational Phase Sector Profiling Impact

Economic Geography	Current GDP (at Basic Prices)	Additional GDP (at Basic Prices)	New GDP (at Basic Prices)	% Contribution
Western Cape Provincial Economy	1 308 691 412 000		1 308 693 235 185	0.00%
Cape Winelands Regional Economy	84 321 214 000	1 823 185	84 323 037 185	0.00%
Stellenbosch Sub-Regional Economy	20 380 502 000		20 382 325 185	0.01%

Top Economic Sectors that Benefit from Increased GDP

1	Wholesale and retail trade	391 126	6	Business activities n.e.c.	112 275
2	Finance and insurance	358 287	7	National and Provincial government	76 619
3	Professional business services	241 816	8	Health and social work (Private)	56 090
4	Transport and storage	127 675	9	Construction	45 912
5	Agriculture	125 396	10	Catering and accommodation services	45 846

Distribution of Additional GDP (at Basic Prices) per Secondary Economic Sector

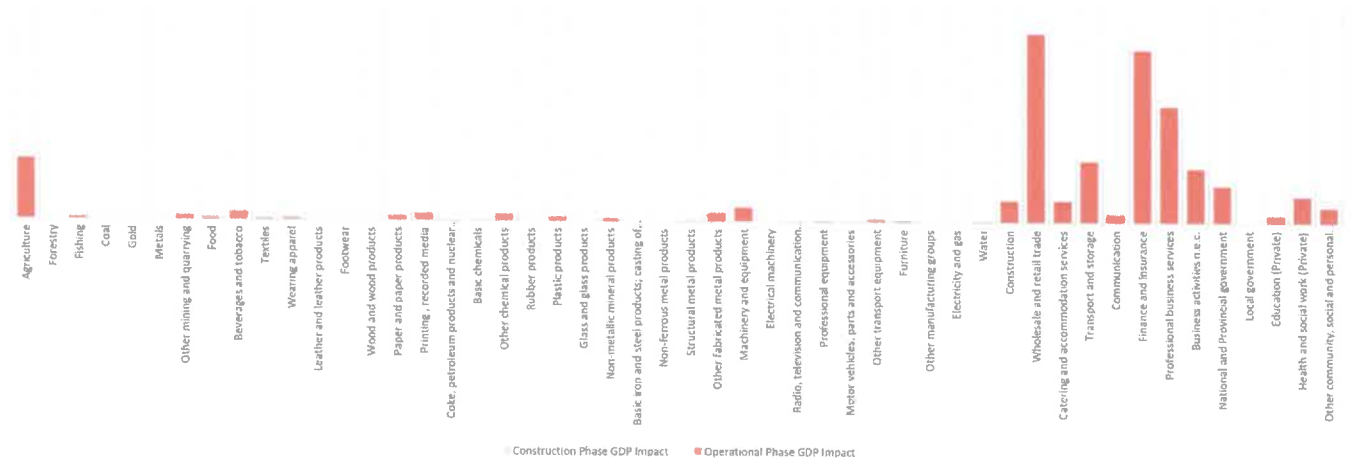


10.3 Detailed Added GDP Breakdown

Economic Sector	Actual Sector GDP (at Basic Prices)	Construction Phase GDP Impact	Operational Phase GDP Impact	Distribution (Operational
Agriculture	22 522 083 000	0	125 396	
Forestry	575 365 000	0	81	
Fishing	14 365 971 000	0	5 885	
Coal	0	0	0	
Gold	0	0	0	
Metals	162 378 000	0	456	
Other mining and quarrying	3 292 175 000	0	8 628	
Food	30 995 475 000	0	5 397	
Beverages and tobacco	22 143 021 000	0	16 986	
Textiles	3 603 622 000	0	3 197	
Wearing apparel	4 941 307 000	0	4 930	
Leather and leather products	363 383 000	0	403	
Footwear	495 566 000	0	1 206	
Wood and wood products	2 800 914 000	0	774	
Paper and paper products	8 730 823 000	0	10 168	
Printing , recorded media	11 464 457 000	0	14 886	
Coke, petroleum products and nuclear fuel	18 806 712 000	0	1 620	
Basic chemicals	5 128 976 000	0	1 942	
Other chemical products	9 449 321 000	0	13 907	
Rubber products	934 989 000	0	1 468	
Plastic products	5 446 268 000	0	8 678	
Glass and glass products	995 868 000	0	0	
Non-metallic mineral products	3 374 224 000	0	6 456	
Basic iron and steel products; casting of metal	2 694 565 000	0	474	
Non-ferrous metal products	2 265 260 000	0	71	
Structural metal products	2 700 220 000	0	2 196	
Other fabricated metal products	6 340 519 000	0	17 757	
Machinery and equipment	13 013 007 000	0	30 000	
Electrical machinery	3 004 959 000	0	628	
Radio, television and communication apparatus	467 769 000	0	1 714	
Professional equipment	1 394 954 000	0	3 006	
Motor vehicles, parts and accessories	9 718 287 000	0	2 067	
Other transport equipment	3 592 352 000	0	5 478	
Furniture	1 275 043 000	0	3 197	
Other manufacturing groups	19 696 777 000	0	553	

Economic Sector	Actual Sector GDP (at Basic Prices)	Construction Phase GDP Impact	Operational Phase GDP Impact	Distribution (Operational
Electricity and gas	25 044 354 000	0	760	
Water	5 576 456 000	0	2 953	
Construction	44 914 547 000	0	45 912	
Wholesale and retail trade	187 123 870 000	0	391 126	
Catering and accommodation services	16 154 835 000	0	45 846	
Transport and storage	67 739 522 000	0	127 675	
Communication	36 090 722 000	0	16 761	
Finance and insurance	93 707 260 000	0	358 287	
Professional business services	273 289 664 000	0	241 816	
Business activities n.e.c.	40 586 807 000	0	112 275	
National and Provincial government	88 609 414 000	0	76 619	
Local government	44 231 750 000	0	0	
Education (Private)	68 570 162 000	0	14 517	
Health and social work (Private)	49 364 548 000	0	56 090	
Other community, social and personal services	30 930 891 000	0	32 945	
Total	**1 308 691 412 000**	**0**	**1 823 185**	

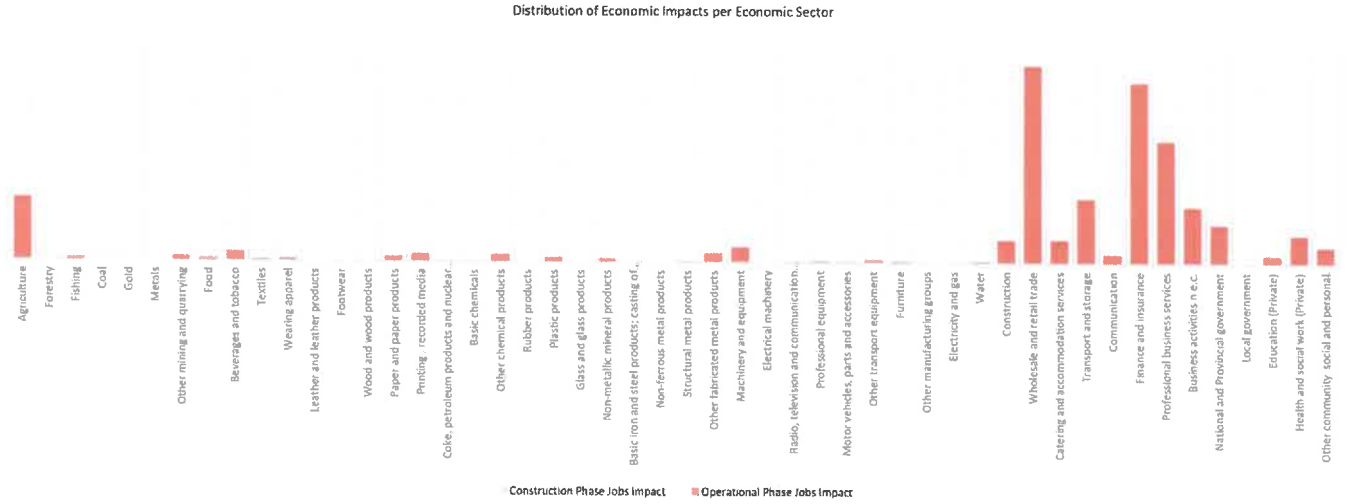
Detailed Distribution of Economic Impacts per Economic Sector



10.4 Detailed Added Jobs Breakdown

Economic Sector	Actual Sector Jobs	Construction Phase Jobs Impact	Operational Phase Jobs Impact	Distribution (Operational
Agriculture	195 143	0	1	
Forestry	11 155	0	0	
Fishing	64 007	0	0	
Coal	0	0	0	
Gold	0	0	0	
Metals	48	0	0	
Other mining and quarrying	2 061	0	0	
Food	74 806	0	0	
Beverages and tobacco	17 511	0	0	
Textiles	12 363	0	0	
Wearing apparel	18 375	0	0	
Leather and leather products	1 405	0	0	
Footwear	2 880	0	0	
Wood and wood products	13 136	0	0	
Paper and paper products	9 052	0	0	
Printing , recorded media	25 772	0	0	
Coke, petroleum products and nuclear fuel	6 199	0	0	
Basic chemicals	5 745	0	0	
Other chemical products	15 462	0	0	
Rubber products	2 719	0	0	
Plastic products	22 111	0	0	
Glass and glass products	3 691	0	0	
Non-metallic mineral products	10 219	0	0	
Basic iron and steel products; casting of metal	4 605	0	0	
Non-ferrous metal products	1 456	0	0	
Structural metal products	10 259	0	0	
Other fabricated metal products	19 883	0	0	
Machinery and equipment	36 391	0	0	
Electrical machinery	12 319	0	0	
Radio, television and communication apparatus	2 178	0	0	
Professional equipment	4 576	0	0	
Motor vehicles, parts and accessories	25 946	0	0	
Other transport equipment	8 535	0	0	
Furniture	7 842	0	0	
Other manufacturing groups	14 310	0	0	

Economic Sector	Actual Sector GDP (at Basic Prices)	Construction Phase GDP Impact	Operational Phase GDP Impact	Distribution (Operational
Electricity and gas	10 919	0	0	
Water	3 013	0	0	
Construction	213 755	0	0	
Wholesale and retail trade	739 147	0	2	
Catering and accommodation services	106 612	0	0	
Transport and storage	129 691	0	1	
Communication	30 123	0	0	
Finance and insurance	122 653	0	2	
Professional business services	319 157	0	1	
Business activities n.e.c.	363 028	0	1	
National and Provincial government	156 546	0	0	
Local government	105 446	0	0	
Education (Private)	247 752	0	0	
Health and social work (Private)	176 278	0	0	
Other community, social and personal services	378 696	0	0	
Total	**3 764 976**	**0**	**8**	



LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT
DEMACON

Fiscal and socio-economic impact model developed by DEMACON Market Studies.

Should you have any questions, please contact Hein du Toit on:

Telephone: +27 12 460 7009'
Cellphone: +27 82 898 8667
E-mail: hein@demacon.co.za

Or visit our website at:
www.demacon.co.za

ANNEXURE H: SITE DEVELOPMENT PLAN

631

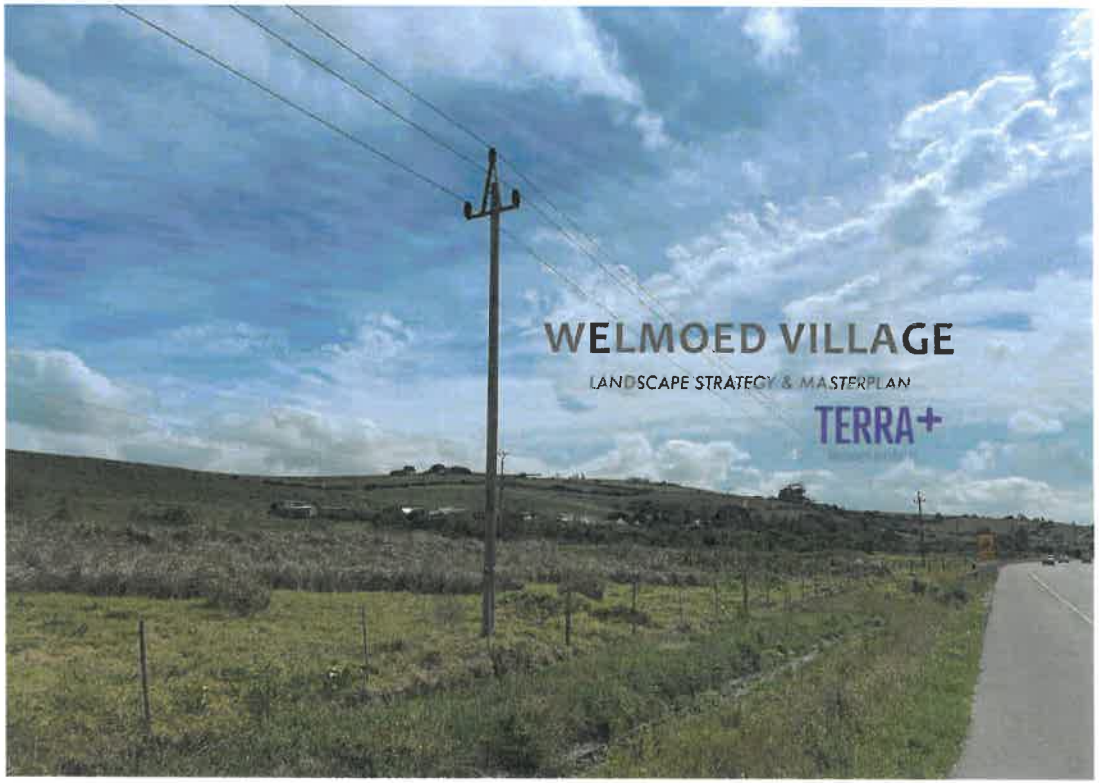


PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Alottment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024

WELMOED URBANSTUDIO architects & urban designers

ANNEXURE I: LANDSCAPE FRAMEWORK


WELMOED VILLAGE
LANDSCAPE STRATEGY & MASTERPLAN
TERRA+

Welmoed Village - INTRODUCTION

APRIL 2024

TERRA+ Landscape Architect were mandated to develop and landscape framework plan for the Portion 28 of farm 468 Welmoed. The site is situated in a rural landscape and part of the Lyndoch node. This particular setting required a understanding of the cultural landscape and the unique qualities of both the landscape and the visual aspects relating to the site and setting.

Through landscape analysis of the context and workshops with the urban designers URBANSTUDIO a clear concept was developed of a village typology with reference to the rural context. This was expressed in both the architectural layout and the landscape layer to take cognizance of all the aspects pertaining to the site.

PROJECT: Welmoed Estate, Stellenbosch

PREPARED FOR: UNiQON

PREPARED BY: TERRA+ Landscape Architects
Unit 20 Sussex Studios
23 - 25 Sussex Street
Woodstock 7915
Cape Town

terraplus.co.za

CONTENTS

3 LANDSCAPE ANALYSIS AND STRATEGY
Methodology
Meaning Of The Site In The Broader Context
Landscape Analysis
Study Area Context

4 LANDSCAPE ANALYSIS AND STRATEGY
Intrinsic Qualities Of The Site And Context - Design Informants

5 LANDSCAPE CONCEPT DEVELOPMENT
Concept Development: Framework Plan
Concept Development: Design Principles

6 LANDSCAPE FRAMEWORK PLAN & ILLUSTRATIVE SECTIONS
Landscape Framework Plan
Main Access Sections
Principles Precedents

7 LANDSCAPE FRAMEWORK PLAN & ILLUSTRATIVE SECTIONS
Roadway and Pathway Sections 3 - 6

8 LANDSCAPE FRAMEWORK PLAN & ILLUSTRATIVE SECTIONS
Roadway and Pathway Sections 7 - 8

9 LANDSCAPE FRAMEWORK DIAGRAMS & PRINCIPLES
Circulation
Green Matrix
Green Elements

10 LANDSCAPE PRINCIPLES
Long Sections

11 LANDSCAPE PRINCIPLES
Street And Roadway Sections

13 LANDSCAPE PLANTING STRATEGY
Landscape Typologies

TABLE OF FIGURES

Fig. 1 Macro context with study area shaded in red
Fig. 2 Landscape analysis layers
Fig. 5 Impressions of landscapes are always rooted in our memory and experience of the space. Rarely is it a static and finite image. It changes through time and repeated experiences
Fig. 4 Landscape typology
Fig. 3 Landscape typology
Fig. 6 Landscape Patterns
Fig. 7 View of the site with hedgerows and tree clusters visible in dark green
Fig. 8 Initial concept of the "weft and weave" of landscape elements
Fig. 9 Hydrology patterns
Fig. 10 Ridge-lines and slopes
Fig. 11 Hydrological concept
Fig. 13 Roadway paving and storm water
Fig. 14 Conceptual Landscape Framework Plan
Fig. 12 Roadway materiality
Fig. 15 Roadway lighting
Fig. 16 Storm water ecology
Fig. 17 Stormwater retention
Fig. 18 Roadway planting
Fig. 19 Roadway planting
Fig. 20 Public space planting
Fig. 25 Visual screening and visual connections
Fig. 21 Fynbos edge with internal pathways
Fig. 23 13m tree planted street
Fig. 26 Areas of visual sensitivity - source Clair Abrahams document
Fig. 22 pathways and minor fynbos edged streets
Fig. 24 Public space planting
Fig. 27 Fynbos edge with internal pathways
Fig. 28 pathways and minor fynbos edged streets
Fig. 29 13m tree planted streets
Fig. 30 13m and 16m tree lined streets
Fig. 31 Section 1 - Main Access Street along the contour
Fig. 32 Section 2 - Main Access Street against the contour
Fig. 33 Section 3 - Secondary Access Street along contour with tree clusters
Fig. 34 Section 4 - Secondary Access Street against contour with shrub and hedge planting
Fig. 35 Section 5 - Access pathways against contour with hedge and shrub planting
Fig. 36 Section 6 - Natural pathways and open clearings in rehabilitated fynbos
Fig. 37 Section 7 - Detention ponds and pathways
Fig. 38 Section 8 - Residential development and integrated agricultural fringe
Fig. 39 Circulation - pedestrian connectivity and street hierarchy
Fig. 40 Green Matrix - Ecological connection and continuity
Fig. 41 Green Elements - Tree planting and green structures
Fig. 42 Planting Section 1 - Swale and seasonal wetland typology
Fig. 43 Planting Section 2 - Hedge row typology
Fig. 44 Planting Section 3 - Rehabilitated fynbos typology
Fig. 45 Planting Section 4 - Screening street tree typology
Fig. 46 Planting Section 5 - Avenue street tree typology

Welmoed Village - LANDSCAPE ANALYSIS AND STRATEGY

METHODOLOGY

The relative position and spatial implications of a site in the broader landscape makes a significant contribution to how the site is developed and perceived by the public and end-users.

To understand these subtle qualities one must unpack the various layers that encompass the entire site and then the interactions that these layers have with each other and the context. That is in essence the making of the cultural landscape.

There should also be a recognition that the current state, past status and potential future developments are within a continuum of change. How these changes are implemented with the recognition of past impacts and future potentials can result in development which is relevant, resilient and enduring.

For the site/study area this methodology has been applied.



Fig. 1 - Macro context with study area shaded in red

MEANING OF THE SITE IN THE BROADER CONTEXT

635

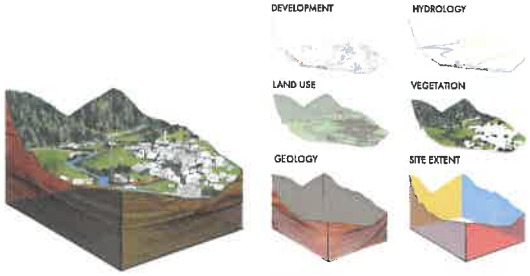


Fig. 2 Landscape analysis layers



Fig. 5 Impressions of landscapes are always rooted in our memory and experience of the space. Rarely is it a static and finite image. It changes through time and repeated experiences





Fig. 4 Landscape typology

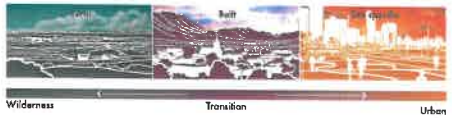


Fig. 3 Landscape typology

Welmoed Village

STUDY AREA CONTEXT

The study area is a combination of interconnected and interacting layers which provides a particular character to the study area.

The position relative the dominant landforms such as Stellenbosch Mountains, part of a notable biodiversity area, to the east and the expansive view across the valley to the south and southeast contribute to a bucolic and romantic landscape infused with beauty.

The landforms denotes peaks, ridge and valleys which in-turn determines hydrological patterns. The implication of this is a number of dams nestled between rolling hills in the drainage lines leading to the major valley shaped by the dominant Eerste River.

Landscape patterns of cultivated land and hedgerows follow these landforms and presents an organised pattern of fields , vineyards and demarcated land.

The urban pattern is one of tucked homesteads between hills and the notable linear development along the R310 and the Eerste river with farms such as Meerlust and Spier which follows the river basin.

It is important to note that this is not a landscape of tree-lines and wind-breaks but rather indigenous low growing hedgerow with smaller trees populating the drainage lines and areas difficult to cultivate. The trees dominant on the site are the exotic eucalyptus and palm trees which are in clusters around the built forms.



Fig. 6 Landscape Patterns



Fig. 7 View of the site with hedgerows and tree clusters visible in dark green



Fig. 8 Initial concept of the "weft and weave" of landscape elements



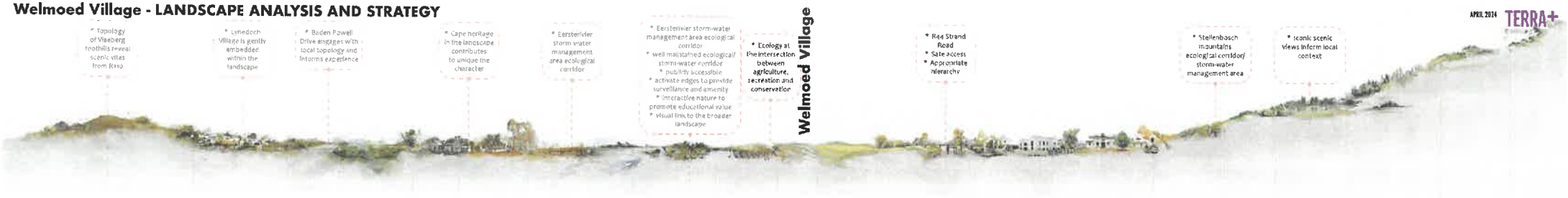
Fig. 9 Hydrology patterns



Fig. 10 Ridge-lines and slopes

Welmoed Village - LANDSCAPE ANALYSIS AND STRATEGY

APRIL 2024 TERRA+





ECOLOGICAL CORRIDORS AND DOMINANT GREEN SPACES

ECOLOGICAL CORRIDORS AND DOMINANT GREEN SPACES

ECOLOGICAL CORRIDORS AND DOMINANT GREEN SPACES

636

INTRINSIC QUALITIES OF THE SITE AND CONTEXT - DESIGN INFORMANTS



Drainage lines and streams organise the site and can be formalised in swales and open channels to accommodate excess storm-water run-off

Historic and informal access routes and pedestrian connections are recognised and integrated in the overall design

Historic urban patterning and werf qualities are developed through layout and materiality

Recognise and retain heritage elements in the layout by understanding the value of the cultural landscape layers

Utilising agricultural patterns to organise the landscape

Rehabilitation of landscape areas to increase biodiversity and create ecological corridors

Ensure ample space is allowed for recreational facilities and access to recreational spaces.



PLANTING ... intrinsic qualities inform design principles

Welmoed Village - LANDSCAPE CONCEPT DEVELOPMENT

APRIL 2024

CONCEPT DEVELOPMENT

The design intent is to capture the intrinsic qualities of the site and develop these as meaningful spaces imbued with the contextual references gleaned from the analysis. The management of natural and urban systems are essential for a functional development. These systems include connectivity through the space, storm-water management and green connections making reference to contextual landscape patterns and features.

A clear hierarchy of street-scape is developed through tree and shrub planting, defining the main route through the development with an avenue of trees and the minor streets with clustered tree planting. Where the visual connections were straightened with seams of shrub planting along the routes through the existing vineyards.

The greening and street layout of the site also supports the stormwater management with the use of open channels and swales carried the majority of the storm-water to detention facilities on the site.

The greening of the site is through a weft and weave of green seams connecting a rehabilitated fynbos edge which will enhance biodiversity whilst providing a valuable recreational facility. All planting will utilise endemic and indigenous species to ensure resilience and responsible water use .

637

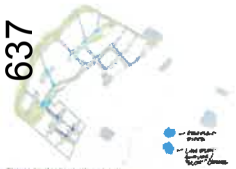


Fig. 11 Hydrological concept



Fig. 14 Conceptual Landscape Framework Plan



Fig. 13 Roadway paving and storm water



Fig. 12 Roadway materiality



Fig. 15 Roadway lighting



Fig. 16 Storm water ecology



Fig. 17 Stormwater retention



Fig. 18 Roadway planting



Fig. 19 Roadway planting



Fig. 20 Public space planting

Welmoed Village

APRIL 2024 TERRA+

CONCEPT DEVELOPMENT

Early concept development explored the spatial qualities and landscape values through typical concept sections of a variety of street typologies. These enabled the professional team to develop a synergy in the services and allow for quality urban spaces.

Stormwater and other systems were integrated and enough space allowed for tree planting to ensure greening of the site.

Another aspect essential to the concept development were the visual sensitivity of certain areas of the site. These were expanded upon in the Visual Statement Document developed by Claire Abrahamse where specific sensitive areas were identified. The tree planting and greening of the site is implemented to ensure adequate screening is provided and creating green visual connections



Fig. 21 Fynbos edge with internal pathways

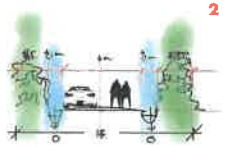


Fig. 22 pathways and minor fynbos edged streets

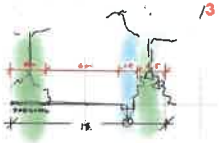


Fig. 23 13m tree planted street

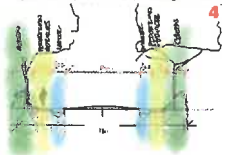


Fig. 24 Public space planting

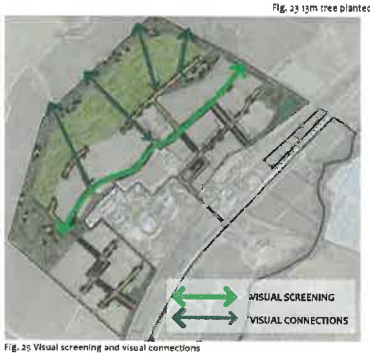


Fig. 25 Visual screening and visual connections

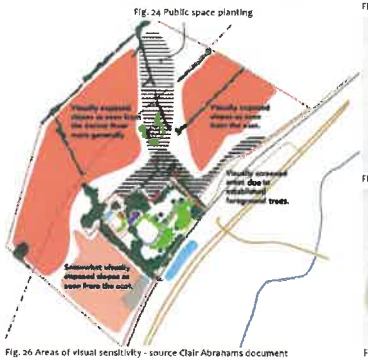


Fig. 26 Areas of visual sensitivity - source Clair Abrahams document



Fig. 27 Fynbos edge with internal pathways



Fig. 28 pathways and minor fynbos edged streets



Fig. 29 13m tree planted streets



Fig. 30 13m and 16m tree lined streets

Welmoed Village - LANDSCAPE FRAMEWORK PLAN AND ILLUSTRATIVE SECTIONS

APRIL 2024



1. **Main Access Street (on contour)** - Tree planting in a linear pattern within the road reserve - (Refer to illustrative Section 1)
2. **Main Access Street (against contour)** - Tree planting in a linear pattern within the road reserve - (Refer to illustrative Section 2)
3. **Secondary Access Street (on contour)** - Tree planting in a cluster pattern within the road reserve - (Refer to illustrative Section 3)
4. **Secondary Access Street (against contour)** - hedge/shrubs planting within the road reserve - (Refer to illustrative Section 4)
5. **Access Pathway (against contour)** - hedge/shrubs planting as ecological connection (beetle banks) - (Refer to illustrative Section 5)
6. **Access Pathway (within rehabilitated fynbos)** - Natural pathways and clearings for picnics and places of pause - (Refer to illustrative Section 6)
7. **Rehabilitated Fynbos** - rehabilitated fynbos edge as ecological edge and connection to the broader landscape
8. **Internal Urban Parks** - Planted and landscaped urban parks
9. **Detention Ponds**- Planted and landscaped storm-water management facilities - (Refer to illustrative section 7)
10. **Existing vineyards**

Welmoed Village

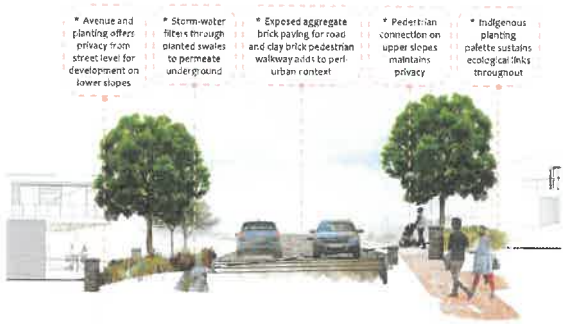


Fig. 31 Section 1 - Main Access Street along the contour

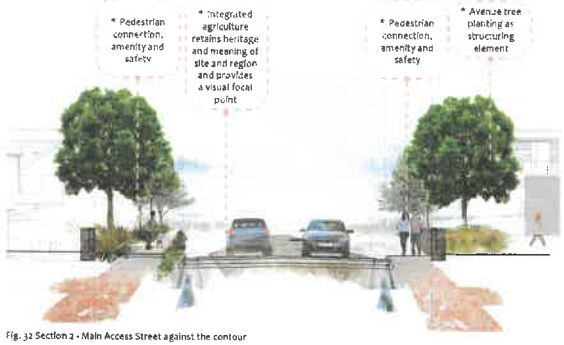


Fig. 32 Section 2 - Main Access Street against the contour



APRIL 2024 TERRA+



Section 3 - Secondary Access Street along contour with tree clusters



Fig. 34 Section 4 - Secondary Access Street against contour with shrub and hedge planting

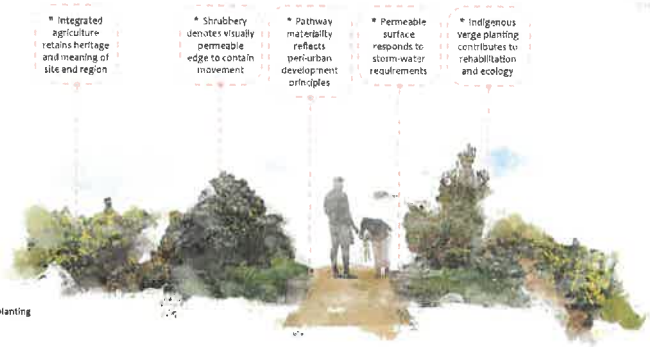


Fig. 35 Section 5 - Access pathways against contour with hedge and shrub planting

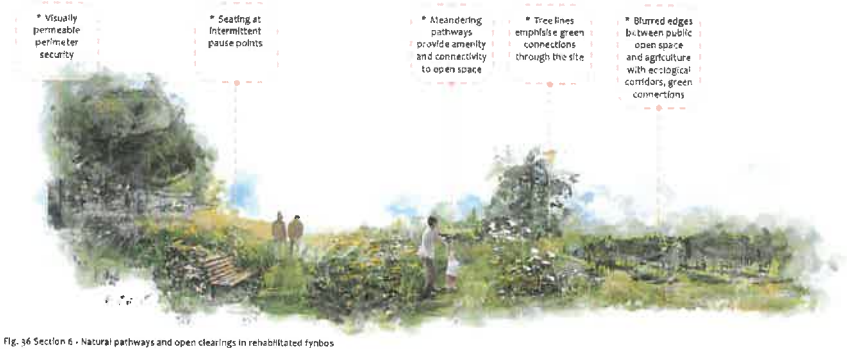


Fig. 36 Section 6 - Natural pathways and open clearings in rehabilitated fynbos



Fig. 37 Section 7 - Detention ponds and pathways

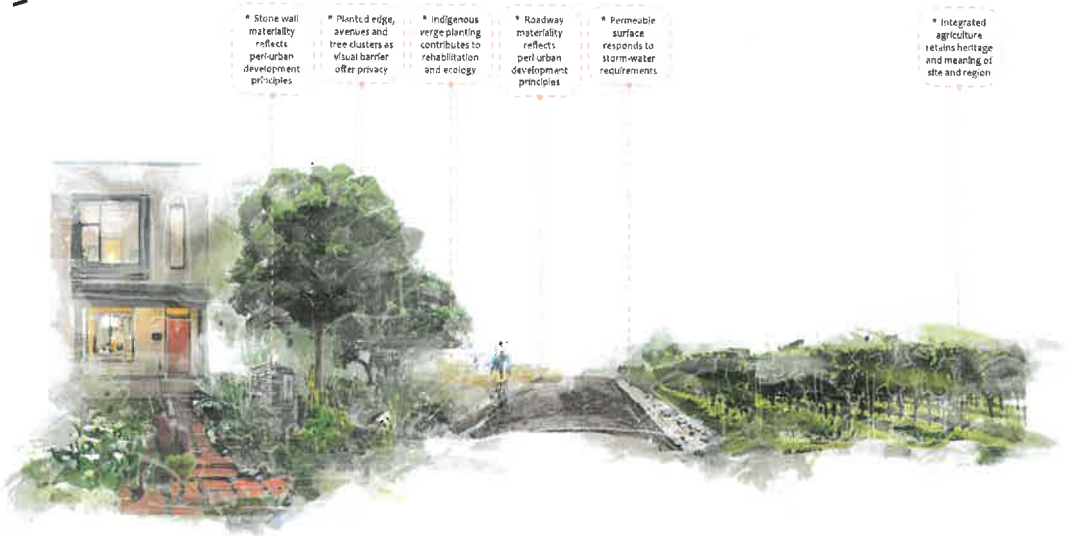


Fig. 38 Section 8 - Residential development and integrated agricultural fringe

Welmoed Village - LANDSCAPE FRAMEWORK DIAGRAMS AND PRINCIPLES



Fig. 39 Circulation - pedestrian connectivity and street hierarchy



Fig. 40 Green Matrix - Ecological connection and continuity



Fig. 41 Green Elements - Tree planting and green structures

Welmoed Village - LANDSCAPE PRINCIPLES

APRIL 2024

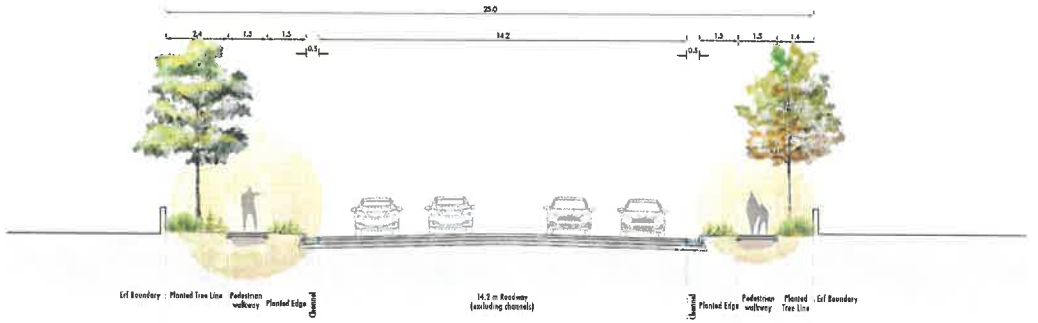
LANDSCAPE PRINCIPLES

Landscape principles are developed to ensure the identity and character of the design intent is maintained for the project. The use of materials and specific placement of circulation routes and green edges contribute to the unique sense of place.

The rural quality of the site is expressed in the use of natural materials proposed for roadways, walkways and other landscape elements such as retaining walls and storm-water management systems. The planting and greening of the site is a further mechanism to develop the character of the development. Placing trees in particular patterns not only allows for a hierarchy of green systems, but recognizes the contextual landscape patterns and ensures the development and project is resilient and relevant.

The series of illustrative sections explore edge conditions, materiality, the spatial relationship of pedestrian and street, and the crucial allocation of services to accommodate landscaping and other elements

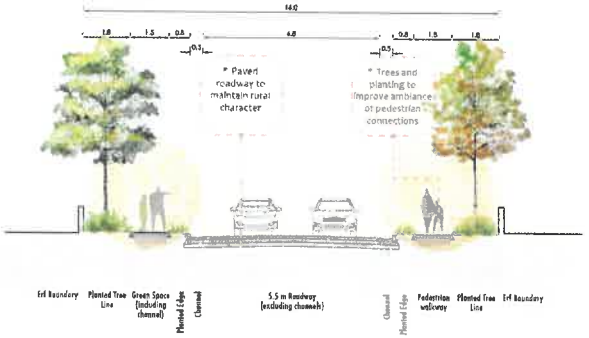


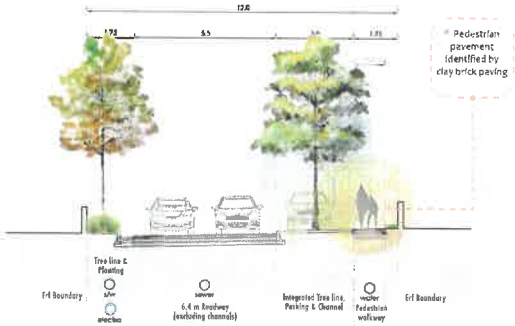


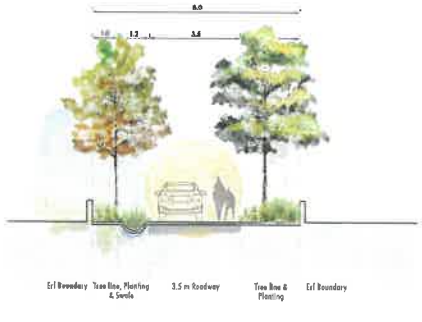
Welmoed Village - LANDSCAPE PRINCIPLES

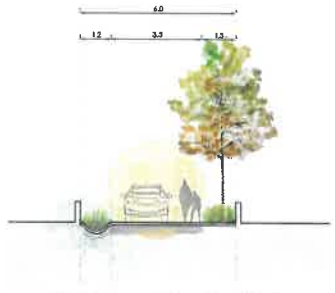
APRIL 2024

TERRA+

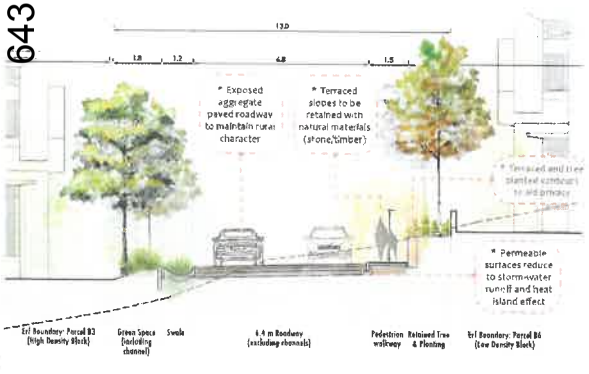


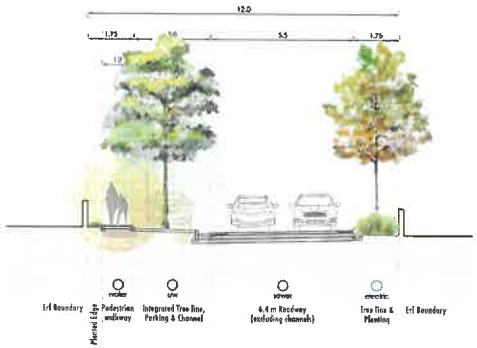


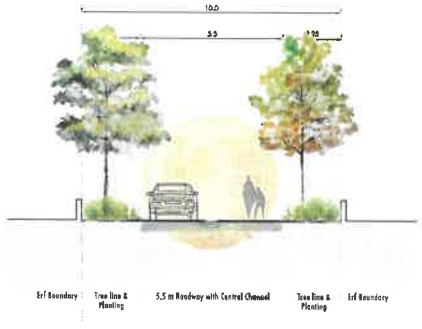




643





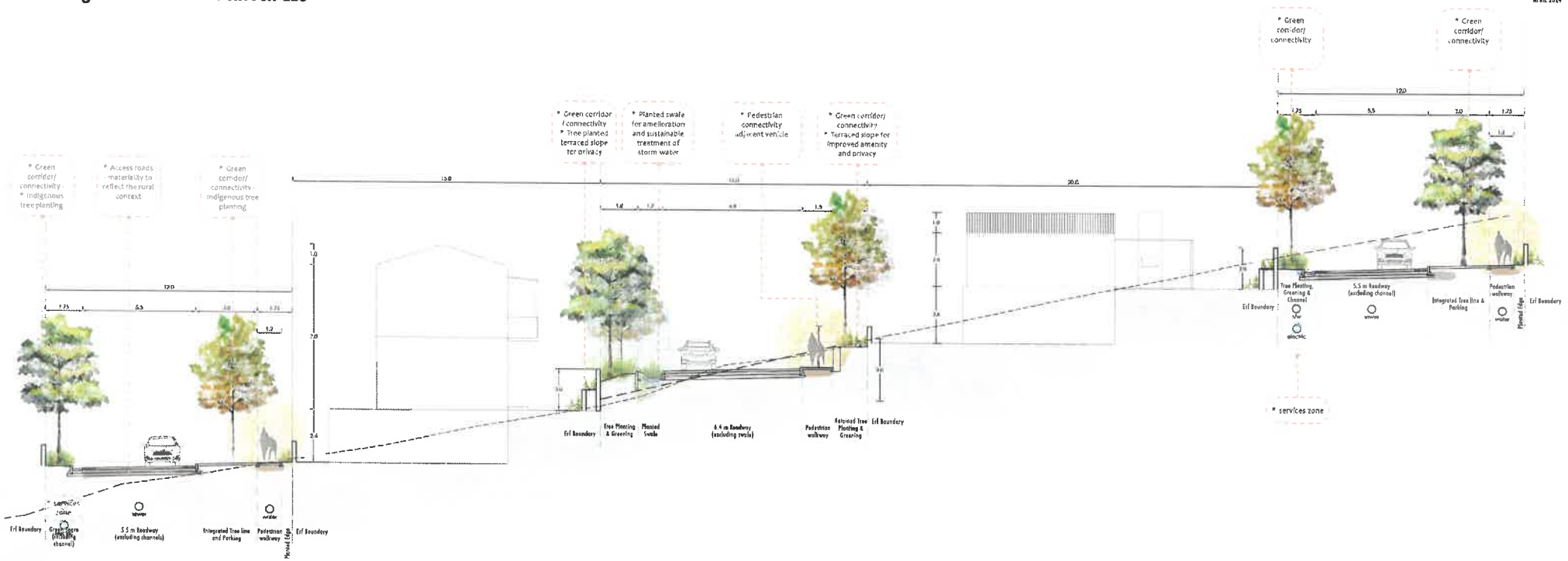


Welmoed Village - LANDSCAPE PRINCIPLES

APRIL 2024

APRIL 2024

TERRA+



LANDSCAPE PLANTING STRATEGY

Planting and the use of plants are beneficial in creating an overall structure to the landscape and implementing a variety of typologies to order the site. The existing landscape elements of the site are indicators to the use of trees and planting. The overall landscape is defined by clusters of trees and densely vegetated drainage lines.

The spatial qualities of various landscape elements such as trees and high hedges further define spaces and provide mechanisms to develop an overall hierarchy of spaces within the site whilst recognising the contextual landscape patterns.

Planting and landscape elements provide an essential ecological function. The varying scales of ecological connectors can be expressed and developed through the varying use of plants and trees. These create micro-climates and habitats for animal and insect life essential to a healthy ecological system. The choice of plants and planting matrixes intentionally mimic the natural plant patterns found in the local biomes.

The intent is for a rich diverse and authentic mix of planting and trees to give identity and a unique sense of place.

NOTE: The plants and trees are indicative and include but are not limited to the plant and tree lists provided.



SWALE & WETLAND PLANT PALETTE

TREES FOR SEASONAL WATER
Syzigium cordatum (Water berry)
Combretum kraussii (Forest bushwillow)
Cunonia capensis (Butter spoon)

HERBACEOUS PERENNIALS
Berula erecta

SEDGES
Cyperus papyrus
Cyperus textilis
Elegia juncea
Elegia tectorum
Juncus capensis
Thamnochortus erectus

GEOPHYTES (BULBS)
Agapanthus praecox
Chasmanthe aethiopica
Kniphofia brucsae (= K. praecox)
Kniphofia uvaria
Spiloxene aquatica
Wachendorfia thyrsiflora
Zantedeschia aethiopica

GROUNDCOVERS
Lobelia anceps
Cliffortia ferruginea







Fig. 42 Planting Section 5 - Swale and seasonal wetland typology

HEDGE ROW PLANT PALETTE

SHRUBS FOR VISUAL BARRIER
Dodonea augustifolia (Sand Olive)
Searsia crenata (Dune crow-berry)

TALL FLOWERING SHRUBS
Grewia occidentalis (Crossberry)
Halleria lucida (Tree fuscia)
Osteospermum moniliferum
Polygala myrtifolia (September Bush)
Coleonema pulchellum

FYNBOS PERENNIALS
Phylica gracilis

SEDGES
Elegia tectorum
Juncus capensis
Thamnochortus erectus

GEOPHYTES (BULBS)
Agapanthus praecox
Chasmanthe aethiopica
Watsonia Borbonica

GROUNDCOVERS
Arctotisstoechadifolia
Osteospermum gangetica
Cineraria saxifraga
Diasda integerrima

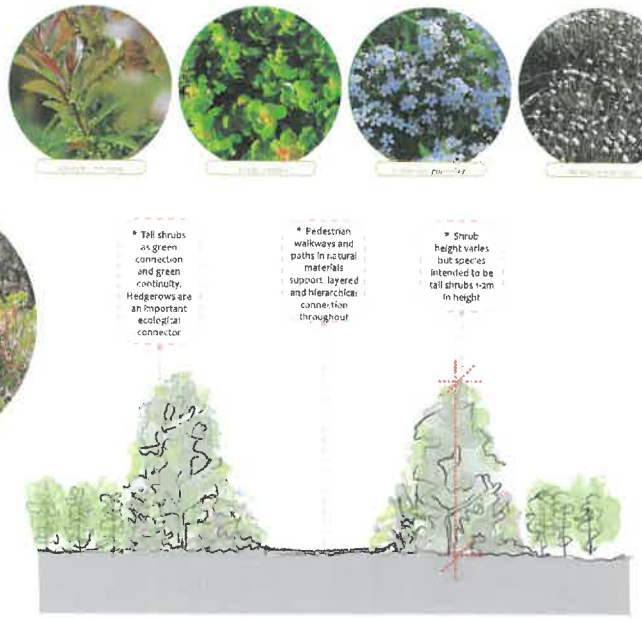


Fig. 43 Planting Section 2 - Hedge row typology

FYNBOS REHABILITATION PALETTE

SMALL TREES
Dodonea augustifolia (Sand Olive)
Halleria lucida (Tree fuscia)
Searsia crenata (Dune crow-berry)
Olea europaea sups africana

SHRUBS
Grewia occidentalis (Crossberry)
Osteospermum moniliferum
Polygala myrtifolia (September Bush)
Eriocephalus africanus var. africanus
Euryops thunbergii
Galenia secunda
Gnidia spicata
Helichrysum cymosum
Helichrysum teretifolium
Leucadendron floridum
Leucadendron salignum
Leucospermum hypophyllocarpodendron
Osteospermum spinosum
Morella quercifolia
Passerina ericoides
Pharnaceum lanatum
Phylica parviflora
Plecostachys polifolia
Plecostachys serpyllifolia
Polpoda capensis
Protea scolymocephala
Serruria fasciflora
Serruria trilopha
Staavia radiata
Stilbe albiflora
Stoebe cinerea
Syncarpha vestita
Trichocephalus stipularis
Erica margaritacea
Aspalathus variegata (probably extinct)
Athanasia capitata
Cliffortia ericifolia
Erica pyramidalis
Erica turgida
Erica verticillata

SEDGES
Elegia tectorum
Juncus capensis
Thamnochortus erectus

GEOPHYTES (BULBS)
Aristea lugens
Babiana angustifolia
Babiana odorata
Babiana secunda
Hesperantha pallescens
Hesperantha spicata subsp. fistulosa
Lachenalia liliiflora
Lachenalia mediana var. rogersii

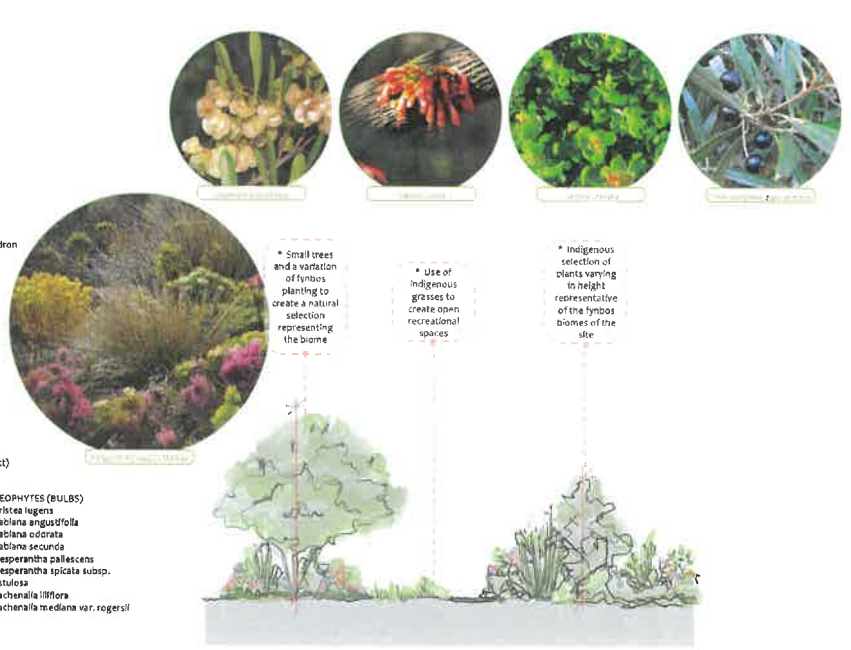


Fig. 44 Planting Section 3 - Rehabilitated fynbos typology

CLUSTERED TREE SCREENING PALETTE

TREES FOR VISUAL BARRIER
Acokanthera oppositifolia
Apodytes dimidiata
Buddleja saligna
Diospyros whyteana
Kiggelaria africana
Olea europaea subsp. africana
Ekebergia capensis
Celtis africana
Curtisia dentata

SHRUBS FOR VISUAL BARRIER
Dodonea augustifolia (Sand Olive)
Searsia crenata (Dune crow-berry)

TALL FLOWERING SHRUBS
Grewia occidentalis (Crossberry)
Halleria lucida (Tree fuscia)
Osteospermum moniliferum
Polygala myrtifolia (September Bush)







Fig. 45 Planting Section 4 - Screening street tree typology

AVENUE STREET TREE PALETTE

STREET TREES
Afrocarpus latifollius
Dais Cotinifolia
Euclea natalensisfracemorus
Scotia brachypetala/afra
Syzigium guinense
Virgilia xanthophloea

VERGE PLANTING
Phylica gracilis
Plectranthus various
Dietes grandiflora
Felicia various
Pelargonium various
Aristea various
Baleria various





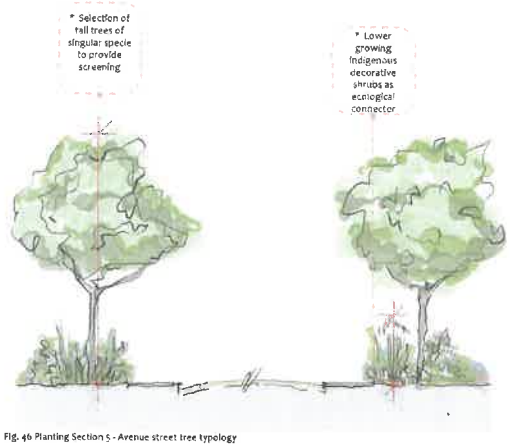


Fig. 46 Planting Section 5 - Avenue street tree typology

ANNEXURE J-1: PROPOSED SUBDIVISION PLAN

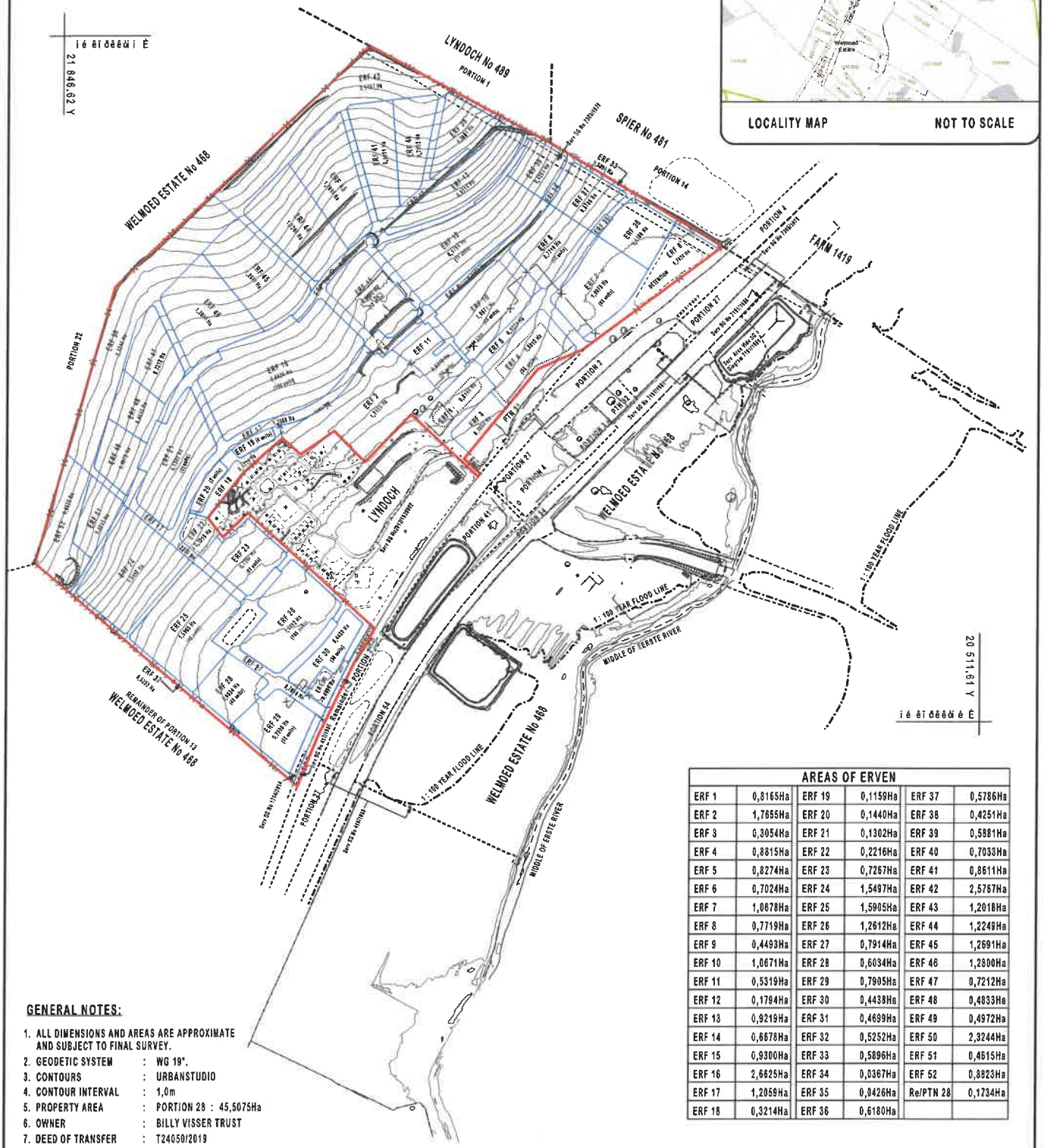
SKETCH PLAN:
PROPOSED SUBDIVISION OF
PORTION 28 OF THE FARM
WELMOED ESTATE No. 468
LOCAL AUTHORITY: STELLENBOSCH

ANNEXURE J.1-1

SCALE: 1 : 4 000



LOCALITY MAP NOT TO SCALE



AREAS OF ERVEN					
ERF 1	0,8165Ha	ERF 19	0,1159Ha	ERF 37	0,5786Ha
ERF 2	1,7655Ha	ERF 20	0,1440Ha	ERF 38	0,4251Ha
ERF 3	0,3054Ha	ERF 21	0,1302Ha	ERF 39	0,5881Ha
ERF 4	0,8815Ha	ERF 22	0,2216Ha	ERF 40	0,7033Ha
ERF 5	0,8274Ha	ERF 23	0,7267Ha	ERF 41	0,8611Ha
ERF 6	0,7024Ha	ERF 24	1,5497Ha	ERF 42	2,5767Ha
ERF 7	1,0878Ha	ERF 25	1,5905Ha	ERF 43	1,2018Ha
ERF 8	0,7719Ha	ERF 26	1,2612Ha	ERF 44	1,2249Ha
ERF 9	0,4493Ha	ERF 27	0,7914Ha	ERF 45	1,2691Ha
ERF 10	1,0671Ha	ERF 28	0,6034Ha	ERF 46	1,2800Ha
ERF 11	0,5319Ha	ERF 29	0,7905Ha	ERF 47	0,7212Ha
ERF 12	0,1794Ha	ERF 30	0,4438Ha	ERF 48	0,4833Ha
ERF 13	0,9219Ha	ERF 31	0,4699Ha	ERF 49	0,4972Ha
ERF 14	0,6678Ha	ERF 32	0,5252Ha	ERF 50	2,3244Ha
ERF 15	0,9300Ha	ERF 33	0,5896Ha	ERF 51	0,4615Ha
ERF 16	2,6625Ha	ERF 34	0,0367Ha	ERF 52	0,8823Ha
ERF 17	1,2059Ha	ERF 35	0,0426Ha	Re/PTN 28	0,1734Ha
ERF 18	0,3214Ha	ERF 36	0,6180Ha		

GENERAL NOTES:

1. ALL DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO FINAL SURVEY.
2. GEODETIC SYSTEM : WG 19°.
3. CONTOURS : URBANSTUDIO
4. CONTOUR INTERVAL : 1,0m
5. PROPERTY AREA : PORTION 28 : 45,5075Ha
6. OWNER : BILLY VISSER TRUST
7. DEED OF TRANSFER : T24050/2019

PLAN NUMBER: ??
REF: ??
Applicant Signature _____

ÓßÍÒ	áÓÙÒÙÓÙÒÍÍ
ßÓÍ ÍßÍÍ	ÍÉÞÓÁÍÑÒ

ON ORIGINAL A2

VIRDUS WORKS
Virdus Works (Pty) Ltd (Reg. No. 2018/585747/07)
Development Management Consultants and Enviromental Assessment Practitioners
3rd Floor, Time Square, Elektron Street, Techno Park, Stellenboch, 7600, South Africa
Mobile: +27 82 467 3748
Email: jacqui@jsamsonconsultancy.com

ANNEXURE J-2: PHASING AND LAND USE PLAN

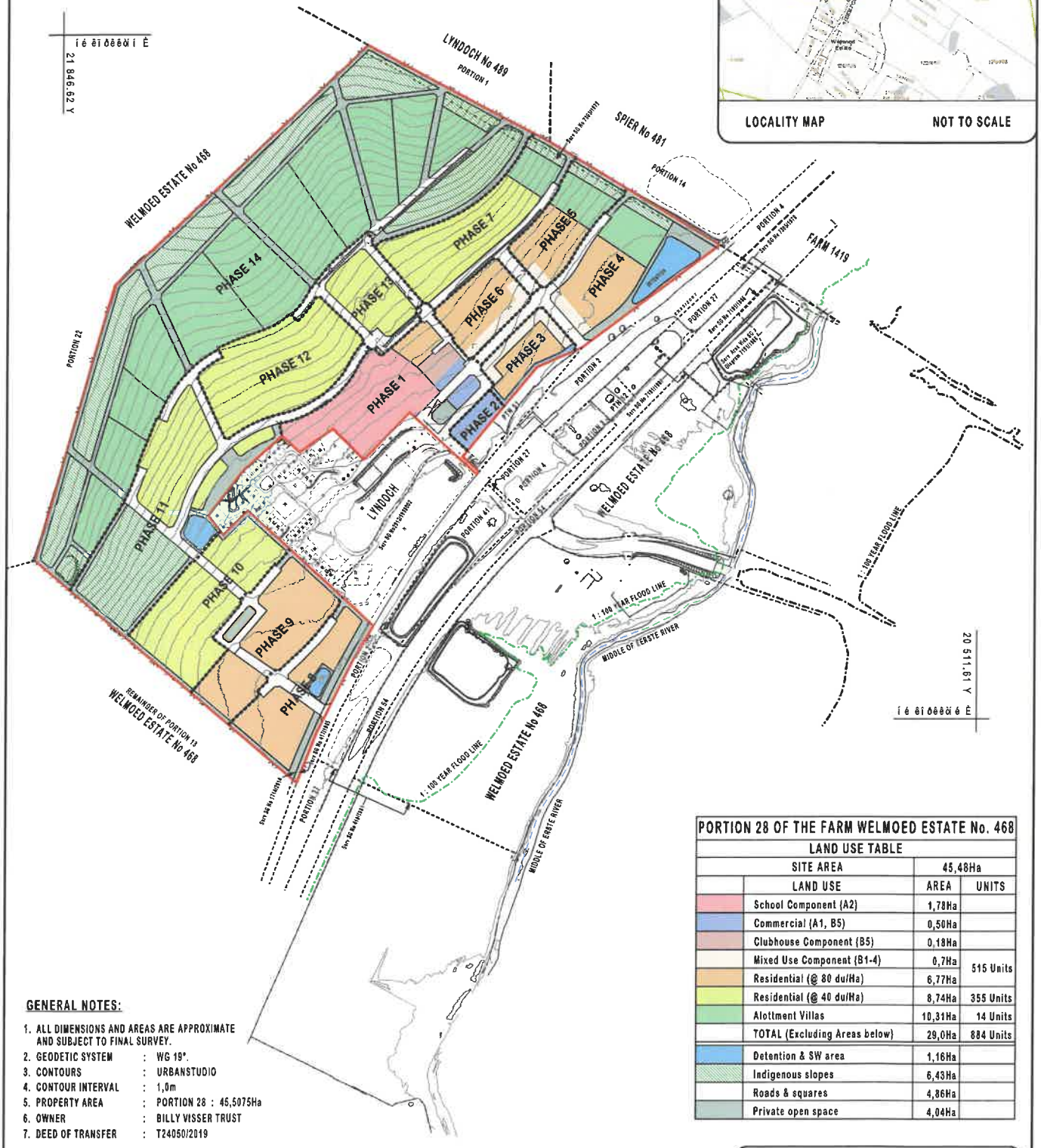
SKETCH PLAN:
PROPOSED PHASING & LAND USE PLAN

ANNEXURE J.1-2

PORTION 28 OF THE FARM
WELMOED ESTATE No. 468
LOCAL AUTHORITY: STELLENBOSCH

SCALE: 1 : 4 000





GENERAL NOTES:

1. ALL DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO FINAL SURVEY.
2. GEODETIC SYSTEM : WG 19°.
3. CONTOURS : URBANSTUDIO
4. CONTOUR INTERVAL : 1,0m
5. PROPERTY AREA : PORTION 28 : 45,5075Ha
6. OWNER : BILLY VISSER TRUST
7. DEED OF TRANSFER : T24050/2019

PORTION 28 OF THE FARM WELMOED ESTATE No. 468

LAND USE TABLE			
SITE AREA		45,48Ha	
	LAND USE	AREA	UNITS
	School Component (A2)	1,78Ha	
	Commercial (A1, B5)	0,50Ha	
	Clubhouse Component (B5)	0,18Ha	
	Mixed Use Component (B1-4)	0,7Ha	515 Units
	Residential (@ 80 du/Ha)	6,77Ha	
	Residential (@ 40 du/Ha)	8,74Ha	355 Units
	Alottment Villas	10,31Ha	14 Units
	TOTAL (Excluding Areas below)	29,0Ha	884 Units
	Detention & SW area	1,16Ha	
	Indigenous slopes	6,43Ha	
	Roads & squares	4,86Ha	
	Private open space	4,04Ha	

PLAN NUMBER: ??
REF: ??
Applicant Signature

ON ORIGINAL A2

VIRDUS WORKS
Virdus Works (Pty) Ltd (Reg. No. 2018/585747/07)
Development Management Consultants and Enviromental Assessment Practitioners
3rd Floor, Time Square, Elektron Street, Techno Park, Stellenbosch, 7600, South Africa
Mobile: +27 82 467 3748
Email: jacqui@jsamsonconsultancy.com

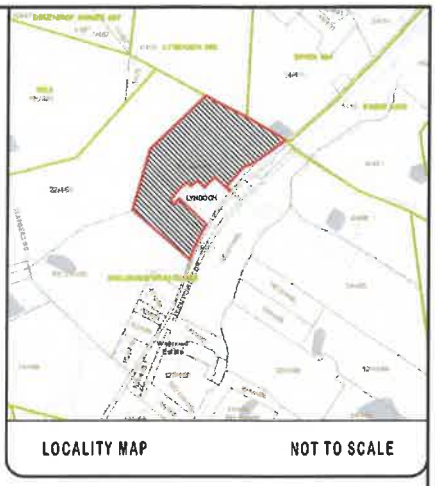
ANNEXURE J-3: STREETNAMES PLAN

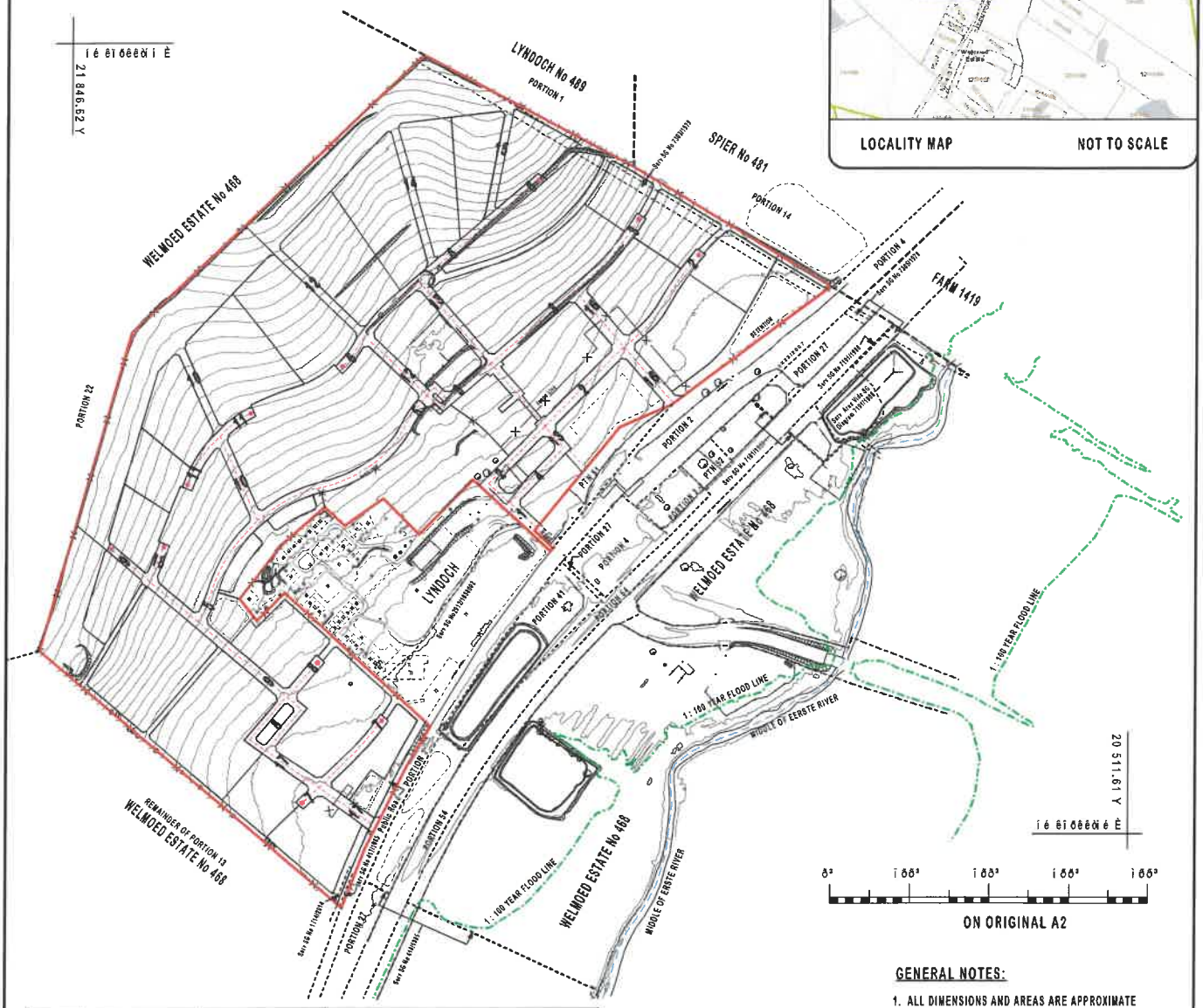
SKETCH PLAN:
PROPOSED STREET NAMES

PORTION 28 OF THE FARM
WELMOED ESTATE No. 468
LOCAL AUTHORITY: STELLENBOSCH

ANNEXURE J.1-3

SCALE: 1 : 4 000





Street Reference	Prefered Name	Alternative Name	Name Derivation
1	Lynedoch Street		Existing access street with name as name appeals in documents and on maps
2	Welmoed Avenue	Welmoed Road	Name of relevance to the original farm name.
3	Meerlust Avenue	Meerlust Road	Name of relevance to the name of an abutting farm awarded to the original farm owners.
4	Cellar Street	Kelder Street	Name relevant to the old wine cellar on the farm.
5	Spier Avenue	Farm Road	Name of relevance to the name of an abutting farm, the owners of which made significant contribution to the Sustainability Institute.
6	Granite Avenue	Pluton Road	Names referring to the rocky outcrops, which are the only portions not cultivated or transformed.
7	Drie Gewels Avenue	Institute Road	Name relevant to the existence of the main built features of Lynedoch Village.
8	Uniqon Square Avenue	Hendrich Square Raod	Names of relevance to the developer.
9	Avalien Street	Anika Street	Names of relevance to the developer.
10	Marcell Street	Carla Street	Names of relevance to the developer.
11	Olive Street	Renosterbos Street	Name of relevance to the vegetation on the farm.
12	Windpomp Street	Windmill Street	Name of relevance to a windmill standing on the farm.
13	Varney Street	Glen Eagles Street	Name of relevance to the name of one of the original farm owners responsible for establishing the hotel, and the initial name thereof.
14	Oakleaf Street	Villafontes Street	Names of the two major soil types found on the property.
15	Spring Street	Fontein Street	Name of relevance to the spring that used to provide the farm with water.
16	Bendeman Street	Christelle Street	Names of relevance to the developer.
17	Cabernet Street	Vineyard Street	Name of relevance to the viticulture on the farm.
18	Christiaan Close	Stella Close	Names of relevance to the developer.

GENERAL NOTES:

1. ALL DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO FINAL SURVEY.
2. GEODETIC SYSTEM : WG 19°.
3. CONTOURS : URBANSTUDIO
4. CONTOUR INTERVAL : 1,0m
5. PROPERTY AREA : PORTION 28 : 45,5075Ha
6. OWNER : BILLY VISSER TRUST
7. DEED OF TRANSFER : T24050/2019

PLAN NUMBER:
REF:
Applicant Signature _____

VIRDUS WORKS
Virdus Works (Pty) Ltd (Reg. No. 2018/585747/07)
Development Management Consultants and Enviromental Assessment Practitioners
3rd Floor, Time Square, Elektron Street, Techno Park, Stellenbosch, 7600, South Africa
Mobile: +27 82 467 3748
Email: jacqui@jsamsonconsultancy.com

ANNEXURE K: TRAFFIC IMPACT ASSESSMENT

Urban Development Solutions
Reg no. 2003/043709/23

Head Office
Unit 8, Time Square Building,
9 Electron Street, Techno Park,
Stellenbosch, 7600

PO Box 50487
V&A Waterfront
8002

General Enquiries:
Elmarie Els
T +27 (0)21 880 0443
info@udsafrica.co.za

Services
Civil Engineering
(Water, Sewer, Stormwater)
Roads and Transport
Traffic Engineering
Project Management

Offices
Stellenbosch, Piketberg, Somerset West, Clanwilliam

A Level 1 Contributor to B-BBEE

Date: 29 April 2024

Our Ref: UDS629/Reports/TIA

Uniqon Developers (Pty) Ltd
17 Catherine Road
Shere Agricultural Holdings
PRETORIA EAST
0081

ATTENTION: Mr Etienne Coetzer

Dear Sir,

RE: APPLICATION FOR REZONING TO SUBDIVISIONAL AREA FOR PROPOSED DEVELOPMENT OF PORTION 28 OF REMAINDER FARM 468, LYNEDOCH, STELLENBOSCH: TRAFFIC IMPACT ASSESSMENT

This company was appointed by *Uniqon Developers (Pty) Ltd* to prepare a Traffic Impact Assessment (TIA) for the proposed development of Remainder Farm Welmoed 468 Portion 28, Lynedoch, Stellenbosch.

1. BACKGROUND AND LOCALITY

The subject property is situated in the Lynedoch area, northwest of Baden Powell Drive and surrounds the Sustainability Institute. See the attached ***Locality Plan***.

The subject property is currently undeveloped and situated within the urban edge of the Lynedoch Node.

This TIA accompanies the Application for Rezoning to Subdivisional Area for the proposed development of Portion 28 of Remainder Farm 468, Lynedoch, Stellenbosch.

Asger Khan (Pr Eng) (**Managing Member**), John Wessels (Pr Eng), Piet van Blerk (Pr Eng), Cobus Louw (Pr CPM), Tian Koch (Pr Tech Eng), Cobus van der Merwe (Pr Eng), Ruaan Siebrits (Pr Tech Eng), Petri Germishuys (Pr Tech Eng), Dominique Ter Huurne (PhD, M Eng M Phil), Shameez Patel (MSc Eng), Yolandi Obermeyer (B Eng), Fergus Swartz (B Tech), Erhard Blom (Geometric & Traffic Signal Design)

2. PROPOSED DEVELOPMENT

2.1 Proposed Development

The proposed development will be that of a residential estate, with accompanying institutional- and commercial facilities to tie in with neighbouring Lynedoch Eco-Village and The Sustainability Institute. The extent of the proposed development are as follows:

Allotment Villas	14 units
Single Residential	355 units
Townhouse	515 units
School	1,78 ha (estimated 750 learners)
Commercial	0,50 ha (estimated ± 2 500 m^2 GLA)

A concept layout is indicated on the attached ***Block Plan*** (*Rev 05.2, 28.03.2024*) prepared by *Urban Studio Architects & Urban Designers*.

2.2 Access to the Property

Access to the subject property is currently informally obtained via the neighbouring properties and via the Lynedoch service road (parallel to Baden Powell Drive). The said service road is referred to as 'Lynedoch Road' in this report. Access to the proposed development will be along Lynedoch Road, detail of which will be further discussed in *paragraph 4* below.

3. TRAFFIC

3.1 Available Traffic

Traffic counts were conducted on Thursday, 25 May 2023 from 06h00 to 09h00 and again from 15h30 to 18h30 at the following intersections, with locations as indicated in ***Diagram 1***:

Table 1 : *Intersections counted*

1	Baden Powell Drive/Vlaeberg Road	6	Vlottenburg Road/Lynedoch Road
2	Vlaeberg Road/Lynedoch Road (service road)	7	Polkadraai Road/Vlottenburg Road
3	Polkadraai Road/Vlaeberg Road	8	Baden Powell Drive/Annandale Road
4	Lynedoch Road/Sustainability Access	9	Annandale Road/Access
5	Lynedoch Road T-intersection	10	Baden Powell Drive/Access

Intersections 9 and 10 were included for a scenario where additional properties would have formed part of the development proposal, however, this is no longer the case, and these two intersections are thus not included hereafter.

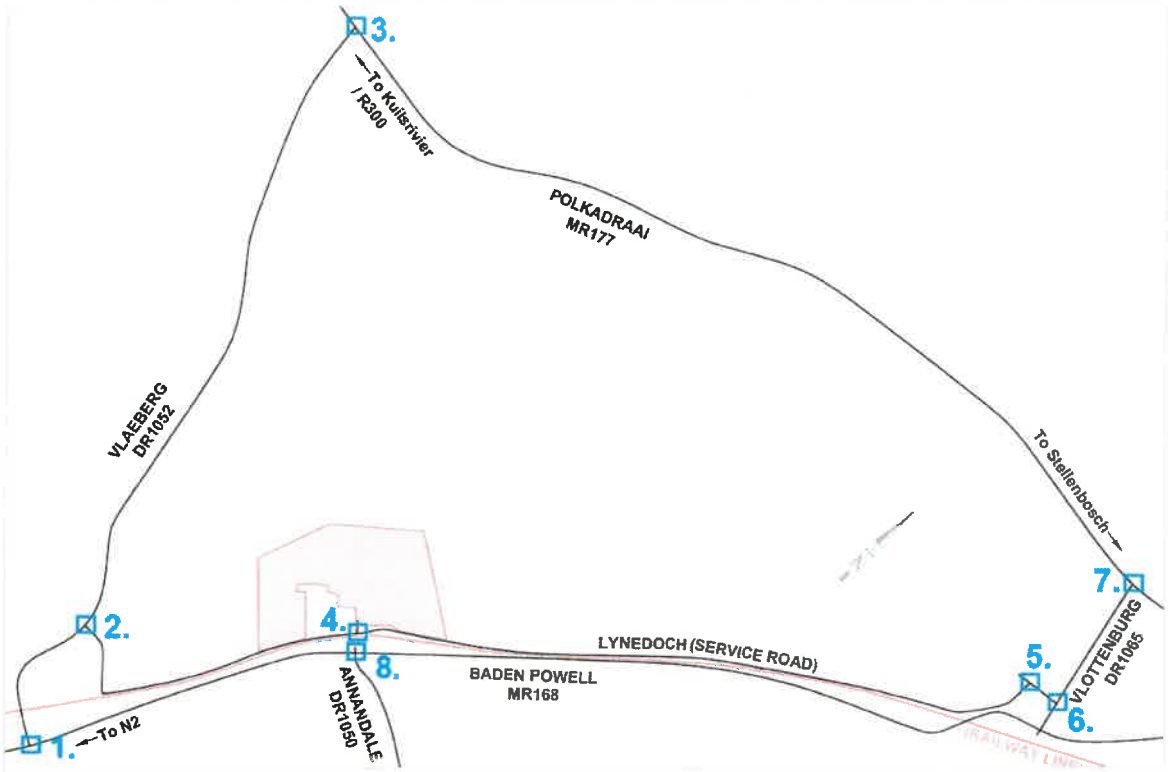


Diagram 1 : *Location of intersections counted*

The peak hour volumes derived from the abovementioned counts are indicated in ***Figure 1*** attached.

3.2 Traffic Growth

To account for average traffic growth, the annual rates as suggested in the TMH17 were applied. To assess a five-year horison (from date of report), the available 2023 peak hour volumes were increased by 3% per annum for six years to obtain the estimated/background 2029 peak hour volumes, as indicated in ***Figure 2*** attached.

3.3 Trip Generation

Trip generation rates as contained in the TMH17 *South African Trip Data Manual* were consulted to calculate the potential peak hour traffic that can be generated by the proposed development. The TMH17 suggests the following relevant rates:

Table 2 : *Relevant TMH17 Trip Generation Rates*

Land use	AM Peak Hour		PM Peak Hour	
	Rate	Split (in/out)	Rate	Split (in/out)
Single Dwelling	1,0 trip per unit	25/75	1,0 trip per unit	70/30
Townhouse	0,85 trips per unit	25/75	0,85 trips per unit	70/30
Retail/Shopping Centre*	2,7 trips per 100 m^2 GLA	65/35	15,3 trips per 100 m^2 GLA	50/50
Private School	0,8 trip per student	50/50	0,3 trips per student	50/50

**Based on the TMH17 Shopping Centre formulas:* $0{,}6 \times \left[1 + \frac{6}{1+m^2/3500}\right]$ & $3{,}4 \times \left[1 + \frac{6}{1+m^2/3500}\right]$

For the purpose of trip generation calculations, it was assumed that the 'single dwelling' rate as above would be applicable to the Allotment Villas and the Single Residential erven, whilst the 'townhouse' rate applicable to the Townhouses, and the 'retail' and 'private school' rates to the Commercial and School, respectively.

The TMH17 suggests trip adjustment (reduction) factors, applicable to mixed-use developments. These factors were considered applicable to the proposed development, and are suggested as follows:

Single Dwelling	10%	Shopping Centre	10%
Townhouse	15%	Private School	30%

Based on the above, the proposed development would have the potential to generate the following peak hour trips:

***Table 3** : Total peak hour trip generation*

Land use	AM Peak Hour			PM Peak Hour		
	Total	**In**	**Out**	**Total**	**In**	**Out**
Allotment Villas (*14 units*)	13	4	9	13	9	4
Single Residential (*355 units*)	320	80	240	320	224	96
Townhouses (*515 units*)	372	93	279	372	260	112
School (*750 learners*)	420	210	210	158	79	79
Commercial (*2 500 m^2 GLA*)	60	39	21	344	172	172
Total	**1 185**	**426**	**759**	**1 207**	**744**	**463**

3.4 Trip Distribution

For the purpose of trip distribution, it was assumed that the commercial and school pockets, as well as a portion of the residential (situated to the outside of the security estate) would travel via the central access (shared with The Sustainability Institute), whilst the erven towards the east of the site were distributed via the eastern access, and similarly, the erven towards the west of the site via the western access.

From the said accesses, the proposed development traffic was assumed to travel in the direction of Stellenbosch (25%), the Northern Suburbs (25%), and via the R44 (25%) and N2 (25%) as follows:

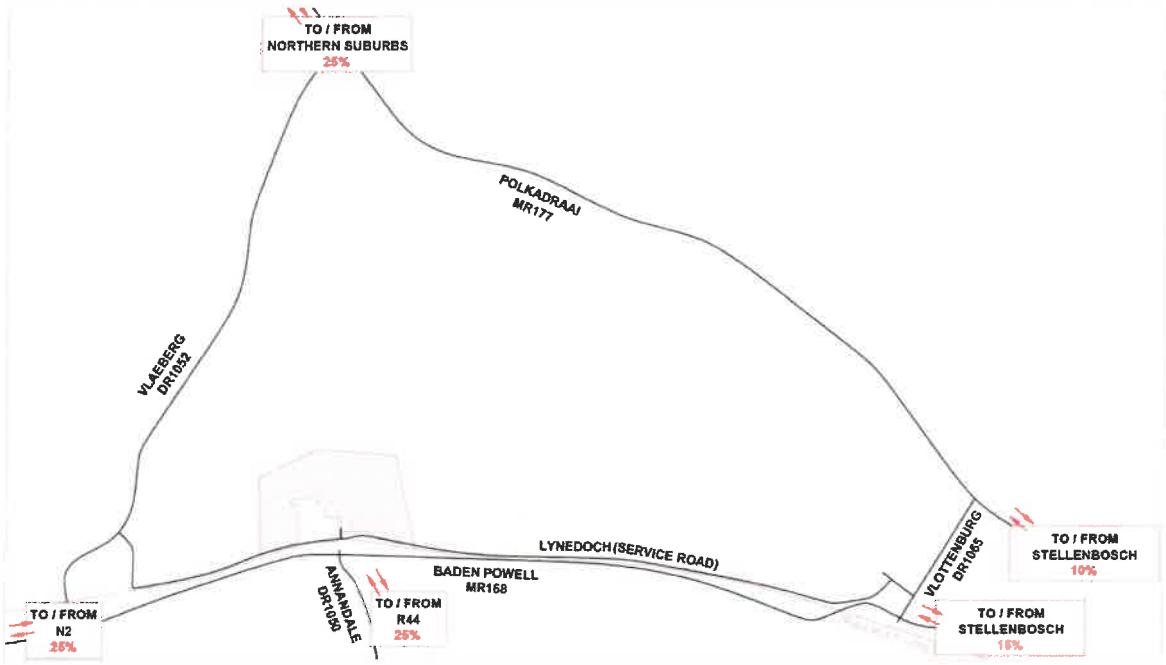


Diagram 2 : *Overview of distribution applied*

The distributed peak hour volumes are indicated in ***Figure 3*** attached, whilst these volumes added to the background traffic (***Figure 2***) are indicated in ***Figure 4*** attached.

3.5 Traffic Analysis

Traffic analyses of the intersections were done by means of the Sidra Intersection 9.1 software. Service levels A to D are considered acceptable, with D the critical.

The intersections analysed consist of lane layouts as follows:

Baden Powell Drive/Vlaeberg Road intersection:

This intersection is currently signalised with dedicated turning lanes on all approaches – see the lane layout below. The upgrade of this intersection formed part of the *Western Cape Government* (WCG) project of dualling Baden Powell Drive (MR168) from the direction of the N2 up to Polkadraai Road.

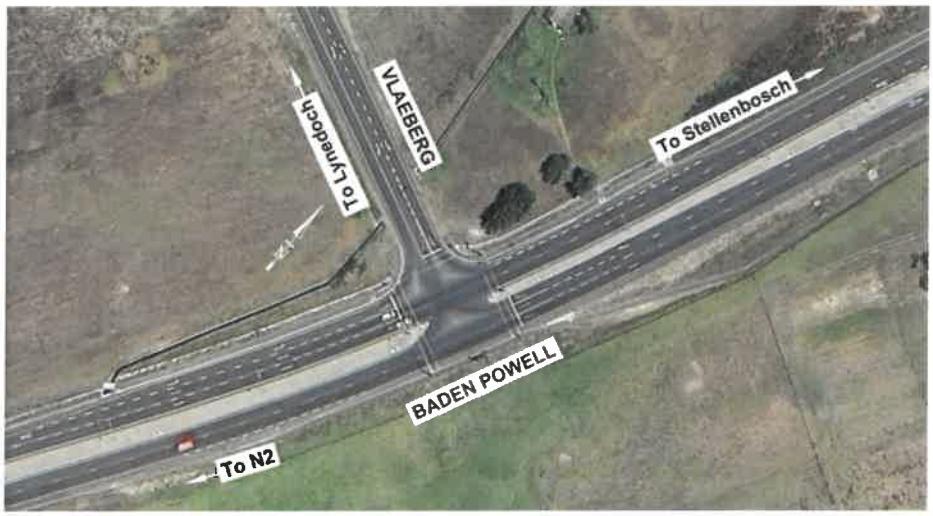


Diagram 3 : *Existing Baden Powell Drive/Vlaeberg Road intersection lane layout*

Vlaeberg Road/Lynedoch Road intersection:

This intersection is currently stop-controlled on the Lynedoch Road-approach, with free-flow conditions along Vlaeberg Road. All approaches consist of shared lanes – see the lane layout below.



Diagram 4 : *Existing Vlaeberg Road/Lynedoch Road intersection lane layout*

Polkadraai Road/Vlaeberg Road intersection:

This intersection is currently stop-controlled on the side streets (Vlaeberg Road- and La Provence Road-approaches) with free-flow conditions along Polkadraai Road. Dedicated right-turn lanes exist along the Polkadraai Road-approaches, whilst a dedicated left-turn lane exists along Vlaeberg Road – see the lane layout below.



Diagram 5 : *Existing Polkadraai Road/Vlaeberg Road intersection lane layout*

Lynedoch Road/Sustainability Institute access intersection:

This intersection is currently priority controlled, with free-flow conditions along Lynedoch Road. All approaches consist of shared lanes – see the lane layout below.

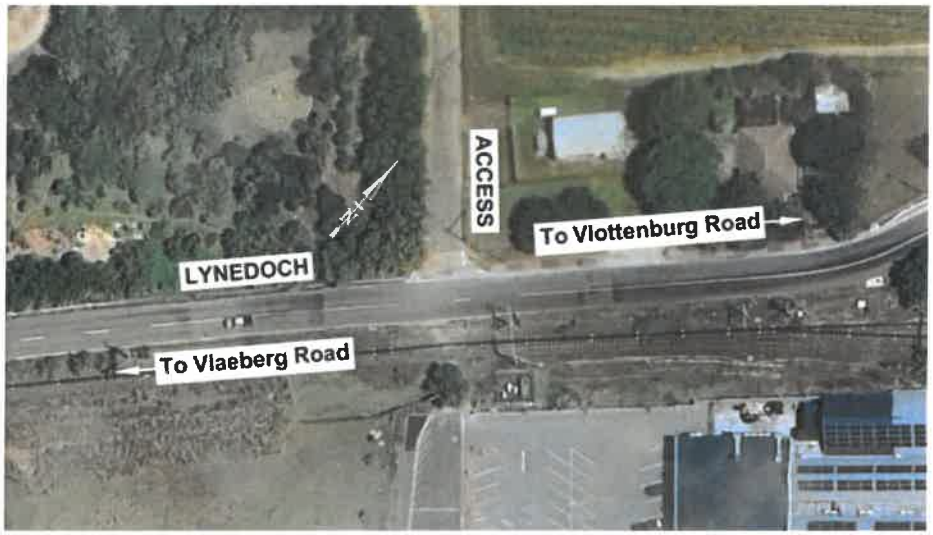


Diagram 6 : *Existing Lynedoch Road/Sustainability Institute access intersection lane layout*

Lynedoch Road T-intersection:

This intersection is currently stop-controlled on the Lynedoch Road-approach, with free-flow conditions along the street intersecting Vlottenburg Road to the east of this intersection. No dedicated turning lanes exist on any of the approaches – see the lane layout below.

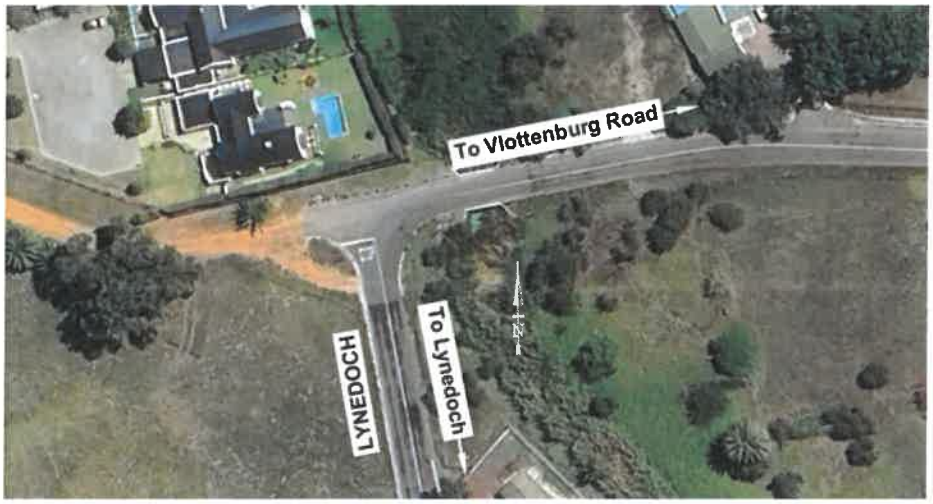


Diagram 7 : *Existing Lynedoch Road T-intersection lane layout*

Vlottenburg Road/Lynedoch Road intersection:

This intersection is currently stop-controlled on the side street, with free-flow conditions along Vlottenburg Road. All approaches consist of shared lanes – see the lane layout below.



Diagram 8 : *Existing Vlottenburg Road/Lynedoch Road intersection lane layout*

Polkadraai Road/Vlottenburg Road intersection:

This intersection is currently stop-controlled on the Vlottenburg Road-approach, with free-flow conditions along Polkadraai Road. All approaches consist of shared lanes – see the lane layout below. It should be noted that the future planning in the area includes the realignment of Vlottenburg Road to intersect Polkadraai Road to opposite Stellenbosch Kloof Road (to the east of this intersection) – the existing Polkadraai Road/Vlottenburg Road intersection will thus, at that stage, be closed.

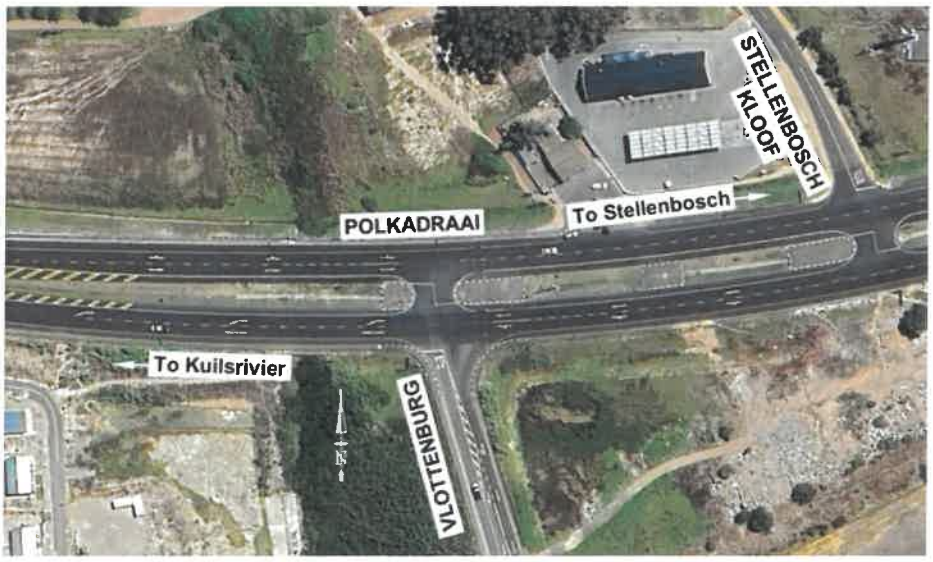


Diagram 9 : *Existing Polkadraai Road/Vlottenburg Road intersection lane layout*

Baden Powell Drive/Annandale Road intersection:

This intersection is currently signalised with dedicated right-turn lanes on the Baden Powell Drive-approaches and dedicated left-turn lanes on the Baden Powell Drive- as well as Annandale Road-approaches. The filling station-access-approach consists of a dedicated right-turn lane. See the lane layout below.



Diagram 10 : *Existing Baden Powell Drive/Annandale Road intersection lane layout*

3.5.1 Analysis of Available and Estimated Peak Hour Volumes (excluding proposed development)

Link volumes:

The link volumes (total two-way traffic) along the surrounding roads during the available 2023 and estimated 2029 (i.e. background) peak hours are as tabled below.

Table 4 : *Link Volumes (total two-way) along Surrounding Roads*

Road	Section	Available 2023 (AM/PM)	Estimated 2029 (AM/PM)
Baden Powell Drive	West of Vlaeberg	1 667 / 1 582	1 991 / 1 889
	East of Vlaeberg	1 707 / 1 658	2 038 / 1 979
Vlaeberg Road	North of Baden Powell Drive	800 / 690	955 / 824
	North of Lynedoch Road	722 / 646	862 / 771
Polkadraai Road	West of Vlaeberg Road	1 678 / 1 614	2 004 / 1 927
	East of Vlaeberg Road	1 056 / 1 057	1 260 / 1 262
	West of Vlottenburg Road	1 212 / 1 066	1 447 / 1 273
	East of Vlottenburg Road	1 333 / 1 121	1 592 / 1 339
Vlottenburg Road	South of Lynedoch Road	122 / 88	145 / 104
	North of Lynedoch Road	171 / 116	204 / 138
Lynedoch Road	East of Vlaeberg Road	92 / 70	109 / 83
	West of Vlottenburg Road	67 / 54	79 / 64

Of these road sections, the Baden Powell Drive- and Polkadraai Road-sections are dual carriageways, whilst the Vlaeberg Road-, Lynedoch Road- and Vlottenburg Road-sections are single carriageways.

The link volumes tabled above are still within the respective single- and dual carriageway capacities, i.e. the dualling of the sections currently single carriageways are not considered necessary to accommodate the background traffic.

Baden Powell Drive/Vlaeberg Road intersection:

According to the Sidra analyses, this signalised intersection currently experience acceptable service levels C and above during the existing AM and PM peak hours. During the estimated 2029 (i.e. background) peak hours, these service levels can be expected to remain, with marginal increase in queueing/delays.

It can thus be concluded that no upgrades are considered necessary at the Baden Powell Drive/Vlaeberg Road intersection to accommodate the background traffic.

Vlaeberg Road/Lynedoch Road intersection:

According to the Sidra analyses, acceptable service levels A are experienced along the Vlaeberg Road-approaches, whilst acceptable service levels B are experienced on the Lynedoch Road-approach during the existing 2023 peak hours. During the estimated 2029 peak hours, these service levels can be expected to remain, with marginal increase in queueing/delays.

It can thus be concluded that no upgrades are considered necessary at the Vlaeberg Road/Lynedoch Road intersection to accommodate the background traffic.

Polkadraai Road/Vlaeberg Road intersection:

According to the Sidra analyses, acceptable service levels are experienced along the Polkadraai Road-approaches, whilst the through- and right-turn movements of the side streets (i.e. Vlaeberg Road- and La Provence Road to the opposite side of the road) experience unacceptable service levels and delays as result of the large free-flow through movements along the higher order road (Polkadraai Road). On-site, safety issues exist based largely on the significant number of right-turning vehicles – to address this, it would be suggested that streetlighting be provided, and the signalisation of the intersection be considered. To ensure mobility remain along Polkadraai Road, minimum green time would be suggested on the side streets.

During the estimated 2029 peak hours, the said delays are expected to increase along with the increase in traffic along Polkadraai Road. With traffic signals at this intersection, the Sidra analyses show acceptable service levels C and above on all movements.

It can thus be concluded that to accommodate the background traffic at the Polkadraai Road/Vlaeberg Road intersection, it is suggested that the provision of traffic signals be considered (along with the required streetlighting).

Lynedoch Road/Sustainability Institute access intersection:

According to the Sidra analyses, acceptable service levels are experienced, and can be expected to remain, on all movements during the existing- and estimated peak hours.

It can thus be concluded that no upgrades are considered necessary at the Lynedoch Road/Sustainability Institute access intersection to accommodate the background traffic.

Lynedoch Road T-intersection:

According to the Sidra analyses, acceptable service levels are experienced, and can be expected to remain, on all movements during the existing- and estimated peak hours.

It can thus be concluded that no upgrades are considered necessary at the Lynedoch Road T-intersection to accommodate the background traffic.

Vlottenburg Road/Lynedoch Road intersection:

According to the Sidra analyses, acceptable service levels A are experienced on all movements during the existing 2023 peak hours. During the estimated 2029 peak hours, these service levels can be expected to remain, with marginal increase in queueing/delays.

It can thus be concluded that no upgrades are considered necessary at the Vlottenburg Road/Lynedoch Road intersection to accommodate the background traffic.

Polkadraai Road/Vlottenburg Road intersection:

According to the Sidra analyses, acceptable service levels A are experienced along the Polkadraai Road-approaches, whilst service levels F and D are experienced on the Vlottenburg Road-approach during the AM and PM peak hours, respectively.

During the estimated 2029 peak hours, the abovementioned conditions can be expected to remain, except for the Vlottenburg Road-approach expected to experience service level F during the PM peak hour. However, upgrades to this intersection are not suggested at this time, especially taking into consideration the planned realignment of Vlottenburg Road (to opposite Stellenbosch Kloof Road), which would include the signalisation of the realigned intersection.

It can thus be concluded that no upgrades are considered necessary to accommodate the background traffic at the Polkadraai Road/Vlottenburg Road intersection at this time.

Baden Powell Drive/Annandale Road intersection:

According to the Sidra analyses, this signalised intersection currently experience acceptable service levels C and above during the existing AM and PM peak hours. During the estimated 2029 (i.e. background) peak hours, acceptable service levels D and above can be expected.

It can thus be concluded that no upgrades are considered necessary at the Baden Powell Drive/Annandale Road intersection to accommodate the background traffic.

3.5.2 Analysis of Expected Peak Hour Volumes (including proposed development)

Link volumes:

The link volumes (total two-way traffic) along the surrounding roads during the expected 2029 peak hours (including proposed development) are as tabled below.

Table 5 : *Link Volumes along Surrounding Roads*

Road	Section	Expected 2029 (AM/PM)
Baden Powell Drive	West of Vlaeberg	2 288 / 2 192
	East of Vlaeberg	2 335 / 2 282
Vlaeberg Road	North of Baden Powell Drive	1 549 / 1 430
	North of Lynedoch Road	1 157 / 1 071
Polkadraai Road	West of Vlaeberg Road	2 299 / 2 227
	East of Vlaeberg Road	1 260 / 1 262
	West of Vlottenburg Road	1 447 / 1 273
	East of Vlottenburg Road	1 710 / 1 460
Vlottenburg Road	South of Lynedoch Road	323 / 284
	North of Lynedoch Road	322 / 259
Lynedoch Road	East of Vlaeberg Road	998 / 989
	West of Vlottenburg Road	375 / 365

The link volumes tabled above are still within the respective single- and dual carriageway capacities, i.e. the dualling of the sections currently single carriageways are not considered necessary to accommodate the proposed development traffic.

External Intersections:

At the signalised Vlaeberg Road- and Annandale Road-intersections along Baden Powell Drive, the acceptable service levels D and above on all movements as discussed during the background peak hours can be expected to remain, with increase in queuing/delays, however, still considered acceptable.

At the priority-controlled Vlaeberg Road- and Vlottenburg Road-intersections along Polkadraai Road, the acceptable conditions along Polkadraai Road, and the delays as result of the large free-flow through movements along the higher order road (Polkadraai Road) can be expected to remain, with increase in the queues along the Vlaeberg Road- and Vlottenburg Road-approaches. As discussed above, the signalisation of the Polkadraai Road/Vlaeberg Road intersection is suggested to be considered to address existing safety issues – the signalised intersection can be expected to remain operating acceptably with the addition of the proposed development traffic. Similar to the conclusion of the background peak hours, no upgrades to the Polkadraai Road/Vlottenburg Road intersection are suggested at the time – the realignment of Vlottenburg Road to opposite Stellenbosch Kloof Road is also expected to become signalised in future, which would further assist vehicles from the side streets.

With the addition of the proposed development traffic at the Vlaeberg Road/Lynedoch Road intersection, dedicated turning lanes are considered required. With dedicated left- and right-turn lanes on all approaches, acceptable service levels can be expected on all movements except the right-turn movement from Lynedoch Road to Vlaeberg Road. To address this, traffic signals are suggested, which can be expected to result in acceptable service levels C and above on all movements. A schematic layout of the proposed upgrade is indicated below. This intersection is spaced ± 850 metres

from the Baden Powell Road-intersection – the spacing between the two signalised intersections are thus not considered an issue.

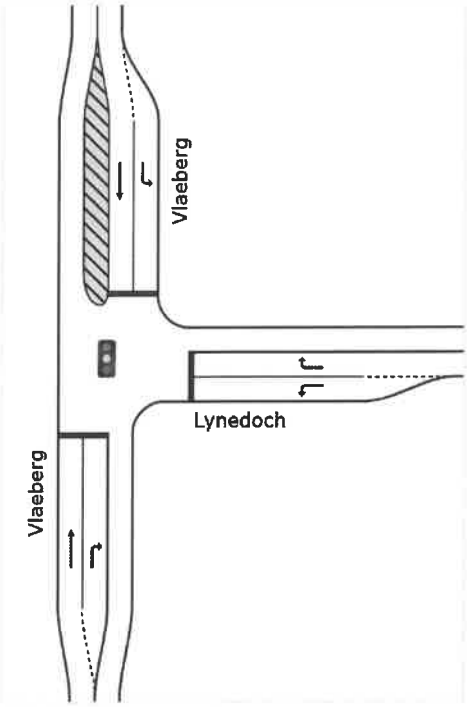


Diagram 11 : *Proposed Vlaeberg Road/Lynedoch Road intersection upgrade (schematic)*

The Vlottenburg Road/Lynedoch Road intersection can be expected to remain operating acceptably (service levels A) as discussed during the background peak hours, with some increase in queuing/delays on the side street-approach. According to the available information of the Baden Powell Road-construction currently underway, its limit-of-construction seems to terminate to the south of this intersection, thus no changes to the intersection at this time. With the planned realignment of Vlottenburg Road, changes to this intersection might likely occur, the details of which has not yet been finalised.

It can thus be concluded that to accommodate the proposed development traffic at the external intersections, the upgrade of the Vlaeberg Road/Lynedoch Road intersection by way of dedicated turning lanes and traffic signals are suggested.

Lynedoch Road-Access Intersections:

To accommodate the proposed development traffic at the three access-intersections along Lynedoch Road, dedicated turning lanes will be required. On the access-approaches, a dedicated left- and right-turn lane each will be required, with dedicated left- and right-turn lanes along the Lynedoch Road-approaches as well. It is suggested that the intersections remain stop-controlled on the access-approaches, with free-flow conditions along Lynedoch Road. With these lane layouts (***Diagram 12*** below), the eastern access can be expected to experience acceptable service levels B on the right-turn movement outbound, whilst the central access (shared with the Sustainability Institute) can be expected to experience acceptable service levels C on the same movement – all other movements are expected to experience service levels A. The western access, where the larger residential volumes are expected, can be expected to experience service level D on the outbound right-turn movement during the AM peak hour and service level D during the PM peak hour, which is still considered acceptable. The provision of the dedicated turning lanes at the access intersections are thus considered sufficient to accommodate the proposed development traffic.

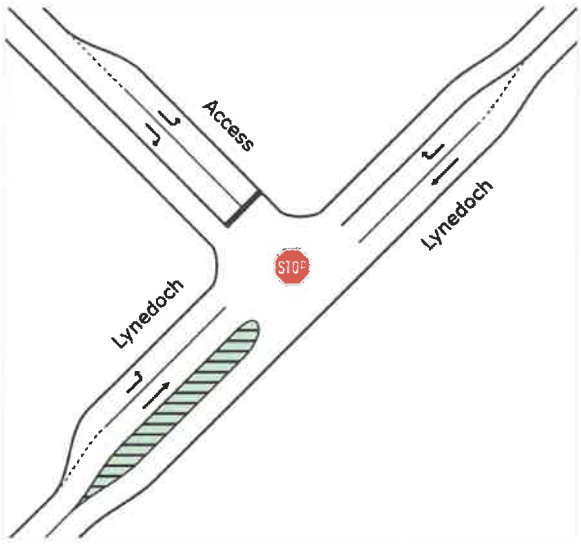


Diagram 12 : *Proposed Lynedoch Road/Access Intersections – schematic upgrade*

Should the traffic along Lynedoch Road, for some reason, drastically increase in future, it could be considered implementing traffic signals at these access intersections, the spacing of which conforms to the relevant guidelines (as will be discussed in *paragraph 4* below).

It can thus be concluded that to accommodate the proposed development traffic at the access intersections along Lynedoch Road, the provision of dedicated left- and right-turn lanes on all approaches are considered sufficient.

4. GEOMETRY AND PARKING

As previously mentioned, access to the proposed development will be obtained along Lynedoch Road. The said road is accessed from Vlaeberg Road and Vlottenburg Road, both of which are accessed via Baden Powell Drive and Polkadraai Road. These roads are classified as tabled and indicated below.

Table 6 : *Classification of Surrounding Roads*

Road	Classification according to:	
	Road Network Information System (RNIS) of WCG	Stellenbosch Municipality Road Master Plan
Baden Powell Drive (MR168)	Class 2	Class 2
Polkadraai Road (MR177)	Class 2	Class 2
Vlaeberg Road (DR1052)	Class 3	Class 3
Vlottenburg Road (DR1065)	Class 3	Class 4
Lynedoch Road	n/a	Class 4

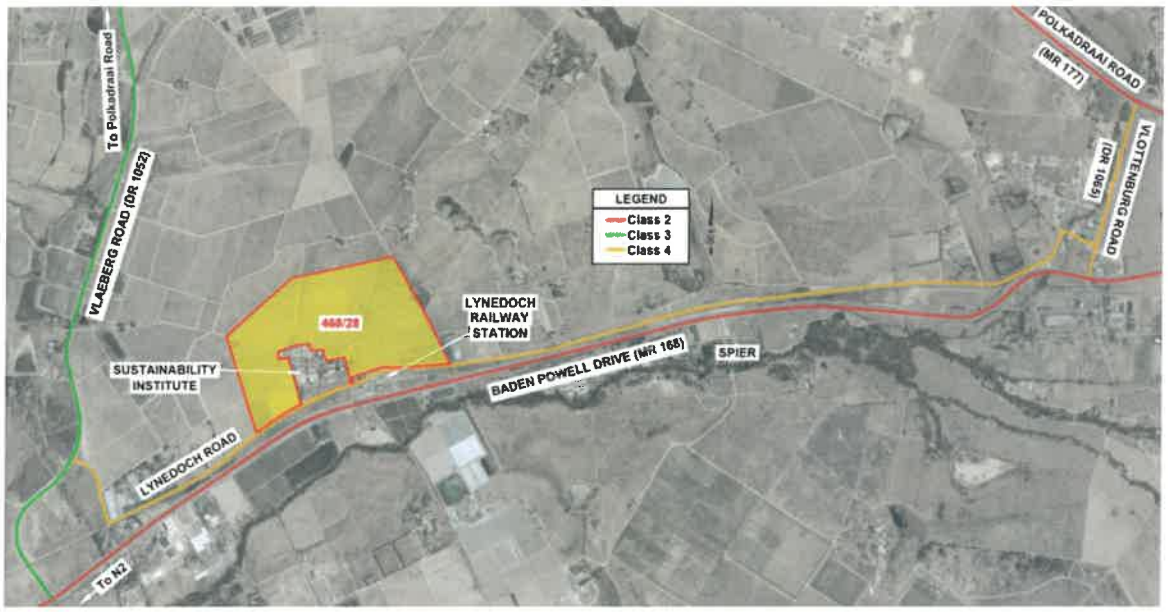


Diagram 13 : *Classification of Surrounding Roads (Stellenbosch Road Master Plan)*

The Lynedoch 'service' Road was constructed as part of the Baden Powell Drive upgrade (dualling) in the vicinity. A portion of the subject property was expropriated for the purpose of the road – see ***Diagram 14*** below. The road has a 60 km/h posted speed limit and measures between ± 6,4 and 7 metres in width (two lane road, i.e. one lane per direction) along its extent. Space within the expropriated 'road reserve', i.e. between the railway line and the opposite property boundary is very limited.

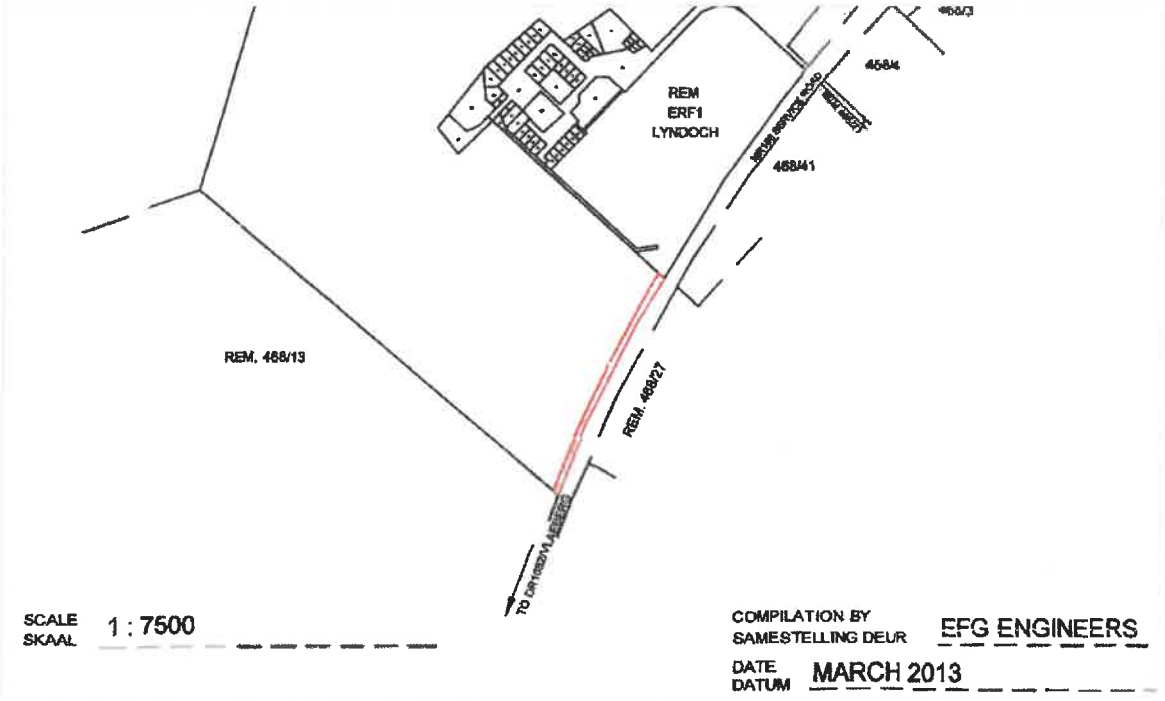


Diagram 14 : *Expropriation extract – subject property*

The three (3) accesses as proposed along Lynedoch Road are situated ± 420 and ± 235 metres apart – see ***Diagram 15*** below. The former is in accordance with the intersection spacing as contained in the *Access Management Guidelines* (AMG) of WCG. The required spacing for signalised intersections along a Class 4-road in a Suburban area (which the section abutting the road could be considered as with the development of the subject property) is 370 metres.

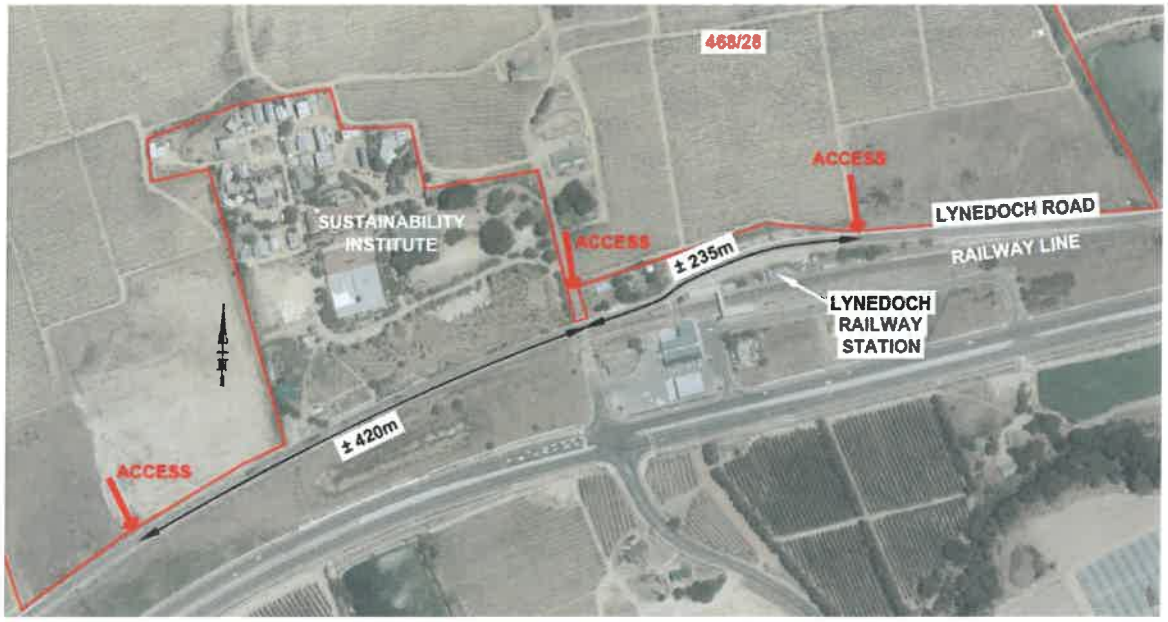


Diagram 15 : *Proposed development accesses along Lynedoch Road*

The 'middle/central' access will be situated on the subject property (portion of existing panhandle), however, shared with the neighbouring Sustainability Institute (currently being used as their main access). As far as could be established, a formal right-of-way servitude does not currently exist for the said use of the access across the subject property. Should the shared access arrangement as proposed not be acceptable to the neighbouring property, alternative access to the neighbouring property will have to be taken from Lynedoch Road, at an acceptable position between the two proposed accesses east and west thereof.

Internal roads are proposed to be private. The main internal street providing access to the pockets within the development is proposed to have a 16 metre road reserve and 6,8 metre surfaced width – based on the slopes, the road will be surfaced with interlocking pavers. Bellmouth radii along the main internal street is proposed to be 8 metres at the sections accommodating two-way traffic, whilst 6 metre radii are proposed along the short one-way sections. These streets will most likely accommodate vehicles up to and including the size of single unit trucks, i.e. the size of vehicles allowed to enter the development would be limited. Although the internal streets indicated at this time is schematic, the provided road reserves are considered sufficient to accommodate the required residential streets.

Two security-controlled accesses are proposed, i.e. the eastern- and western accesses. The space provided for these control points accommodates two inbound- and two outbound-lanes at the security booms. The booms at the eastern access is proposed to be situated further into the development about 25 metres from the internal intersection as indicated, whilst the booms at the western access is proposed ± 50 metres from the edge of Lynedoch Road, providing sufficient stacking space for the proposed development. The school- and commercial pockets, as well as one of the residential pockets will be situated to the outside of the said security controls.

Refuse removal is proposed to be handled privately, with the intention to explore the possibility of combining recycling with the Sustainability Institute. Detail on this will be addressed during further design/application stages.

Parking will be provided within the individual pockets as the slopes of the internal main street will likely not accommodate on-street parking. When the detail of the individual pockets is determined, it should be ensured that sufficient parking is provided in accordance with the relevant Zoning Scheme Requirements.

5. PUBLIC- AND NON-MOTORISED TRANSPORT

The Lynedoch Railway Station is situated just to the southeast of the subject property, within walking distance of the proposed development. A pedestrian crossing is situated in the vicinity thereof, with a sidewalk between the railway station and the subject property/Sustainability Institute-access. The said sidewalk is currently overgrown with vegetation at some points along it. It is suggested that this sidewalk be maintained and extended up to the eastern access of the proposed development, and tie in with the facilities provided on-site. Refer to the schematic proposal below. Furthermore, it is suggested that the existing pedestrian crossing be raised, which would also address traffic calming along this section of road.

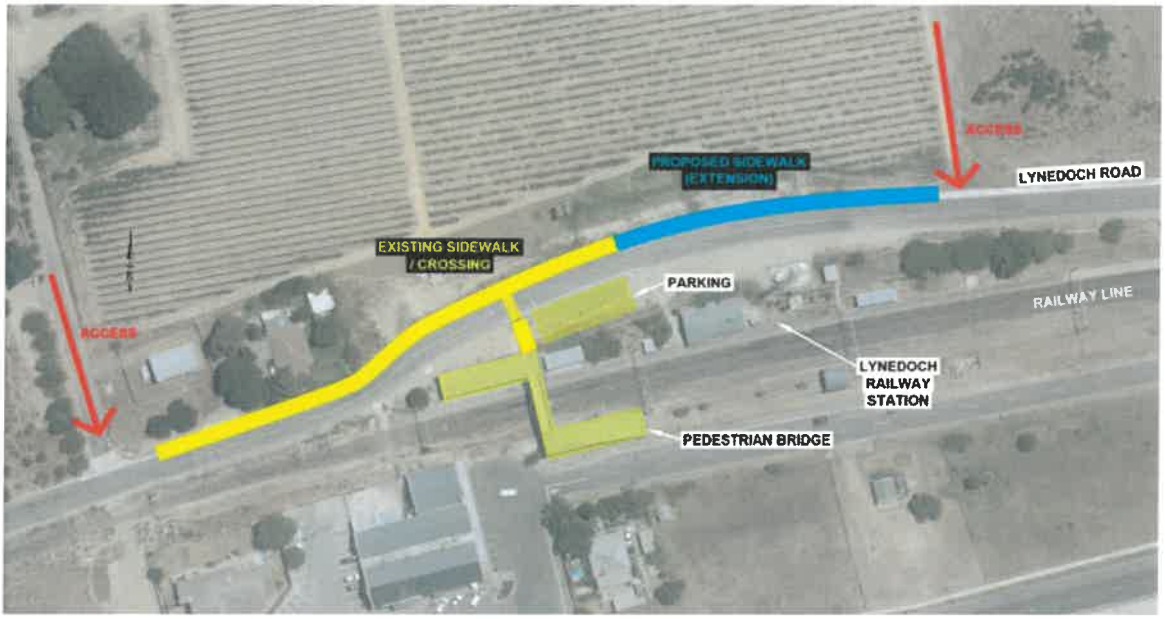


Diagram 16 : *Existing and proposed pedestrian- and public transport accommodation*

Ideally, the sidewalk along the northern side of the road would be extended in a westerly direction, up to the western access, as well, however, as result of the limited space within the 'road reserve' of Lynedoch Road, the said sidewalk would encroach onto the neighbouring property.

Internally, the cross-sections of the private streets propose to have sidewalks along at least one side of the street (both sides along relevant sections where possible).

The accommodation of taxis is also considered necessary to be addressed in this area. Embayments could be considered along Lynedoch Road at the accesses, however, as noted above, space within the 'road reserve' of this Lynedoch service road is limited. It is thus likely that if embayments are considered necessary, it would encroach onto the subject property. It should be noted, however, that as result of the size of the development and the incline of the internal streets, it could be expected that residents would likely, as example, pick domestic workers up at the railway station.

6. CONCLUSIONS

The following can be concluded from the report:

1) That this TIA accompanies the application for rezoning to subdivisional area for the proposed development of Farm 468/29, situated in the Lynedoch area, northwest of Baden Powell Drive, and surrounds the Sustainability Institute;
2) That the proposed development is that of a residential estate (14 allotment villas, 355 single residential units, 515 townhouses) with accompanying commercial (± 2 500 m^2 GLA) and institutional (± 750 learners) facilities, obtaining access along the Lynedoch service road;
3) That the proposed development would have the potential to generate 1 185 AM peak hour trips (426 in, 759 out) and 1 207 PM peak hour trips (744 in, 463 out);
4) That to accommodate the background traffic:
    a) The signalisation (with the required streetlighting) be considered at the Polkadraai Road/Vlaeberg Road intersection to address existing safety concerns;
5) That to accommodate the addition of the proposed development traffic:
    a) The upgrade of the Vlaeberg Road/Lynedoch Road intersection by way of dedicated left- and right-turn lanes along all approaches, as well as traffic signals; and
    b) The provision of dedicated left- and right-turn lanes on all approaches at the three access-intersections;
6) That space within the expropriated 'road reserve' of the Lynedoch service road is limited, thus some space would be required along the proposed development-side of the road for providing the required turning lanes at the accesses;
7) That the 'middle/central' access will be situated on the subject property, and shared with the Sustainability Institute (currently used as their main access, however, without formal right-of-way servitude according to available information);
8) That internal roads are proposed to be private, within 16 metre road reserves where two-way traffic is accommodated and 8 metre reserves where one-way traffic is accommodated, and that vehicles up to and including the size of single unit trucks are expected to be accommodated, thus limiting the size of vehicles allowed within the estate;
9) That the larger residential component will obtain access via two security controlled accesses, whilst the commercial, institutional and a small portion of residential will be situated to the outside of the security controls;
10) That the proposed booms at the said two accesses are setback sufficiently to accommodate the expected queuing at the access controls, and that two inbound- and two outbound-lanes are provided at both accesses which is considered sufficient for the proposed development;
11) That refuse removal is proposed to be handled privately and that parking will be provided on the individual erven/within the development pockets – detail of which to be addressed during further design/application stages;
12) That the Lynedoch Railway Station is situated just to the southeast of the subject property, with a short section of sidewalk and pedestrian crossing across Lynedoch Road existing – it is suggested that the existing sidewalk be maintained (overgrown vegetation), the pedestrian crossing raised (to inter alia address traffic calming in the vicinity) and that the sidewalk be extended up to the eastern development access, to tie in with the facilities proposed on-site; and
13) That the possibility of providing public transport embayments along Lynedoch Road at the development-accesses be further investigated.

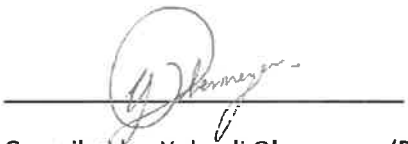
7. RECOMMENDATIONS

From the above, it is recommended that the proposed development be considered for approval from a traffic point of view, on the following conditions:

1) That to accommodate the background traffic (i.e. prior to the development of the subject property), the provision of traffic signals (with the required streetlighting) be considered at the Polkadraai Road/Vlaeberg Road intersection to address existing safety concerns;
2) That to accommodate the proposed development traffic:
   a) Dedicated left- and right-turn lanes along all approaches, and traffic signals be provided at the Vlaeberg Road/Lynedoch Road intersection; and
   b) Dedicated left- and right-turn lanes be provided along all approaches to the development accesses;
3) That the existing pedestrian crossing across Lynedoch Road (at the railway station) be raised and that the existing sidewalk along Lynedoch Road be improved and extended up to the eastern development-access.

We trust that the Traffic Impact Assessment will be to your satisfaction and will gladly provide any additional information required on request.

Yours faithfully,



Compiled by: Yolandi Obermeyer (B Eng)



Piet van Blerk Pr Eng

UDS AFRICA

Attachments:

Locality Plan

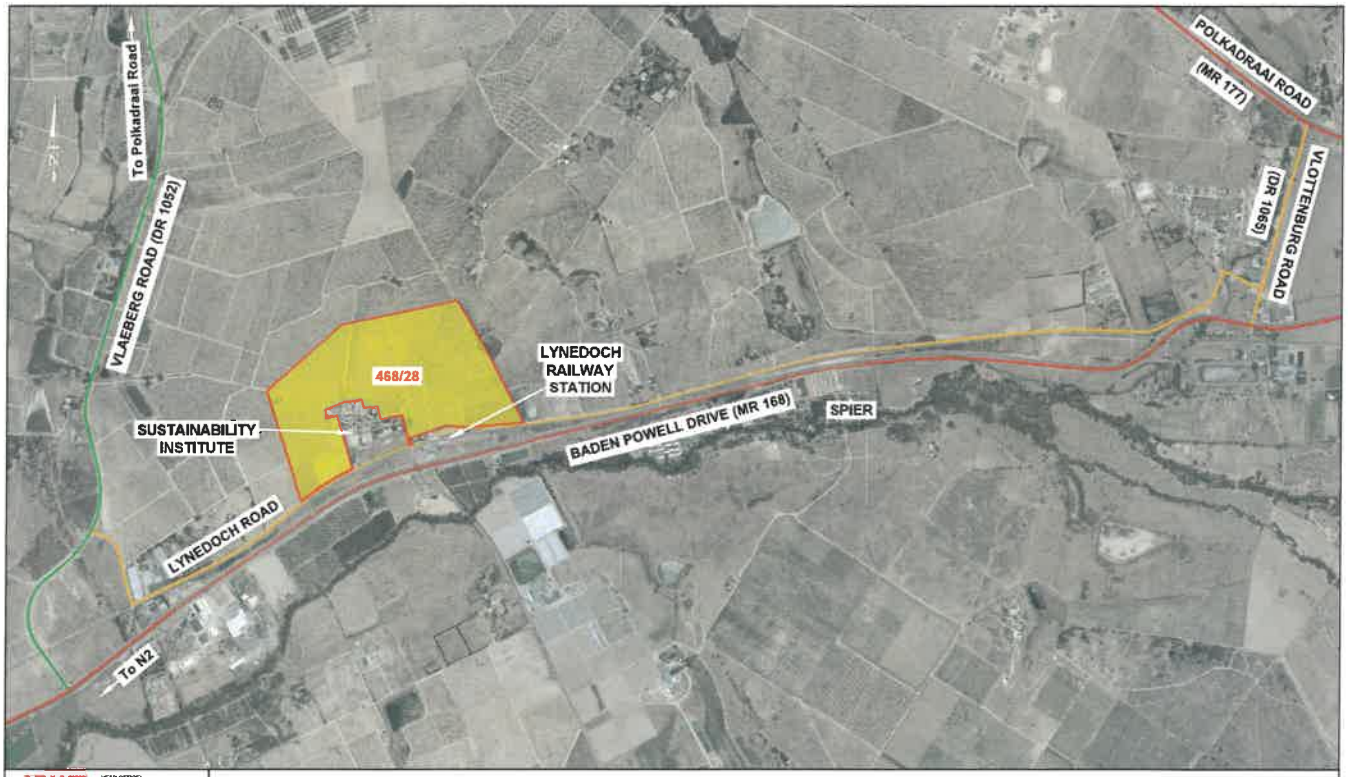
Block Plan (Rev 05.2, 28.03.2024) (*Urban Studio Architects & Urban Designers*)

Figure 1 Available AM/PM Peak Hour Traffic Volumes

Figure 2 Estimated 2029 AM/PM Peak Hour Traffic Volumes

Figure 3 Distribution of Peak Hour Traffic Potentially Generated by Proposed Development

Figure 4 Expected 2029 AM/PM Peak Hour Traffic Volumes



HEAD OFFICE:
Unit 3, Tree Square Building,
3 Electron Street, Techno Park,
Stellenbosch
PO Box 50417
V&A Waterfront
8002
T +27 (0)21 880 0443
F +27 (0)86 512 0223
info@urbanafrica.co.za

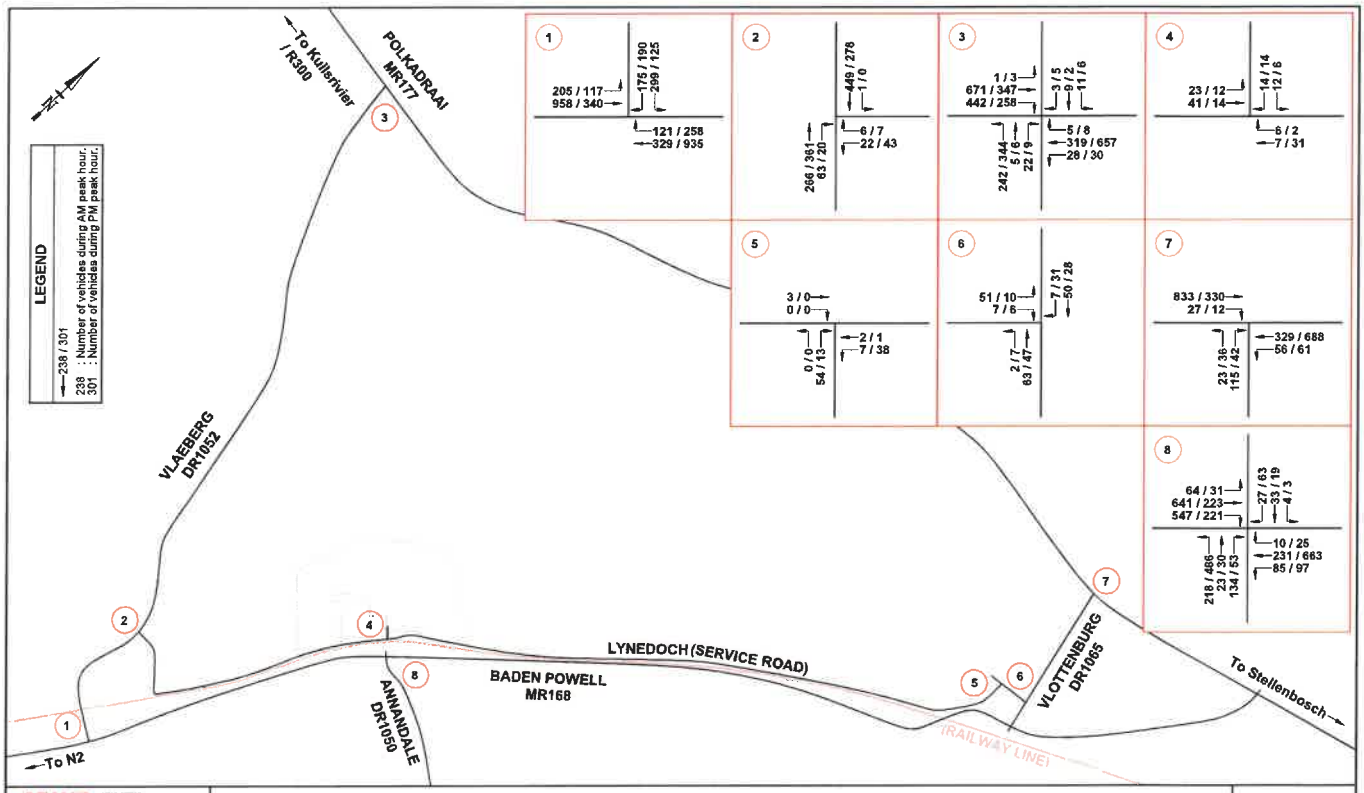
Locality Plan



PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Allotment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024

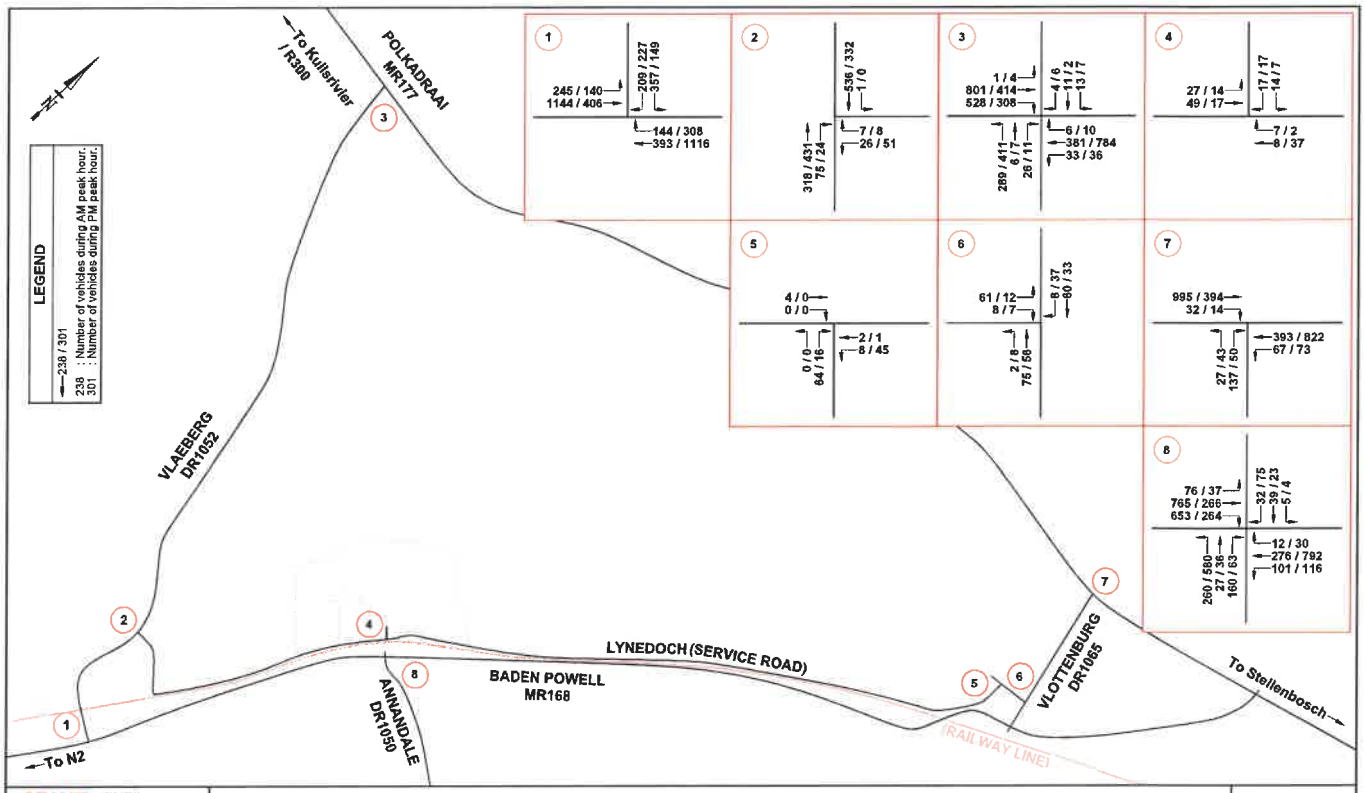
WELMOED URBANSTUDIO architects & urban designers



africa

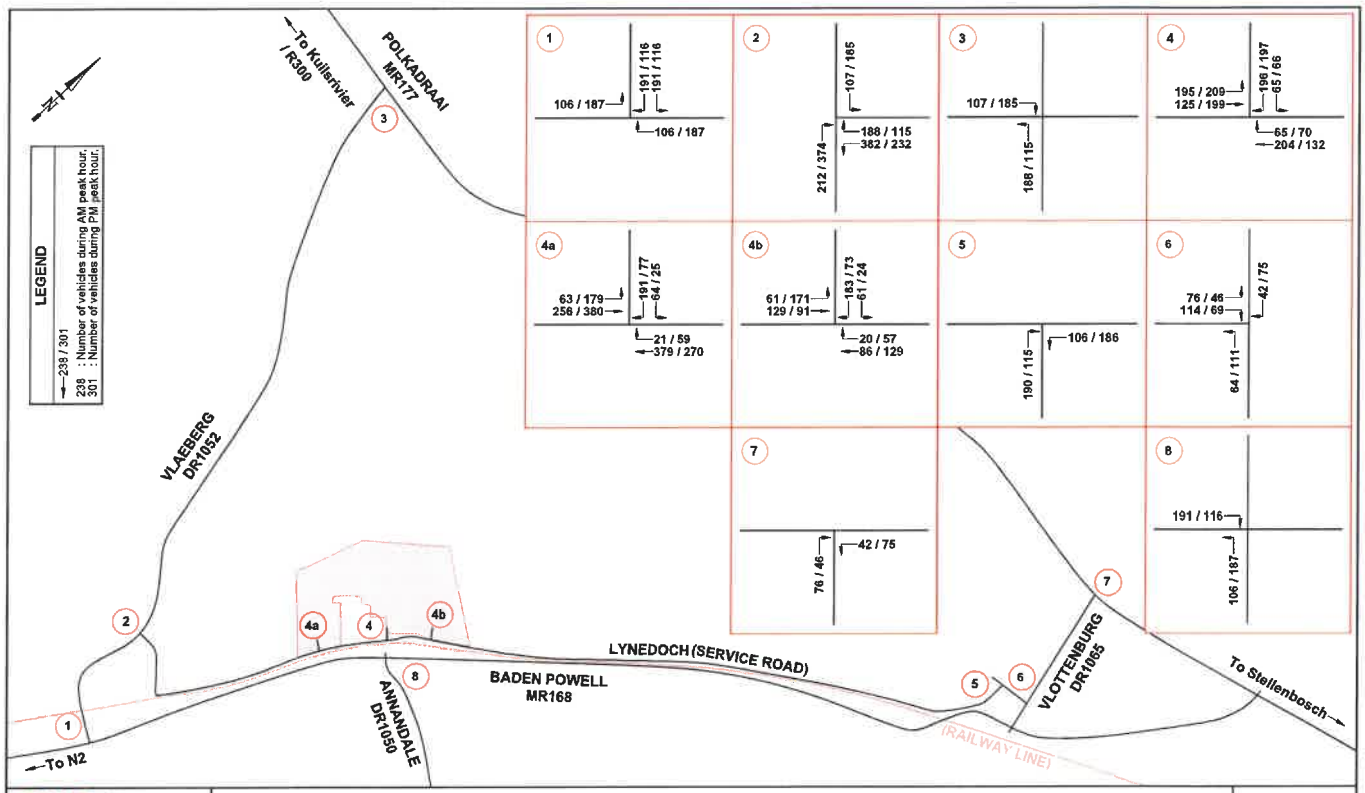
Available AM/PM Peak Hour Traffic Volumes
(Thursday, 25 May 2023)

Figure 1



Estimated 2029 AM/PM Peak Hour Traffic Volumes ('background traffic', including annual traffic growth)

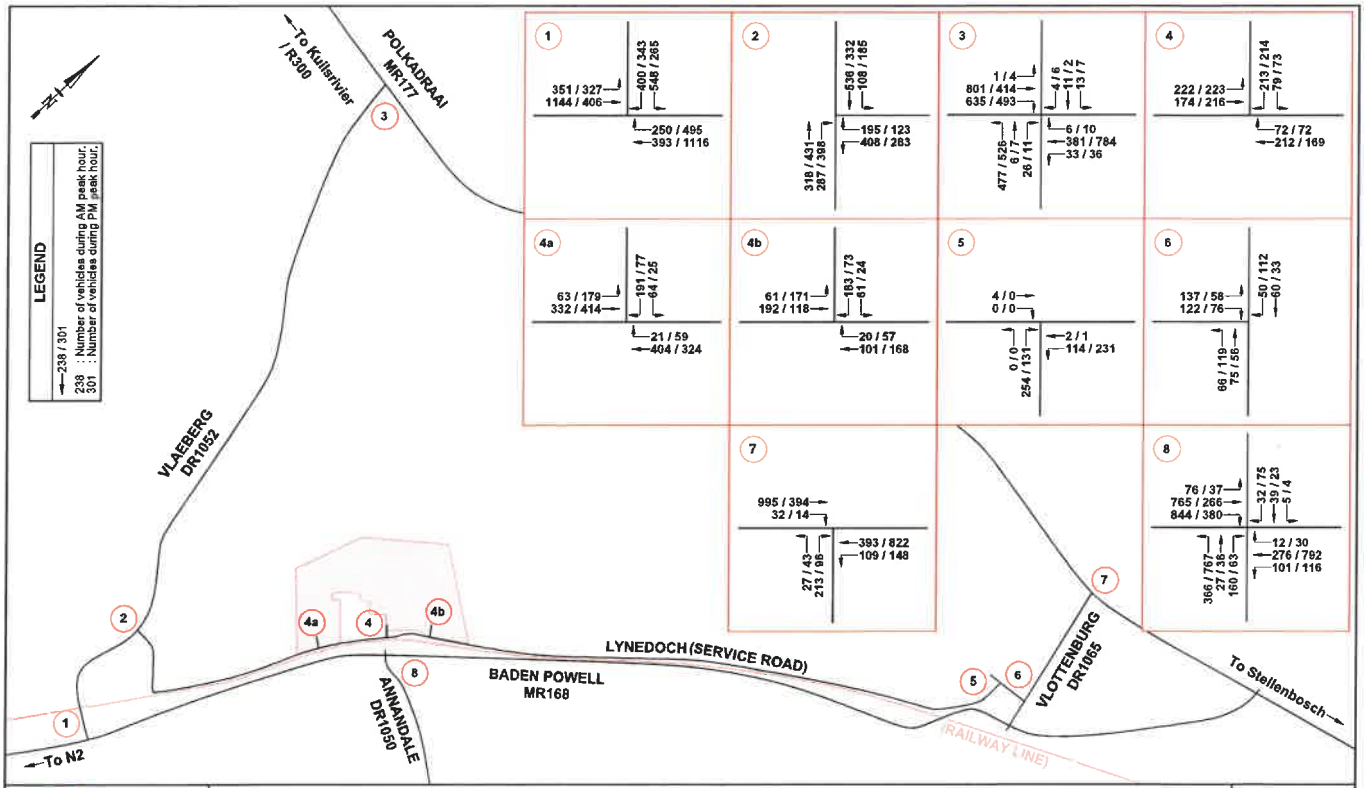
Figure 2



africa

Distribution of Peak Hour Traffic Potentially Generated by Proposed Development

Figure 3



Expected 2029 AM/PM Peak Hour Traffic Volumes
(including annual traffic growth plus proposed development)

Figure 4

ANNEXURE L: ENGINEERING SERVICES REPORT

WELMOED DEVELOPMENT

PORTION 28 OF FARM 468, LYNEDOCH, WITHIN THE STELLENBOSCH MUNICIPAL AREA, WESTERN CAPE

ENGINEERING SERVICES REPORT

REVISION 00

APRIL 2024

Uniqon Developers (Pty) Ltd.
17 Catherine Road
Shere Agricultural Holdings
Pretoria East
0081

UDS Africa
9 Electron Road
Techno Park
Stellenbosch
7600

Contents

1. Background 2

2. Locality 2

3. The development 3

4. Water Demand 3
4.1 Water demand for proposed development 3
4.2 Existing services 4

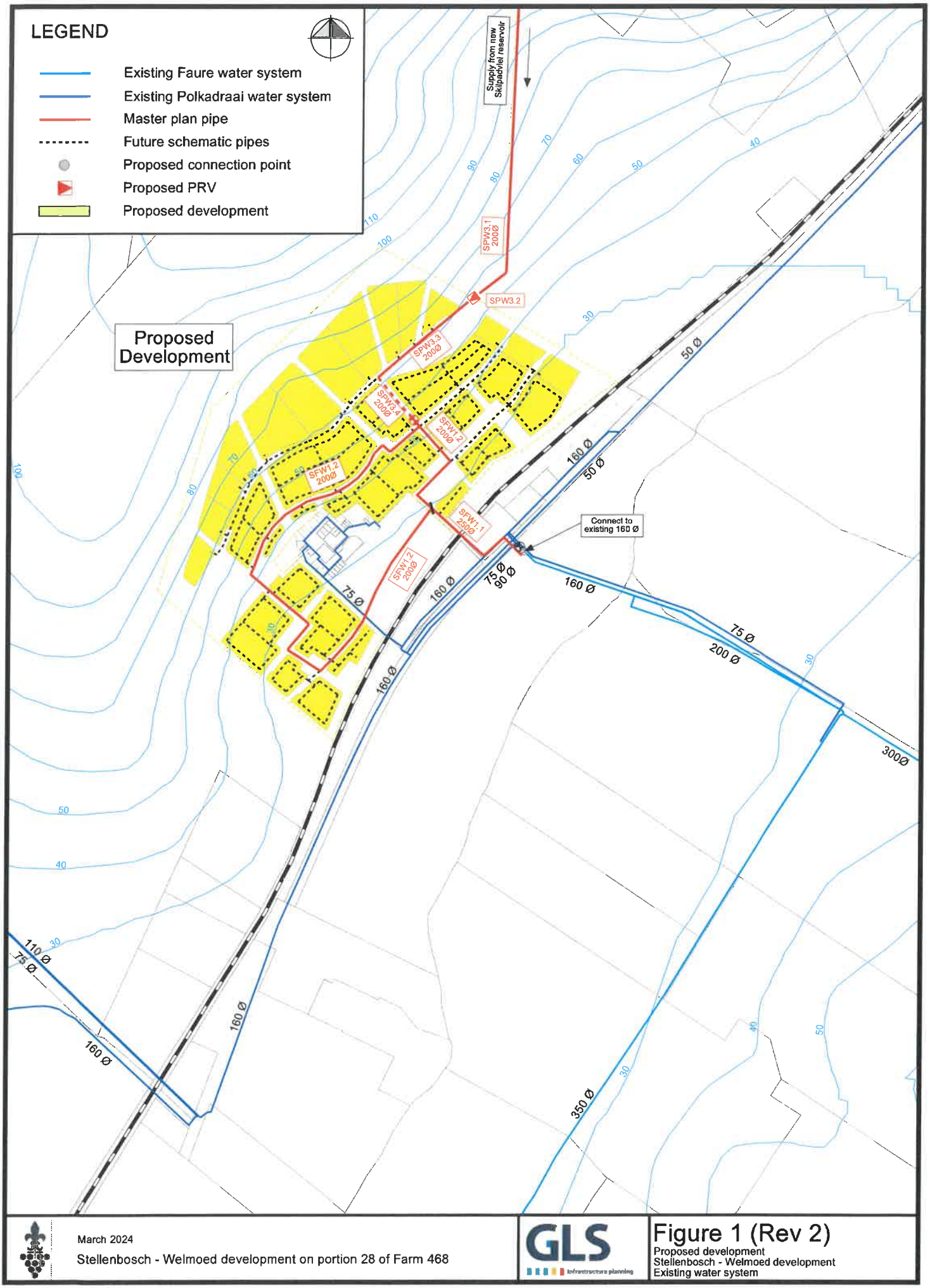
5. Sewerage 6
5.1 Sewer demand for proposed development 6
5.2 Existing services 6

6. Stormwater 8

7. Road Network 8

8. Solid waste 8

9. Conclusion 8



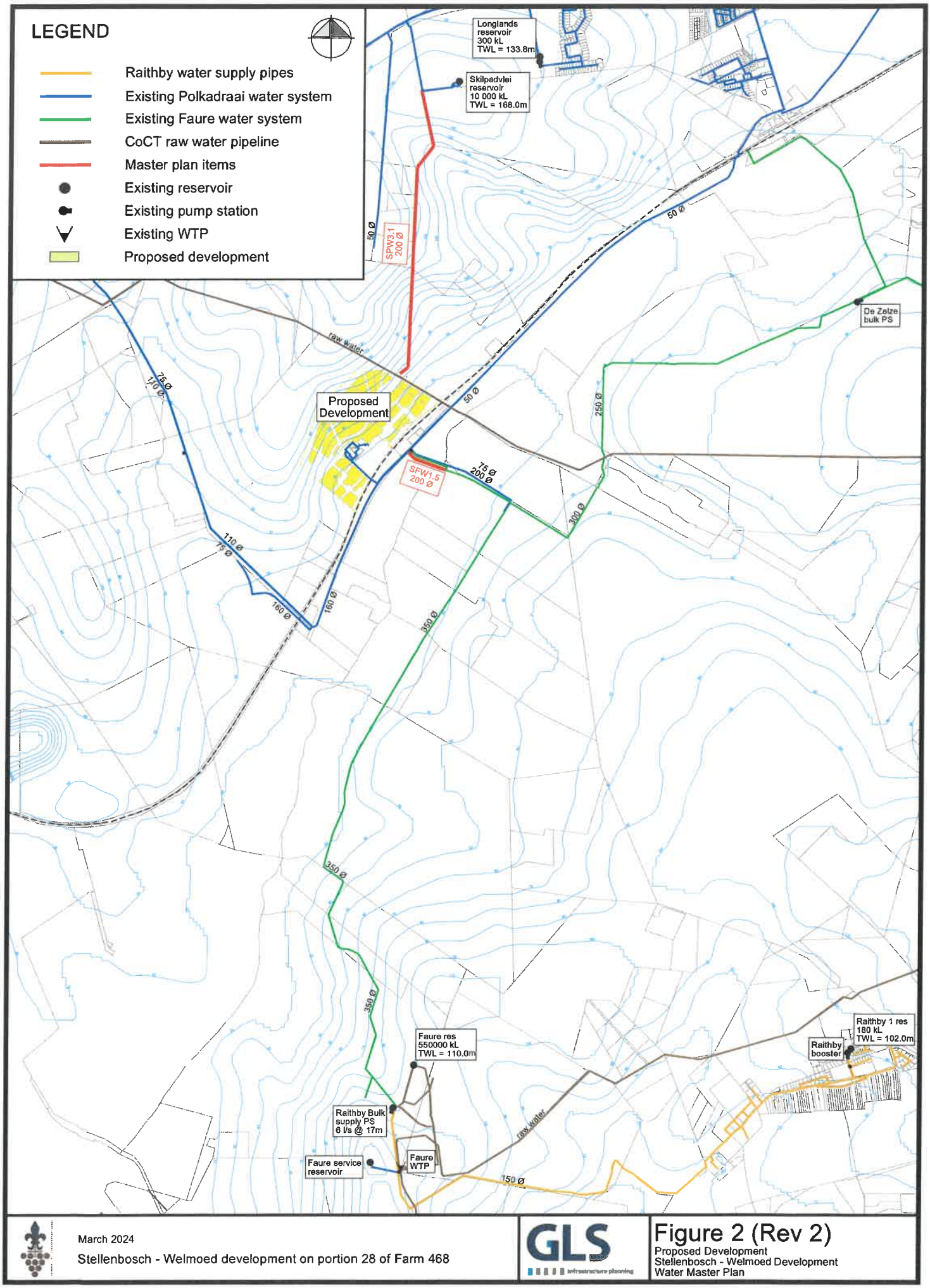
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS infrastructure planning

Figure 1 (Rev 2)

Proposed development
Stellenbosch - Welmoed development
Existing water system



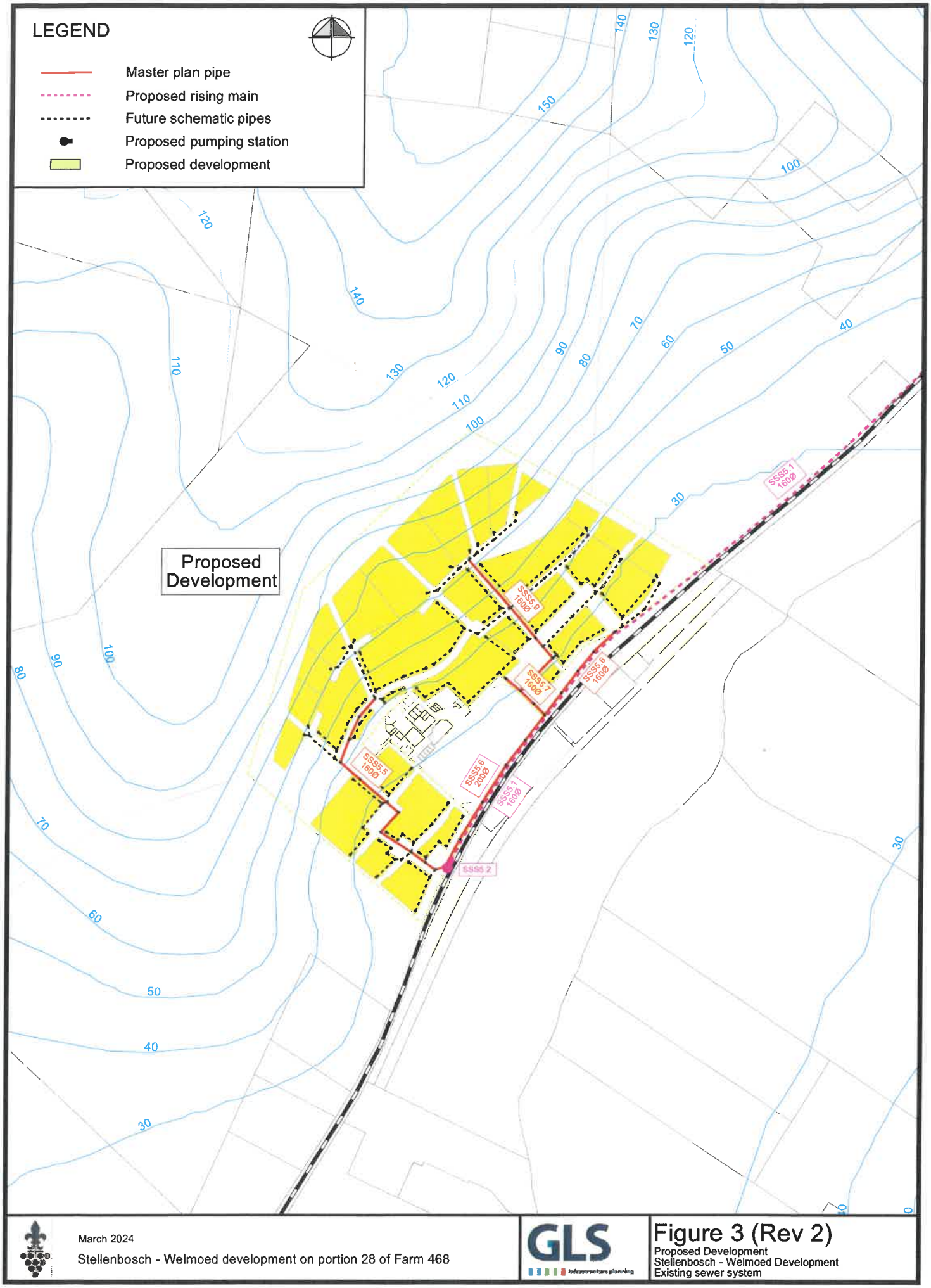
March 2024

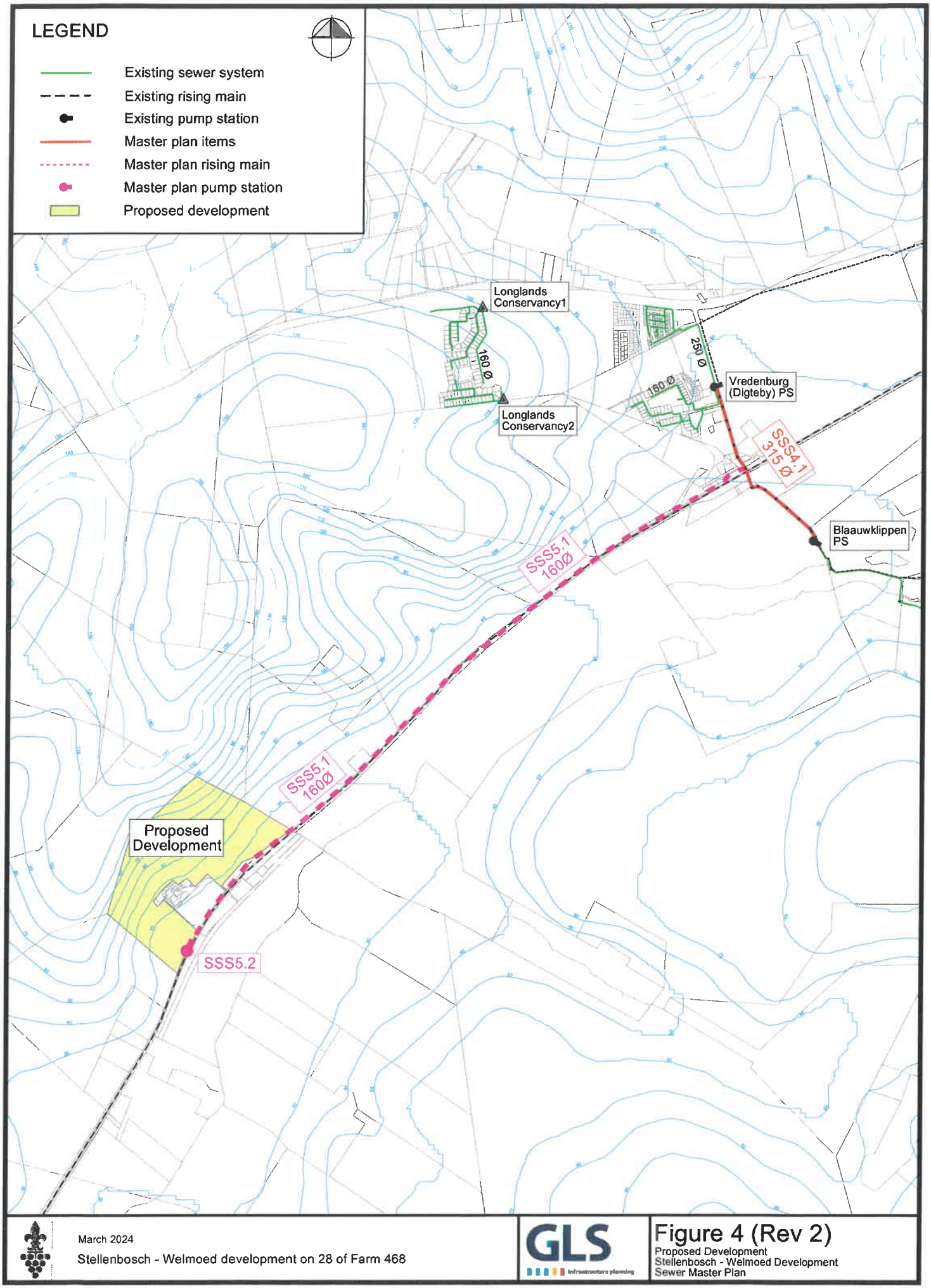
Stellenbosch - Welmoed development on portion 28 of Farm 468

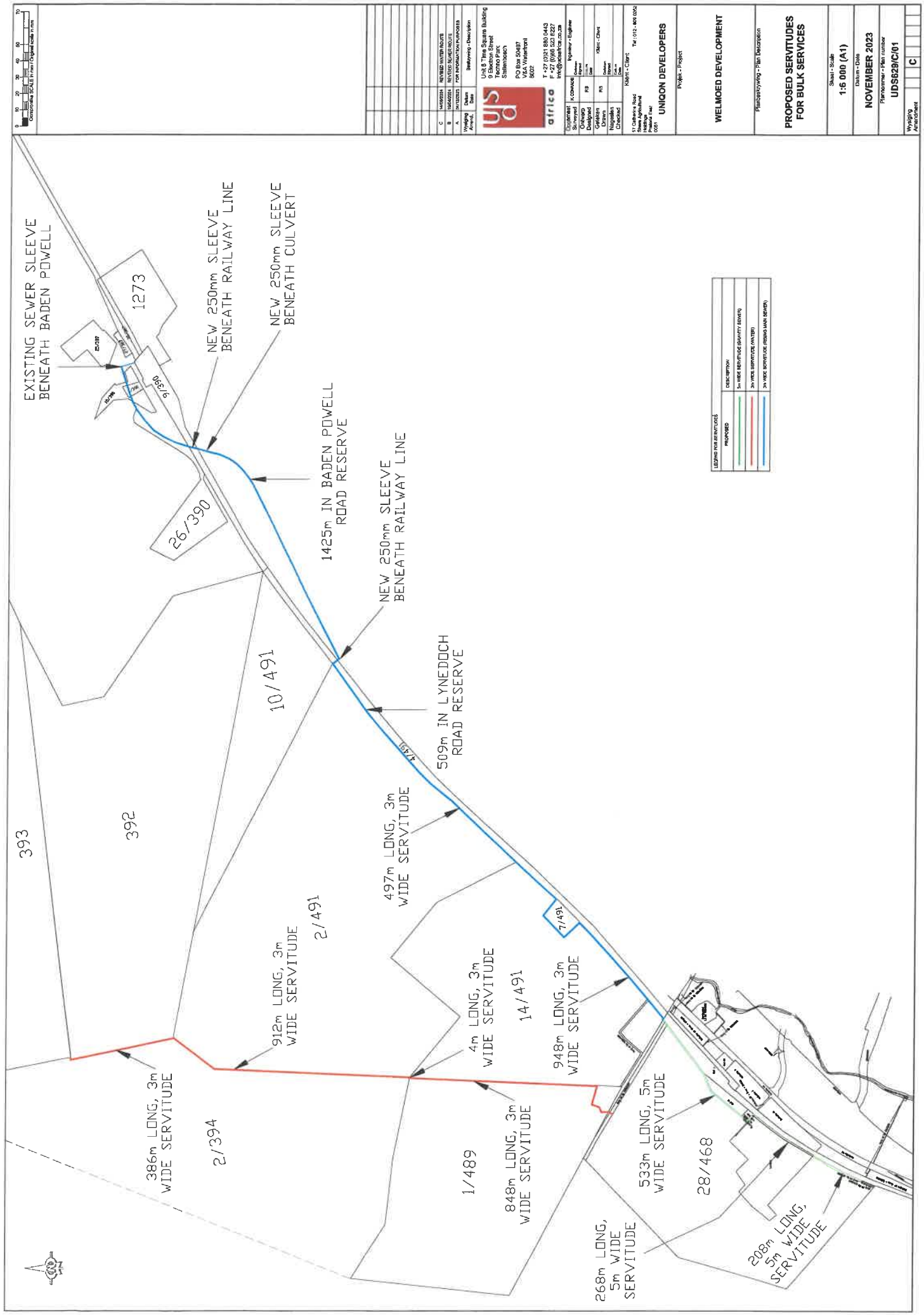
GLS infrastructure planning

Figure 2 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Water Master Plan


LEGEND
Master plan pipe
Proposed rising main
Future schematic pipes
Proposed pumping station
Proposed development
Proposed Development
SSS5.9 160Ø
SSS5.7 160Ø
SSS5.8 160Ø
SSS5.5 160Ø
SSS5.6 200Ø
SSS5.1 160Ø
SSS5.2
SSS5.1 160Ø
March 2024
Stellenbosch - Welmoed development on portion 28 of Farm 468
GLS
Figure 3 (Rev 2)
Proposed Development
Stellenbosch - Welmoed Development
Existing sewer system


LEGEND
Existing sewer system
Existing rising main
Existing pump station
Master plan items
Master plan rising main
Master plan pump station
Proposed development
Longlands Conservancy1
Longlands Conservancy2
160 Ø
250 Ø
160 Ø
Vredenburg (Digteby) PS
SSS4.1 315 Ø
Blaauwklippen PS
SSS5.1 160Ø
SSS5.1 160Ø
Proposed Development
SSS5.2
March 2024
Stellenbosch - Welmoed development on 28 of Farm 468
GLS
Figure 4 (Rev 2)
Proposed Development
Stellenbosch - Welmoed Development
Sewer Master Plan


EXISTING SEWER SLEEVE BENEATH BADEN POWELL
NEW 250mm SLEEVE BENEATH RAILWAY LINE
NEW 250mm SLEEVE BENEATH CULVERT
1425m IN BADEN POWELL ROAD RESERVE
NEW 250mm SLEEVE BENEATH RAILWAY LINE
509m IN LYNEDOCH ROAD RESERVE
497m LONG, 3m WIDE SERVITUDE
912m LONG, 3m WIDE SERVITUDE
4m LONG, 3m WIDE SERVITUDE
948m LONG, 3m WIDE SERVITUDE
386m LONG, 3m WIDE SERVITUDE
848m LONG, 3m WIDE SERVITUDE
533m LONG, 5m WIDE SERVITUDE
268m LONG, 5m WIDE SERVITUDE
208m LONG, 5m WIDE SERVITUDE
1273
26/390
10/491
392
393
2/491
2/394
1/489
14/491
7/491
28/468
LEGEND FOR SERVITUDES
PROPOSED
DESCRIPTION
3m WIDE SERVITUDE (GRAVITY SEWER)
3m WIDE SERVITUDE (WATER)
3m WIDE SERVITUDE (RISING MAIN SEWER)
UNIQON DEVELOPERS
WELMOED DEVELOPMENT
PROPOSED SERVITUDES FOR BULK SERVICES
1:6 000 (A1)
NOVEMBER 2023
UDS629/C/01
C
Unit 8 Tina Square Building
9 Electron Street
Techno Park
Stellenbosch
PO Box 50497
V&A Waterfront
8002
T +27 (0)21 880 0443
F +27 (0)86 523 8227
info@udsafrica.co.za
africa
17 Catherine Road
Stellenbosch Agricultural
Holdings
Postbus 7141
0051
Tel: (012) 809 0500

PORTION 28 OF FARM WELMOED ESTATE

NO. 468, STELLENBOSCH

INFRASTRUCTURE REPORT

ELECTRICAL SERVICES

APRIL 2024

Report By:
DM Consulting Engineers Cape (Pty) Ltd

DM
CONSULTING ENGINEERS
Office 112, The Cliffs 1, 3 Niagara Street,
Tyger Falls Boulevard, Bellville, 7530
+27 (0)21 914 1004 info@dmce.co.za
www.dmce.co.za
WE ALSO HAVE OFFICES IN THE NORTH WEST PROVINCE

Contents

1. Abbreviations 3

2. List of Tables 4

3. List of Figures 4

4. Introduction 5

5. Existing Infrastructure 6

a) Electrical supply from Eskom 6

6. Design development 10

a) Scope of works 10

7. Estimated load 10

a) Capacity availability confirmation from ESKOM 12

b) Future After Diversity Maximum Demand (ADMD) 12

c) PV Solar estimation 13

d) Eskom upgrading proposal 14

8. Costing 14

a) Eskom estimation costs 14

b) Direct construction cost estimation 15

9. Conclusion 16

10. Annexure A 17

1. Abbreviations

ADMD	:	After diversity maximum demand
ATS	:	Automatic Transfer Switch
BDMD	:	Before diversity maximum demand
c/kWh	:	cent per kilo-watt-per hour
CEF	:	Cost Estimate Fee
CEL	:	Cost Estimate Letter
CNC	:	Customer Network Centre
DB	:	Distribution Board
DMCE	:	DM Consulting Engineers Cape (Pty) Ltd
DMS	:	Department of Water and Sanitation
EMP	:	Environmental Management Plan
HV	:	High voltage
kV	:	kilovolt
kVA	:	kilo-volt-ampere
kW	:	kilowatt
kWh	:	kilo-watt-per hour
kWp	:	kilowatt-peak
LPU	:	Large Power User
LV	:	Low voltage
MD	:	Maximum Demand
MDB	:	Main Distribution Board
MSub	:	Miniature substation
MV	:	Medium voltage
NE	:	Northeast
NMD	:	Notified Maximum Demand
NW	:	Northwest
POC	:	Point of consumption
POS	:	Point of supply
PV	:	Photovoltaic
SANS	:	South African National Standards
SDP	:	Site development plan
SE	:	Southeast
SOC	:	State owned company
SW	:	Southwest

2. List of Tables

Table 1: Load calculation summary 11
Table 2: Load calculation - Residential 13
Table 3: Load calculation – Commercial & Summary 13
Table 4: Potential PV Solar generation 13
Table 4: Eskom Process 14
Table 5: Eskom budget estimations 15
Table 6: Direct construction cost estimation 15

3. List of Figures

Figure 1: Location of site. 5
Figure 2: Site development plan 6
Figure 3: Existing Eskom network 7
Figure 4: Proposed POS 7
Figure 5: Lynedoch Substation load profile 8
Figure 6: Eskom MV network 9
Figure 7: Diversity factor example 12

5

4. Introduction

DMCE has been instructed by the client; Uniqon Developers (Pty) Ltd to report on the electrical infrastructure for PORTION 28 OF FARM WELMOED ESTATE NO. 468, STELLENBOSCH and compile an infrastructure report of the site, including load estimation and capacity confirmation of electrical services for the proposed development.



Figure 1: Location of site.

6



PORTION 28 LAND USE TABLE		
Site area	45.48 Ha	
Land use	Area	Units
School Component (A2)	1.78 Ha	
Commercial (A1,B5)	0.50 Ha	
Clubhouse Component(B5)	0.18 Ha	
Mixed Use Component (B1-4)	0.7 Ha	515 units
Residential (@80 du/ha)	5.88 Ha	
Residential (@40 du/ha)	8.74 Ha	355 units
Allotment Villas	10.31 Ha	14 units
Total (excluding areas below)	28.09 Ha	884 units
Detention & SW area	1.15 Ha	
Indigenous slopes	6.42 Ha	
Roads & squares	4.86 Ha	
Private open space	4.04 Ha	

Figure 2: Site development plan

5. Existing Infrastructure

a) Electrical supply from Eskom

There is currently an existing 11kV overhead Eskom line operating along the southeast side of the property, fed from Lynedoch Substation; feeder 1. Various transformers and switching points have been identified (See figure 3). The supply point, "FSARail" has been identified and communicated to Eskom for capacity simulations and confirmation (See Figure 4). The final point of supply (POS) will be determined, identified, and communicated by Eskom.

7



Figure 3: Existing Eskom network



Figure 4: Proposed POS

8

The development is expected to be fed from Lynedoch substation via Lynedoch Farmers 1 feeder. The Substation is equipped with one 10MVA 66/11kV transformer. A peak demand of 9.3MVA to date was recorded on the transformer. Lynedoch Farmers 1 will experience thermal and low voltage constraints should additional load be applied. Voltage regulators will be considered by Eskom. The load on the feeder is currently 4.5MVA and is expected to grow more than that as there are LPUs which are not fully utilising their capacity to date.

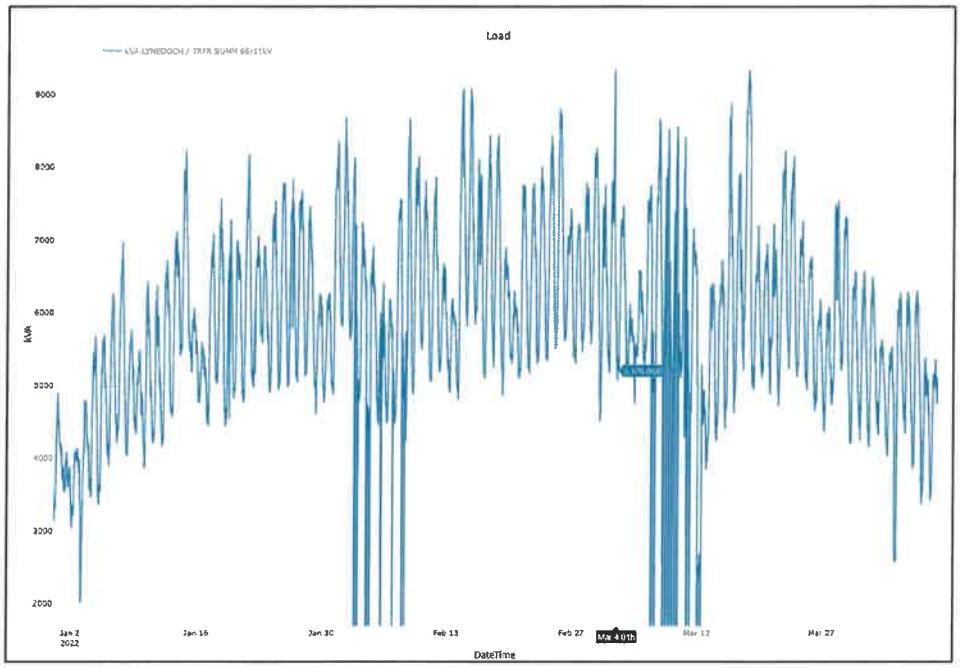


Figure 5: Lynedoch Substation load profile

The following strengthening options must be considered to make capacity available for Welmoed, Portion 28 development.

Option 1:

Transfer load to interconnecting feeders to de-load both the substation and Lynedoch farmers 1 feeder. The amount of load that can be transferred is limited due to the capacity limitations of the interconnecting feeders. This approach is considered a temporary solution and upgrading of the substation transformer will still be required eventually. Eskom confirms 650kVA can be made available of the required maximum demand (MD). See Annexure A.

9

Option 2:

Construct as second overhead feeder (approximately 4km) from Lynedoch substation to the development to share the current load. This option will also require upgrading of the Lynedoch Substation transformer.

This option will require an approved route between Lynedoch substation and Welmoed, Portion 28. Wayleaves assuring legal right of way will be required prior to construction. The overhead powerline will become Eskom property after construction. A selfbuild project may be considered to speed along the process. See figure 6.



Figure 6: Eskom MV network

Option 3:

Construct as new overhead feeder (approximately 5km) from Eersterivier substation to Welmoed, Portion 28 to share the current load. Written confirmation of the viability of this option is still outstanding from the planner responsible for the Eersterivier Substation.

This option (as with option 2) will require an approved route between Eersterivier substation and Welmoed, Portion 28. Wayleaves assuring legal right of way will be required prior to construction. The overhead powerline will become Eskom property after construction. A selfbuild project may be considered to speed along the process. See figure 6.

A project evaluation model analysis will be conducted by Eskom to determine which option yields the least-life cycle cost between option 2&3. The analysis combined with the require confirmation from the network operator for Eersterivier substation will influence Eskom's preference between option 2 and 3 respectively.

6. Design development

a) Scope of works

The scope of works for the proposed development may be listed as follows:

1. Conduct a load estimation of the development.
2. Confirm sufficient capacity available from Eskom for the development.
3. Examine potential PV Solar generation for the development.
4. Apply for MV Bulk supply point from Eskom.
5. Provide recommendations.

7. Estimated load

The development allows for 886 residential dwellings with potential allowance for future density increase applications. A design load of 2.5kVA is calculated for each dwelling. The follow alternative energy measures will be employed at each dwelling to limit energy consumption form the national Eskom grid:

1. Gas stoves
2. Gas geyser
3. Gas ovens
4. 5kW PV Solar system

PV Solar efficiency of each induvial dwelling cannot be declared at present. Information such as roof structure, direction, roof tilt and shading information is not

available at present. Allowance for the PV Solar shortfalls have been made in the design load.

Item	Building Type	Block	Residential Type	Area (m²)	No. of Units	kVA/Unit	Total Load (kVA)
1	Residential	B1	Standard Unit		55	2,5	137,5
2	Residential	B2	Standard Unit		56	2,5	140
3	Residential	B3	Standard Unit		56	2,5	140
4	Residential	B4	Standard Unit		86	2,5	215
5	Residential	B5	Standard Unit		20	2,5	50
6	Residential	B6	Standard Unit		71	2,5	177,5
7	Residential	B7	Standard Unit		37	2,5	92,5
8	Residential	B8	Standard Unit		106	2,5	265
9	Residential	B9	Standard Unit		52	2,5	130
10	Residential	B10.1	Standard Unit	258200	4	2,5	10
11	Residential	B10.2	Standard Unit		5	2,5	12,5
12	Residential	B11	Standard Unit		23	2,5	57,5
13	Residential	B12	Standard Unit		46	2,5	115
14	Residential	B13	Standard Unit		48	2,5	120
15	Residential	B14	Standard Unit		105	2,5	262,5
16	Residential	B15	Standard Unit		30	2,5	75
17	Residential	B16	Standard Unit		49	2,5	122,5
18	Residential	-	Standard Unit		22	2,5	55
19	Residential	C1-14	Alottment Villa		14	2,5	35
					885		
			Total Load (KVA)				2212,50
			Diversity				0,90
			ADMD (KVA)				1991,25

Page 1

Table 1: Load calculation – Residential

COMMERCIAL SPACES								
Item	Building	Level	Commercial Space Type	Qty	Area (m²)	VA/m²	Total Load (VA)	Total Load (KVA)
1	-	All	School component	1	17800	85	1513000	1513
2	-	All	Commercial component	1	5000	85	425000	425
3	-	All	Clubhouse component	1	1800	40	72000	72
4	-	All	Mixed use component	1	7000	65	455000	455
5	External lighting	-	-	1	-	-	-	5,00
					31600			
						Total Load (KVA)		2470,00
						Diversity		0,80
						ADMD (KVA)		1976,00
						Total Load (Residential + Commercial Spaces)		4188,50
						Diversity		0,50
						ADMD (KVA)		2094,25

Page 1

Table 2: Load calculation – Commercial & Summary

Formal applications to Eskom for capacity allocations will increase over time in required NMD with relation to growth of the development. This allows time for Eskom to perform necessary upgrading and preparations towards 2.1MVA NMD. An increase NMD application for 2.6MVA will be submitted for future density increase applications after the designed number of consumers is reached (1500).

12

a) Capacity availability confirmation from ESKOM

A revised scope of works has been issued to Eskom following a meeting conducted on the 7th of June 2023. Eskom will provide feedback regarding the maximum allowed capacity available on the Lynedoch Substation Feeder 1 (See Annexure A).

b) Future After Diversity Maximum Demand (ADMD)

ADMD is the after diversified Maximum Demand (MD).

The ADMD is determined as follows:

1. The Maximum Demands (MD) for each dwelling is determined using appropriate kVA/dwelling values.
2. A diversity factor is factored in for the complete development (885 connections). The diversity factors decrease as the number of connections increases.

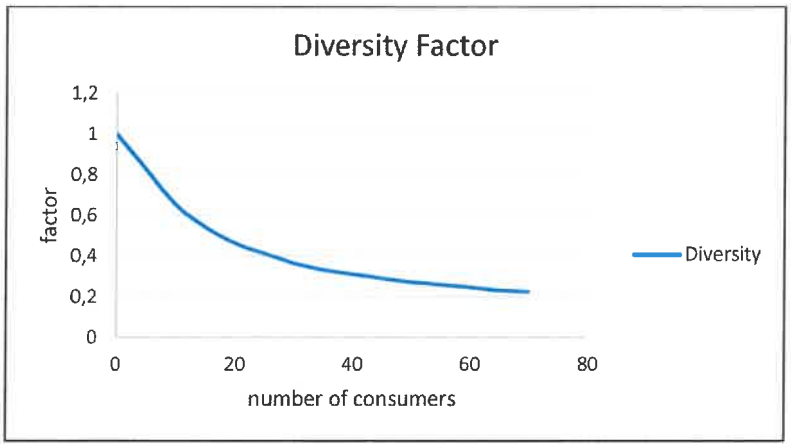


Figure 7: Diversity factor example

3. The MD and ADMD are determined from the sums of the separate dwelling MDs and ADMDs.

The site's MD is calculated at 4.2MVA (BDMD) and 2.1MVA (ADMD) respectively. As illustrated below in Table 3, the number of consumers is expected to be reached over a construction period of 6 years. The final phasing of the project to be confirmed by

the developer. Required application for a 2.1MVA NMD supply will follow the number of designed consumers (885) including the planned commercial area.

Phase	Expected year of construction	Number of Units	kVA required @ 2.5kVA design load	kVA demand with Diversity
Phase 1	2025	150	375	187.5
Phase 2	2026	150	375	187.5
Phase 3	2027	150	375	187.5
Phase 4	2028	150	375	187.5
Phase 5	2029	150	375	187.5
Phase 6	2030	135	340	170
		885	2 215	1 108

Table 3: Future expected load increase

c) PV Solar estimation

As previously mentioned, each dwelling will be equipped with a 5kW PV Solar system. Limiting factor cannot be declared at present. A design efficiency of 60% is selected to consider.

PORTION 28, WELMOED ESTATE

PV SOLAR CALCULATION 2023/07/18

Item No.	No of dwellings	Area	Design Load (kW)	(kW) - TOTAL
1	886	Portion 28, Welmoed Estate	5.0	4 430
A		Potential capacity		4 430
B		Expected supply capacity	60%	2 658

Table 4: Potential PV Solar generation

d) Eskom upgrading proposal.

A MV bulk supply point with metering will be supplied, installed, tested, and commissioned by Eskom for the development. Eskom is required to confirm capacity in writing (see annexure A).

8. Costing

a) Eskom estimation costs

A formal application was submitted to Eskom on the 22 of May 2023. A follow up meeting was conducted with members of Eskom on the 7th of June 2023 and a revised scope of works was issued to Eskom on the 10th of July 2023. Eskom is required to provide written confirmation of capacity available for the development on the supply feeder. Eskom-process can be summarised as follow:

Step 1	Submit application to Eskom
Step 2	Pay cost estimate (CE) fee – This fee can vary depending on the project R33 436,00. We will request an invoice and assigned reference number after submitting the application.
Step 3	Project is loaded on system and network planning is consulted about the project. Scope of works is advised.
Step 4	Cost Estimate Letter (CEL) is issued for payment by the customer. Amount depends on network planning and cannot be predicted in advance.
Step 5	Budget quotation is issued for payment by the customer. Cost Estimate Fee and Cost Estimate letter amount is deducted from this amount, and the difference is for the client's account. Amount depends on network planning findings and cannot be predicted in advance.
Step 6	Project is handed over to design, construction and closing.

Table 2: Eskom Process

15

Preliminary budget estimations

The following costs are estimated to be paid to Eskom for a MV Bulk point supply:

	Description	Amount
1	Cost estimation fee	R33 436.00
2	Cost estimation letter	R100 000.00
3	Budget quotation	R1 500 000.00
	Total (excl. VAT)	R1 633 436.00

Table 3: Eskom budget estimations

All amounts listed above are VAT excl.

This is a high-level cost estimation. Correspondence and approvals are still required from Eskom.

b) Direct construction cost estimation

The follow estimation is allowed for regarding direct construction cost for the development. The estimation only allows for MV underground reticulation up until each miniature substation. Final positions of the miniature substations will be identified and confirmed during construction phase of the development.

	Description	Amount
1	MV Cable	R3 060 000.00
2	5 Way RMU	R700 000.00
3	Miniature Substations	R5 635 000.00
4	Delivery	R89 800.00
5	Installations	R758 784.00
6	Prelim & Generals	R102 435.84
7	OHS	R30 000.00
8	Testing & Commissioning	R30 000.00
	Total (excl. VAT)	R10 406 019.84

Table 4: Direct construction cost estimation

16

This is a high-level cost estimation. More detailed design will be required to conclude a more accurate cost figure.

9. Conclusion

To conclude this report, the following is evident:

1. Alternative energy sources such as gas and PV Solar will be used for the development. LED street lightning recommended.
2. The NMD for the development will increase in relation to construction of the development. Application for increase to a 2MVA NMD supply will follow the completion of the designed consumers (886).
3. The annual energy consumed form the grid will be reduced by the proposed PV solar system.
4. Ring feed MV reticulation recommended for the development MV network.
5. MV underground armoured cable design has been allowed for. Overhead MV reticulation recommended as a more cost-effective approach, subject to development allowance for MV overhead line reticulation.
6. Option 1 is recommended to start the project and establish a point of supply for the development. Instruction to proceed required.
7. Option 2 is recommended to supply remaining demand to the development. Approved overhead line route to be confirmed.

Compiled by:

JP LOURENS
SENIOR PROJECT ENGINEER

Approved by:

D. R. MÜLLER
Pr Eng

DM CONSULTING ENGINEERS CAPE (PTY) LTD

17

10. Annexure A

Eskom

Mr. Jaco van Rooyen
DM Consulting Engineers Cape
PO Box 3125
DURBANVILLE
7551

Date:
17 August 2023

Enquiries: JP Du Preez
Tel +27 21 915 2076

Dear Mr. Van Rooyen

SUPPLY OF ELECTRICITY
PROPOSED SUPPLY: PTN 28 OF THE FARM 468, WELMOED ESTATE, STELLENBOSCH

With reference to your ENQUIRY at Eskom, I advise that Eskom is the licensed Distributor to the property above.

Capacity of 650 kVA can be made available on the Lynedoch / Farmers 1 feeder to supply the initial load.

The method of supplying the electricity will be determined once details are made available. The formal quote process will confirm spare capacity available and a proposal to supply such development. Execution of making supply available will only be initiated on acceptance of a formal budget quote. The date to make a point of supply available will be confirmed during this process.

Should you require any further information please contact Pieter du Preez on the telephone numbers mentioned above, and be assured of Eskom's best service at all times.

Yours faithfully

JP Du Preez
Key Customer Relations Officer

Group Customer Service
60 Voortrekker Road, Bellville, 7530
P.O. Box 2100, Bellville, 7535 SA
Tel +27 86 003 7566 www.eskom.co.za
Eskom Holdings SOC Limited Reg No 2002/015527/30

DM

ENGINEERING SERVICES REPORT FOR THE WELMOED DEVELOPMENT ON PORTION 28 OF FARM 468, LYNEDOCH, WITHIN THE STELLENBOSCH MUNICIPAL AREA, WESTERN CAPE

1. Background

UDS Africa was appointed by Mr Etienne Coetzer to compile a services report in support of the development application for a proposed mixed use development on portion 28 of farm 468, Lynedoch. The site covers an area of 45.48 Ha and is currently undeveloped. The site is zoned for agricultural use.

The purpose of this report is to address the requirements of Stellenbosch Municipality with regard to the provision of engineering services for the proposed development. The infrastructure design of the development is based on the technical requirements and guidelines as stated in the Guidelines for Human Settlements Planning and Design (Red Book: July 2019) and to the requirements and standards of Stellenbosch Municipality.

2. Locality

The site is located in Lynedoch, within the Stellenbosch Municipal area. The site is bordered to the north, east and west agricultural land and to the south by Lynedoch Road. Below is a locality plan for reference (outlined in red, area highlighted in yellow).



Figure 1: Locality plan of Portion 28 of Farm 468

3. The development

The proposed development will be large residential in nature, with a clubhouse, commercial and school component. Please refer to **Annexure A** for a copy of the site development plan prepared by Urban Studio Architects and Urban Designers. Below is a summary of the land uses to from part of the proposed development:

USE	AREA	UNITS
School	1.78 Ha	
Commercial	0.50 Ha	
Clubhouse	0.18Ha	
Mixed use/ Residential (80/Ha)	6.58 Ha	515
Residential (40/Ha)	8.74 Ha	355
Residential (allotment villas)	10.31 Ha	14

Table 1: Summary of land uses

A capacity analysis was completed by GLS Consulting (Pty) Ltd for the proposed development in March 2024. A copy of the report can be found under **Annexure B.**

4. Water Demand

4.1 Water demand for proposed development

The water demand for the proposed development is calculated (in accordance with the Guidelines for Human Settlement Planning and Design) as follows:

WATER DEMAND						
DEVELOPMENT	**Units**	**Area (m^2)**	**l/ unit/ day**	**l/ 100m^2**	**TOTAL (l/d)**	**TOTAL (l/s)**
School		17 800	12000/ ha		21 360	0.247
Commercial		5 000	20 800/ha		10 400	0.120
Clubhouse		1 800	12 000/ ha		2 160	0.025
Residential (80 units per Ha)	515		300		154 500	1.788
Residential (40 units per Ha)	355		450		159 750	1.849
Residential (allotment villas)	14		2 000		28 000	0.324
TOTAL					**376 170**	**4.353**
Annual Average Daily Demand (AADD)	376 170 l/d 4.353 l/s					
Peak factor	4.00					
Peak demand	1 504 680 l/d 17.415 l/s					
Fire flow requirement	25 l/s @ 10m					

Table 2: Water demand calculation

The internal water reticulation network of the proposed development to comply with the minimum specifications as indicated in the "Red Book - Guidelines for Human Settlement Planning and Design" and the municipal standards from Stellenbosch Bay Municipality.

4.2 Existing services

The closest water reticulation network is a 50mm pipe located along Baden Powell Drive. It is proposed that bulk services SPW3.1 & SFW1.5 are constructed in order to supply the development with both domestic and fire water. The Skilpadvlei and Faure reservoirs have sufficient spare capacity to accommodate the development.

A 200mm connection will be made from SPW3.1 and a 250mm connection from SFW1.5. The minimum diameter of the internal water network will be 200mm HDPE PE100 PN12.5 pipes for the northern portion and 250mm HDPE PE100 PN12.5 pipes for the southern portion. A PRV will be required to regulate the water pressure from the Skilpadvlei connection.

The developer intends to construct the development in 14 phases. Refer to **Annexure C** for a copy of the proposed phasing plan.

The total water demand can be apportioned as 355.70 kL/d for the lower lying area to be supplied from the Faure system and 20.47 kL/d for the higher lying area supplied from the Skilpadvlei Reservoir. The Faure system can only supply the development up to the 60 to 70m contour (phase 1 to 13). The Skilpadvlei system will have to be constructed to supply Phase 14.

Refer to **Figure 2** below, showing the location of the existing and bulk network upgrades.

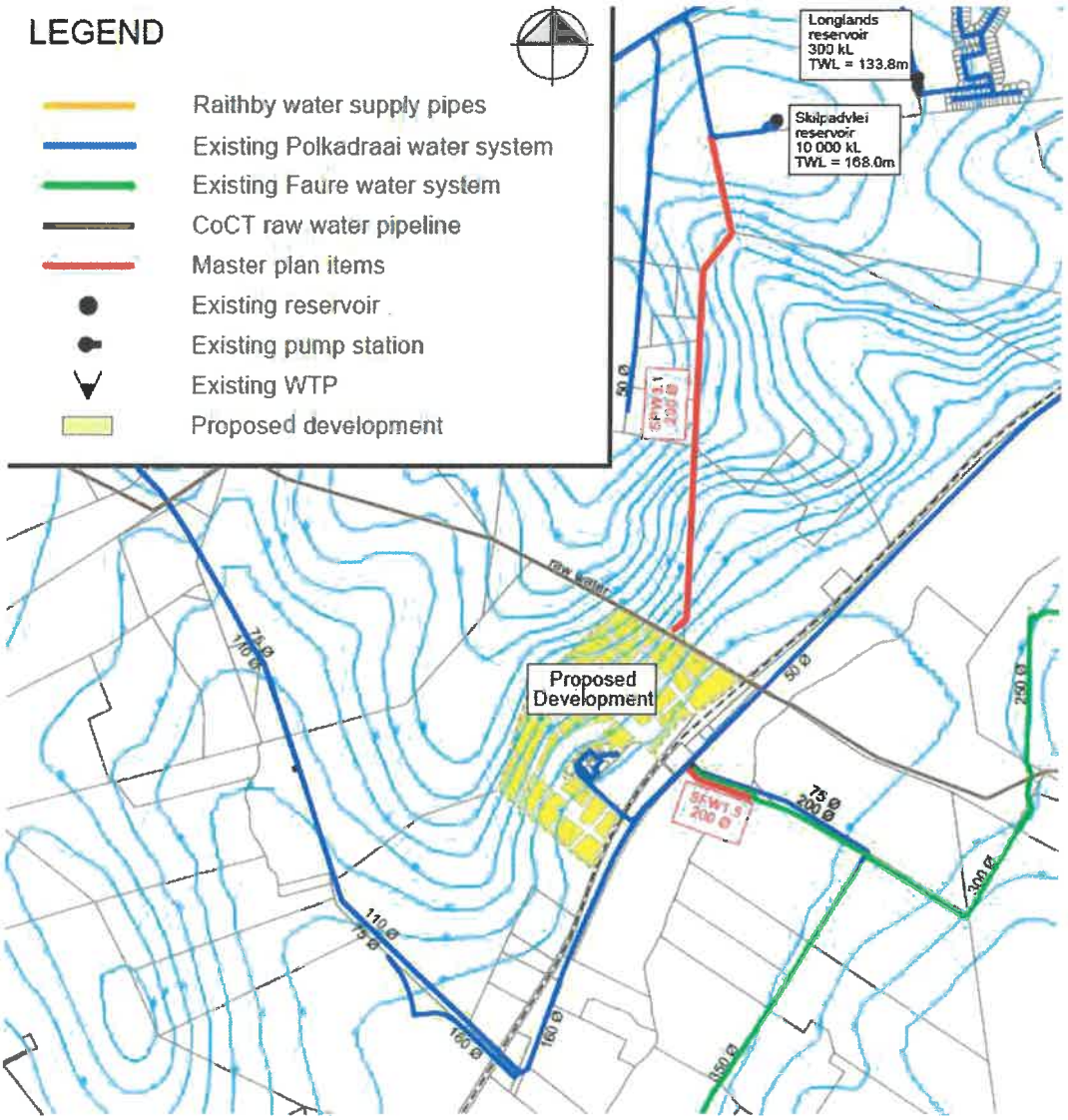


Figure 2: Existing water reticulation services

The cost of the abovementioned bulk services amount to R5 590 000 (Excluding VAT, but includes contingencies and fees). The associated costs hereof is expected to be deductible from the Development Contributions payable by the client.

SPW3.1 will be constructed over private land and a minimum 3m wide servitude will be required.

5. Sewerage

5.1 Sewer demand for proposed development

The sewerage flow for the proposed development is calculated (in accordance with the Guidelines for Human Settlement Planning and Design) as follows:

SEWER FLOW	
Average Dry Weather Flow (ADWF) (70% of annual average daily water demand)	263 319 l/d (3.048 l/s)
Peak Factor	4.00
Peak Dry Weather Flow (PDWF)	12.191 l/s
Peak Wet Weather Flow (PWWF)	14.019 l/s

Table 3: Sewer demand calculation

The internal sewer reticulation network of the proposed development to comply with the minimum specification as given in the "Red Book - Guidelines for Human Settlement Planning and Design" and the municipal standards from Stellenbosch Municipality.

5.2 Existing services

Currently there are no existing municipal sewer services in close proximity to the site.

The GLS capacity report confirmed that there is sufficient capacity available at the Blaauwklippen pump station, however it is required that master plan items SSS5.1, SSS5.2 & SSS4.1 are constructed in order to convey sewerage to the Blaauwklippen pump station.

The internal network will consist of 160mm Class 34 uPVC pipes connected to SSS5.2 (new 12 l/s pump station) with a 200mm Class 34 uPVC collector pipe.

The cost of the abovementioned bulk services (SSS5.1 & SSS5.2) amount to R10 289 000 (Excluding VAT, but includes contingencies and fees). Item SSS4.1 is currently in the process of being implemented by Stellenbosch Municipality (tender phase).

Items SSS5.1 & SSS5.2 will be constructed over private land for approximately 2.4km with the remaining 2.6km section of the pipeline falling within the Baden Powell Road Reserve. A minimum 3m wide servitude will be required where the pipeline is constructed over private property. Refer to **figure 3** below showing the locality of the proposed bulk services.

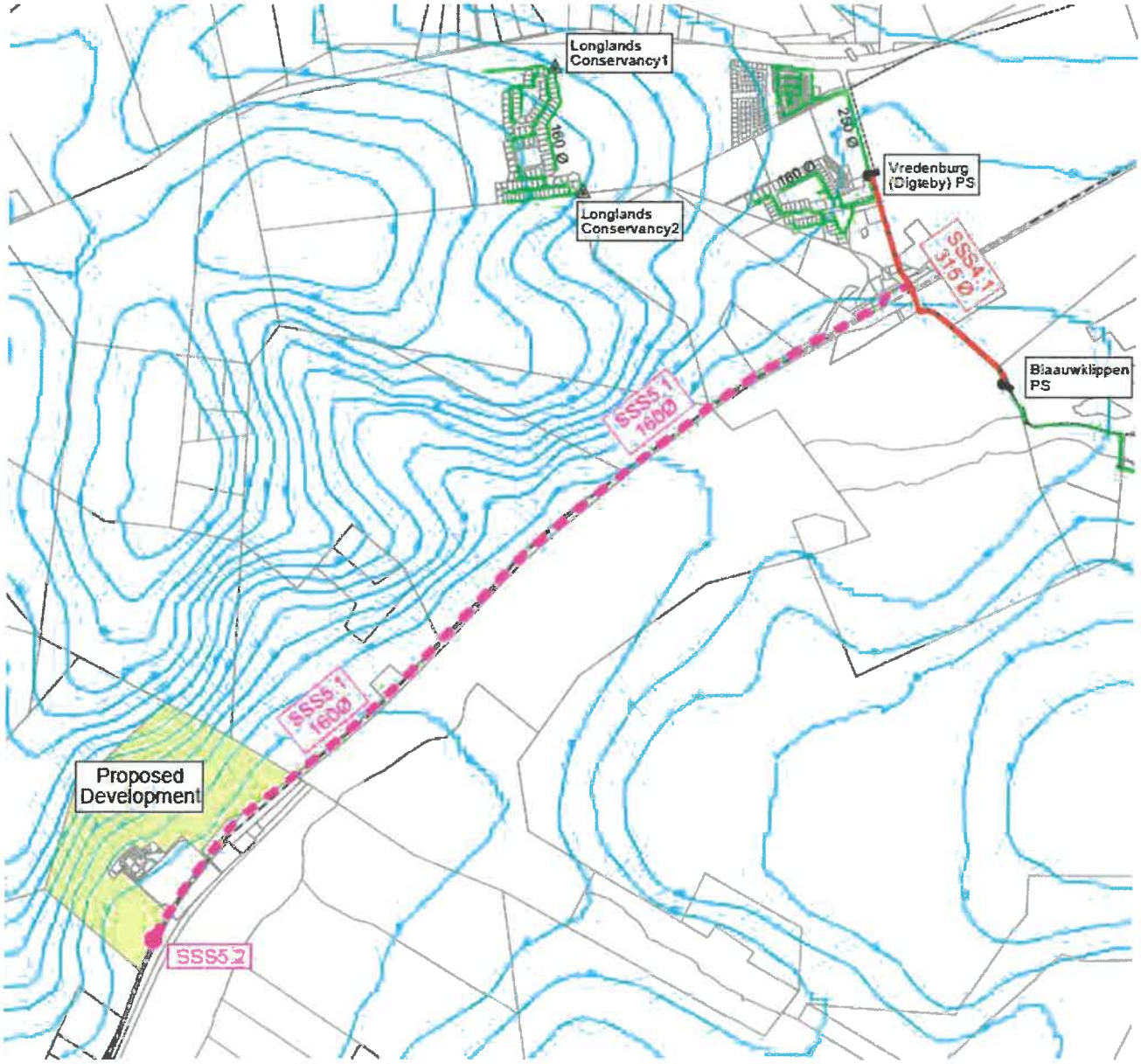


Figure 3: Existing and new sewer reticulation services

6. Stormwater

A stormwater management plan was completed by UDS Africa in order to model the impact of the proposed development on existing stormwater services, as well as proposing both stormwater quantity and quality treatment measures that needs to be provided on site. This will be submitted as a separate report to the Engineering Services Report.

7. Road Network

A full traffic impact assessment was completed by UDS Africa to model the impact of the development on the existing road network. This will be submitted as a separate report to the Engineering Services Report.

8. Solid waste

Dedicated refuse collection areas will be provided at each of the development pockets. It is proposed that refuse removal will take place by private collection on specified collection days at each of the dedicated refuse sites. Accommodation of for refuse removal vehicles will be ensured as well as compliance with their relevant requirements. Below is a summary of the anticipated annual solid waste generation:

USE	AREA	TOTAL PER ANNUM
School	490 pupils @ 30 L/ annum	14.70m^3
Commercial	1m^3/ week	52m^3
Clubhouse	1m^3/ week	52m^3
Mixed use/ Residential (80/Ha)	240 L/ week	6 427.20m^3
Residential (40/Ha)	240 L/ week	4 430.40m^3
Residential (allotment villas)	240L/ week	174.72m^3
TOTAL		11 151.02m^3

9. Conclusion

From the abovementioned information provided, it is concluded that the site can be serviced from an engineering perspective. We trust that the information provided will be sufficient for the purposes of the application.

All aspects of this report will be confirmed in the detail design stage of the project. Please do not hesitate to contact the undersigned should you require any additional information.

Yours faithfully,



Compiled by:

Ruaan Siebrits (Pr Tech Eng)

Attachments:

Annexure A – Site development plan
Annexure B – GLS Report
Annexure C – Phasing plan

ANNEXURE A



PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component (B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Alottment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024

WELMOED URBANSTUDIO architects & urban designers

ANNEXURE B

GLS

Infrastructure planning

28 March 2024

UDS Africa
9 Electron Street
Techno Park
STELLENBOSCH
7600

Attention: Mr Cobus Louw

Dear Sir,

DEVELOPMENT OF PORTION 28 OF FARM 468 (WELMOED DEVELOPMENT), STELLENBOSCH: CAPACITY ANALYSIS OF THE BULK WATER & SEWER SERVICES

This is an update of the bulk water and sewer capacity investigation report performed for development on portion 28 of Farm 468, dated 25 July 2023. In this updated report phasing for the different development areas within the larger development node was included in order to comment on the phasing of the proposed infrastructure upgrades.

Your request for GLS Consulting to investigate and comment on the bulk water supply and sewer discharge of the proposed development (mainly residential development of portion 28 of Farm 468, Stellenbosch), refers.

This document should inter alia be read in conjunction with the Water Master Plan (performed for the Stellenbosch Municipality) dated June 2023 and the Sewer Master Plan dated June 2023.

Future development areas V1.1 to V1.9, which include the proposed development area, were conceptually taken into consideration for the June 2023 master plans for the water and sewer networks.

1. WATER DISTRIBUTION SYSTEM

1.1 *Distribution zone*

Portion 28 of Farm 468 is located on the western side of the Baden Powell Drive (R310 Main Road) adjacent to the existing Lynedoch Eco Village. The existing Lynedoch development is supplied with bulk water from the Polkadraai rural water supply scheme, with alternative supply possible from the Faure rural water supply scheme.

The master planning indicated that the development area below the 60 m contour on portion 28 of Farm 468 should be accommodated in the existing Faure water supply scheme. The connection to the existing system should be done on the 160 mm diameter pipe on the corner of the Baden Powell Drive and Annandale Road, as shown on Figure 1 attached. This will serve Phase 1 to Phase 13 of the larger development area.

GLS Consulting (Pty) Ltd
T +27 21 880 0388
Stellenpark, Block D North, Cnr of R44 and School Rd, Jamestown, Stellenbosch, 7600, ZA | PO Box 814, Stellenbosch, 7599, ZA
Reg no: 2007/003039/07
www.gls.co.za

Directors: Marius de la Rey, Garreth Young

Water pressure from the Faure system is insufficient to service the higher lying areas of portion 28 of Farm 468 (areas above the 60 m contour) and it is proposed in the master planning that these areas are supplied with water directly from the recently constructed Skilpadvlei reservoir, located to the north of the proposed development, as shown on Figure 2 attached. This connection will serve Phase 14 of the development.

The development is situated inside the water priority area.

1.2 *Water demand*

The total annual average daily demand (AADD) and fire flows for the proposed development were calculated as follows:

Potion 28 of Farm 468 [(1), (2)]:

• 355 Medium density residential units (40 units/ha) @ 450 L/d/unit		=	159,8 kL/d
• 520 High density residential units (80 units/ha) @ 300 L/d/unit		=	156,0 kL/d
• 14 Allotment Villa units @ 2,0 kL/d/unit		=	28,0 kL/d
• 1,78 ha School area @ 12,0 kL/d/ha		=	21,4 kL/d
• 0,5 ha Business/commercial area @ 20,8 kL/d/ha		=	10,4 kL/d
• 0,18 ha Clubhouse facility area @ 12,0 kL/d/ha		=	2,2 kL/d
	Total	=	377,7 kL/d

- Fire flow criteria (Moderate risk) = 25 L/s @ 10 m

(1) As per Table J.2 and J.4 from Section J – Water Supply of "The Neighbourhood Planning and Design Guide" (so called "Red book").

(2) The total water demand of 377,7 kL/d for portion 28 of Farm 468 can be apportioned 355,7 kL/d for the lower lying areas supplied from the Faure system and 22,0 kL/d for the higher lying areas supplied from the Skilpadvlei reservoir in the Polkadraai system.

1.3 Present situation

1.3.1 Network capacity

The existing pipes of the Polkadraai system in the Baden Powell Drive have insufficient spare capacity to accommodate the proposed development. It is proposed that the development is supplied with water from the Faure system with a connection to the existing 160 mm diameter pipe on the corner of Baden Powell Drive and Annandale Road.

The Faure system is supplied with water from the City of Cape Town's Faure reservoir with a Top Water Level (TWL) of 110 m above mean sea level (m a.s.l.) and can only supply sufficient water pressure to development on portion 28 of Farm 468 below the 60 to 70 m contour (Phase 1 to Phase 13).

It is proposed that the development area above the 60 to 70 m contour level (Phase 14) be supplied with water from the newly constructed Skilpadvlei reservoir in the Polkadraai system.

The Faure system has sufficient spare capacity to accommodate the proposed Phases 1 to 13 of the development area below the 60 to 70 m contour level.

A small section of 160 mm diameter pipeline between the proposed connection point for the development and the existing 200 mm diameter pipeline that are located adjacent to the Annandale Road, on the eastern side of the Eerste River, will however experience a flow velocity of more than 1.2 m/s during peak demand conditions. This is not a concern, but in order to reinforce the total network it can be considered to upgrade this pipeline to a 200 mm diameter pipe in future.

A new dedicated supply pipeline should be constructed from the Skilpadvlei reservoir to the higher lying Phase 14 erven of portion 28 of Farm 468. The TWL of the Skilpadvlei reservoir is 168 m a.s.l. and a pressure reducing valve (PRV) should be constructed on this pipeline to reduce water pressure at the development.

The following main internal pipes will be required for the development:

Potion 28 of Farm 468 (area supplied from Polkadraai system)

- SPW3.3 : 260 m x 200 mm Ø internal network pipe
- SPW3.4 : 150 m x 200 mm Ø internal network pipe [(1)]

Potion 28 of Farm 468 (area supplied from Faure system)

- SFW1.1 : 280 m x 250 mm Ø internal network pipe and required to connect to existing Faure system.
- SFW1.2 : 1 550 m x 200 mm Ø internal ring feed for the development

[(1)] Internal pipe SPW3.4 is an emergency connection between the Polkadraai and Faure systems to improve redundancy of the system.

1.3.2 Reservoir capacity

The criteria for total reservoir volume used in the Stellenbosch Water Master Plan is 48 hours of the AADD (of the reservoir supply zone). There is sufficient spare capacity available at the existing Skilpadvlei and Faure reservoirs in order to accommodate the proposed development in the existing Polkadraai and Faure water systems.

1.4 *Implementation of the master plan*

The following master plan item are required to supply the higher lying erven of portion 28 of Farm 468 with water from the existing Skilpadvlei reservoir:

Network upgrade (Polkadraai system)

• SPW3.1 :	2 095 m x 200 mm Ø new supply pipe		R	4 214 000 *
• SPW3.2 :	New PRV to regulate water pressure		R	314 000 *
		Sub-total	R	4 528 000 *

The following master plan item is recommended to be implemented in order to improve network conveyance and fire flow to the development from the Faure system:

Network upgrade (Faure system)

• SFW1.5 :	310 m x 200 mm Ø replace existing 160 mm Ø pipe [(2)]	R	1 062 000 *

(* Including P & G, Contingencies and Fees, but excluding VAT - Year 2022/23 Rand Value. This is a rough estimate, which does not include major unforeseen costs).

Take note that the routes of the proposed pipelines and location of the proposed PRV are schematically shown on Figures 1 & 2 attached, but have to be finalised subsequent to detailed pipeline route and PRV position investigations.

[(2)] Master plan pipe SFW1.5 is not a minimum requirement in order to accommodate the proposed development in the existing water system.

2. SEWER NETWORK

2.1 *Drainage area*

There are no sewer services in the vicinity of the proposed development. The nearest bulk infrastructure is the recently constructed Blaauwklippen pumping system to the north of the development area, which discharges at the Stellenbosch Wastewater Treatment Plant (WWTP).

The proposed development is located inside the sewer priority area.

2.2 *Sewer flow*

The proposed development was taken into consideration for the June 2023 master plan for the sewer network.

The peak day dry weather flow (PDDWF) for the proposed development area is calculated as 264,4 kL/d.

2.3 *Present situation*

It is proposed that sewage from the development gravitates towards the lowest point of portion 28 of Farm 468, from where sewage should be pumped to the existing Blaauwklippen pumping station. There is sufficient capacity in the existing Blaauwklippen pumping system to accommodate the proposed development.

The following internal outfall sewers are proposed in order to accommodate the sewer flows from the respective smaller development nodes on portion 28 of Farm 468:

Internal network:

- SSS5.5 : 560 m x 160 mm Ø internal outfall sewer
- SSS5.6 : 400 m x 200 mm Ø internal outfall sewer
- SSS5.7 : 120 m x 160 mm Ø internal outfall sewer
- SSS5.8 : 250 m x 160 mm Ø internal outfall sewer
- SSS5.9 : 390 m x 160 mm Ø internal outfall sewer

2.4 *Implementation of the master plan*

The following master plan items are required to pump sewage from the proposed development to the existing Blaauwklippen bulk pumping station:

Network upgrade

• SSS5.1	:	4 100 m x 160 mm Ø new rising main	R 6 985 000 *
• SSS5.2	:	New Welmoed sewer pumping station (capacity = 12 L/s)	R 3 304 000 *
• SSS4.1	:	1 060 m x 315 mm Ø new bulk sewer (Stellenbosch Municipality is in the process to implement this item; currently in tender phase for construction)	Cost not included
		Total	R 10 289 000 *

(* Including P & G, Contingencies and Fees, but excluding VAT - Year 2022/23 Rand Value. This is a rough estimate, which does not include major unforeseen costs).

Take note that the routes of the proposed pipelines and location of the proposed pumping station are schematically shown on Figures 3 & 4 attached, but have to be finalised subsequent to detailed pipeline route and pumping station position investigations.

3. CONCLUSION

The developer of portion 28 of Farm 468 (Welmoed development) in Stellenbosch may be liable for the payment of a Development Contribution (as calculated by Stellenbosch Municipality) for bulk water and sewer infrastructure as per Council Policy.

The development of Phase 1 to Phase 13 below the 60 m contour line can be accommodated within the existing Faure rural water system without any upgrades required.

The development of Phase 14 on portion 28 of Farm 468 above the 60 m contour line should be supplied with water directly from the Skilpadvlei reservoir in the Polkadraai system. Master plan item SPW3.1 will be required to supply the development with bulk water from the Skilpadvlei reservoir and master plan item SPW3.2 will be required to manage static pressures at the development.

There are no sewer services in the vicinity of the proposed development and master plan items SSS4.1, SSS3.1 & SSS3.2 will be required to pump sewage from the proposed development area to the existing Blaauwklippen bulk sewer pumping station, located roughly 5.0 km to the north east of the proposed development.

The existing Blaauwklippen pumping station has sufficient spare capacity to accommodate the proposed development.

We trust you find this of value.

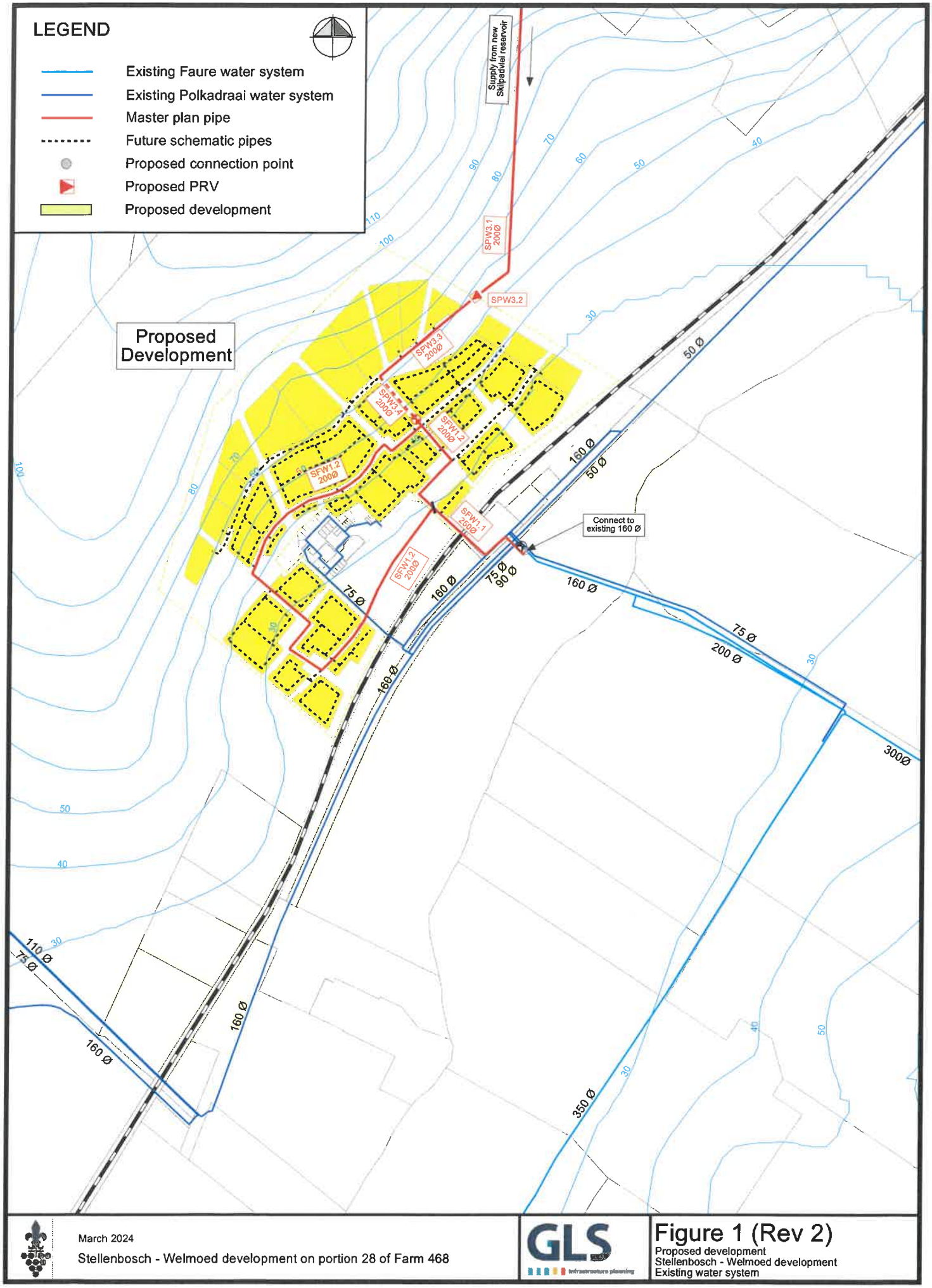
Yours sincerely,

GLS CONSULTING (PTY) LTD
REG. NO.: 2007/003039/07

Per: PC DU PLESSIS

cc. The Director
Directorate: Infrastructure Services
Stellenbosch Municipality
P. O. Box 17
STELLENBOSCH
7599

Attention: Mr Paul Joubert



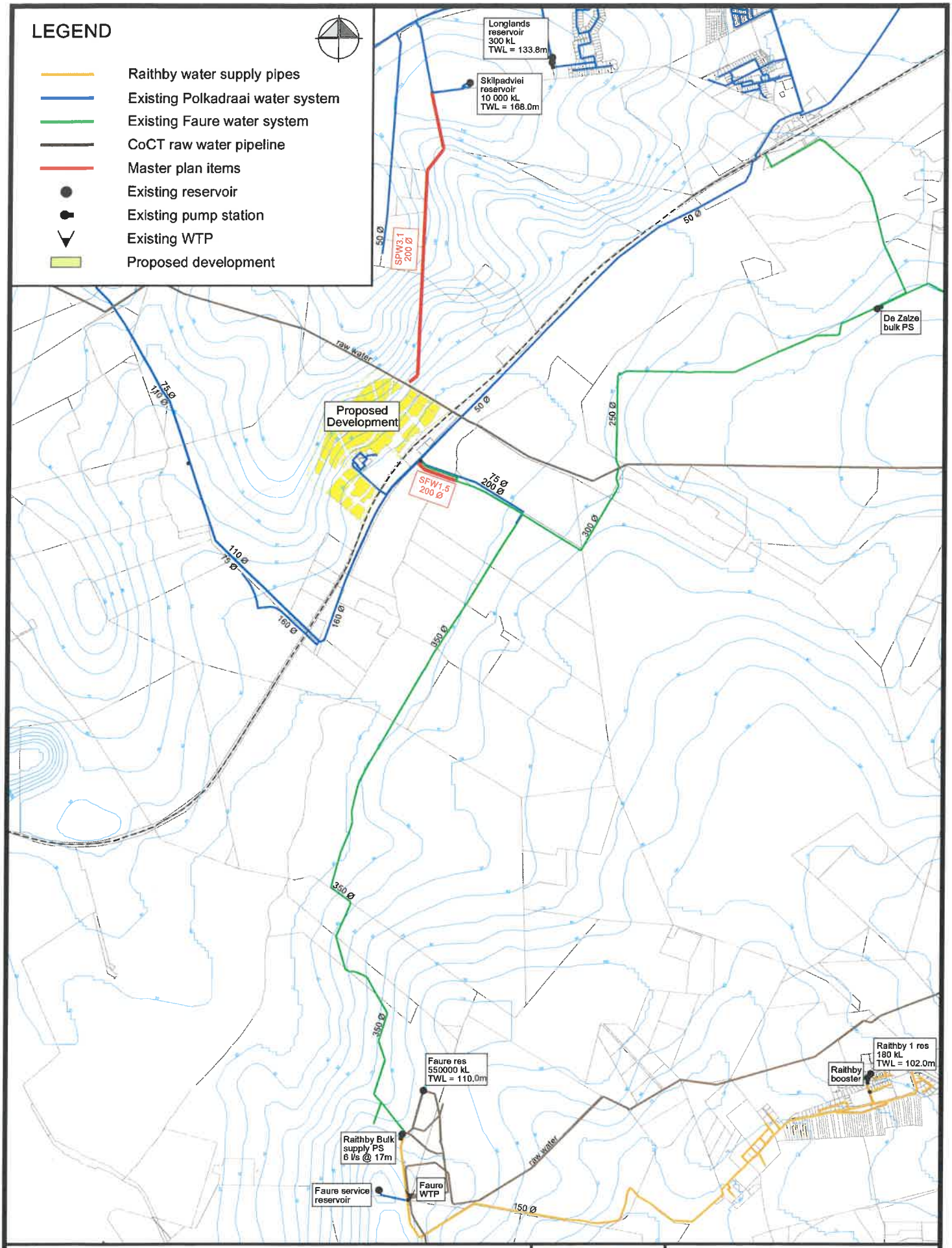
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS infrastructure planning

Figure 1 (Rev 2)

Proposed development
Stellenbosch - Welmoed development
Existing water system



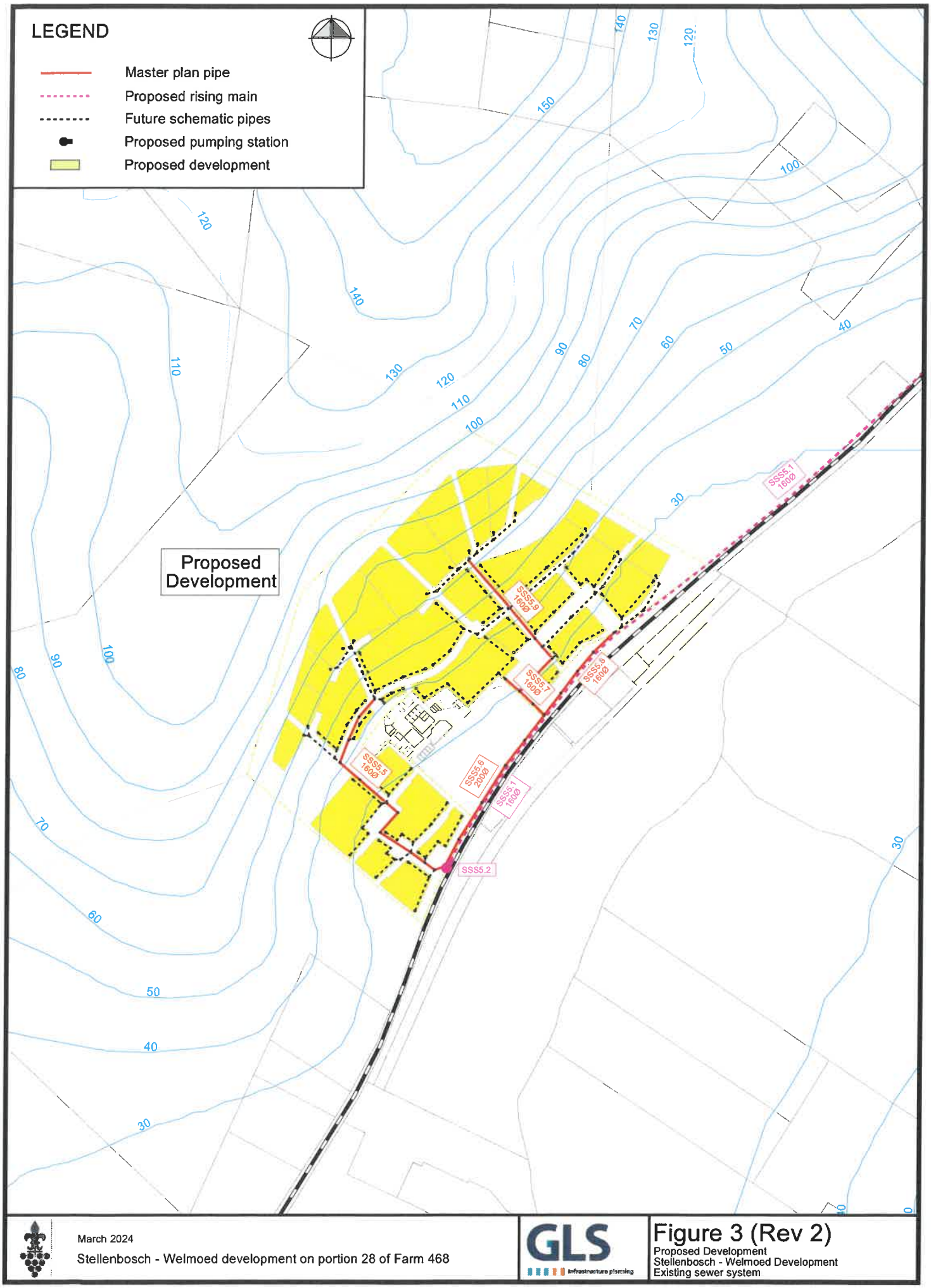
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS Infrastructure planning

Figure 2 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Water Master Plan



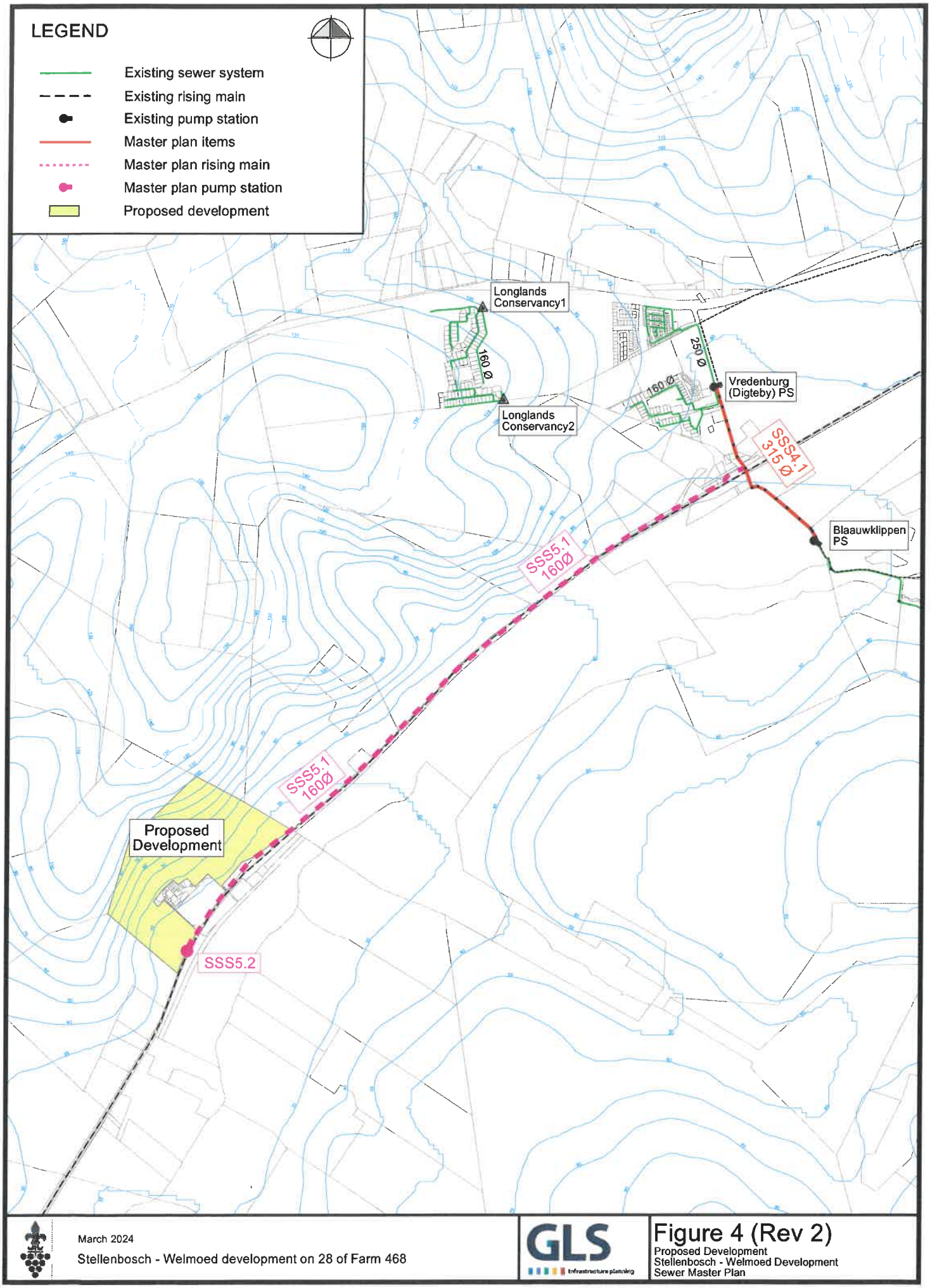
March 2024

Stellenbosch - Welmoed development on portion 28 of Farm 468

GLS Infrastructure planning

Figure 3 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Existing sewer system



March 2024

Stellenbosch - Welmoed development on 28 of Farm 468

GLS

Figure 4 (Rev 2)

Proposed Development
Stellenbosch - Welmoed Development
Sewer Master Plan

ANNEXURE C

Subdivision (Erf) reference	Land use	Phase	Comment
1	Private open space, street, place of assembly	1	
2	Educational, school	1	
3	Commercial, business	1	
4	Residential, business, mixed-use	1	
5	Private open space, street	2	
6	Private open space, outdoor sport, stormwater management	6	
7	Residential, business, mixed-use	2	
8	Residential, business, mixed-use	3	
9	Private open space, street	4	
10	Residential, business, mixed-use	4	
11	Place of assembly, business, mixed-use	4	
12	Residential	5	
13	Private open space, outdoor sport	6	
14	Private open space, street	7	
15	Residential	7	
16	Residential	8	
17	Private open space, street	9	
18	Private open space, outdoor sport, stormwater management	9	
19	Residential	10	
20	Residential	10	
21	Residential	11	
22	Private open space, outdoor sport, stormwater management	9	
23	Residential	12	
24	Private open space, outdoor sport	14	
25	Residential	13	
26	Residential	19	
27	Private open space, street	15	
28	Residential	16	
29	Residential	17	
30	Residential	18	
31	Private open space, outdoor sport, stormwater management	15	
32	Private open space, outdoor sport	17	
33	Private open space, outdoor sport	20	
34	Private open space, street	21	
35	Private open space, street	21	
36	Residential	22	
37	Residential	23	
38	Residential	24	
39	Residential	25	
40	Residential	26	
41	Residential	27	
42	Private open space, outdoor sport, street	28	
43	Residential	29	
44	Residential	30	
45	Private open space, outdoor sport, street	31	
46	Residential	32	
47	Private open space, outdoor sport, street	33	
Remainder Road	Public road	1	

PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component (B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Alottment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	



Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024

WELMOED URBANSTUDIO architects & urban designers

GLS

Infrastructure planning

28 March 2024

UDS Africa
9 Electron Street
Techno Park
STELLENBOSCH
7600

Attention: Mr Cobus Louw

Dear Sir,

DEVELOPMENT OF PORTION 28 OF FARM 468 (WELMOED DEVELOPMENT), STELLENBOSCH: CAPACITY ANALYSIS OF THE BULK WATER & SEWER SERVICES

This is an update of the bulk water and sewer capacity investigation report performed for development on portion 28 of Farm 468, dated 25 July 2023. In this updated report phasing for the different development areas within the larger development node was included in order to comment on the phasing of the proposed infrastructure upgrades.

Your request for GLS Consulting to investigate and comment on the bulk water supply and sewer discharge of the proposed development (mainly residential development of portion 28 of Farm 468, Stellenbosch), refers.

This document should inter alia be read in conjunction with the Water Master Plan (performed for the Stellenbosch Municipality) dated June 2023 and the Sewer Master Plan dated June 2023.

Future development areas V1.1 to V1.9, which include the proposed development area, were conceptually taken into consideration for the June 2023 master plans for the water and sewer networks.

1. WATER DISTRIBUTION SYSTEM

1.1 *Distribution zone*

Portion 28 of Farm 468 is located on the western side of the Baden Powell Drive (R310 Main Road) adjacent to the existing Lynedoch Eco Village. The existing Lynedoch development is supplied with bulk water from the Polkadraai rural water supply scheme, with alternative supply possible from the Faure rural water supply scheme.

The master planning indicated that the development area below the 60 m contour on portion 28 of Farm 468 should be accommodated in the existing Faure water supply scheme. The connection to the existing system should be done on the 160 mm diameter pipe on the corner of the Baden Powell Drive and Annandale Road, as shown on Figure 1 attached. This will serve Phase 1 to Phase 13 of the larger development area.

GLS Consulting (Pty) Ltd
T +27 21 880 0388
Stellenpark, Block D North, Cnr of R44 and School Rd, Jamestown, Stellenbosch, 7600, ZA | PO Box 814, Stellenbosch, 7599, ZA
Reg no: 2007/003039/07
www.gls.co.za

Directors: Flip du Plessis, Tsolane Mokoena

Water pressure from the Faure system is insufficient to service the higher lying areas of portion 28 of Farm 468 (areas above the 60 m contour) and it is proposed in the master planning that these areas are supplied with water directly from the recently constructed Skilpadvlei reservoir, located to the north of the proposed development, as shown on Figure 2 attached. This connection will serve Phase 14 of the development.

The development is situated inside the water priority area.

1.2 *Water demand*

The total annual average daily demand (AADD) and fire flows for the proposed development were calculated as follows:

Potion 28 of Farm 468 [(1), (2)]:

• 355 Medium density residential units (40 units/ha) @ 450 L/d/unit		=	159,8 kL/d
• 515 High density residential units (80 units/ha) @ 300 L/d/unit		=	154,5 kL/d
• 14 Allotment Villa units @ 2,0 kL/d/unit		=	28,0 kL/d
• 1,78 ha School area @ 12,0 kL/d/ha		=	21,4 kL/d
• 0,5 ha Business/commercial area @ 20,8 kL/d/ha		=	10,4 kL/d
• 0,18 ha Clubhouse facility area @ 12,0 kL/d/ha		=	2,2 kL/d
	Total	=	376,3 kL/d

- Fire flow criteria (Moderate risk) = 25 L/s @ 10 m

(1) As per Table J.2 and J.4 from Section J – Water Supply of "The Neighbourhood Planning and Design Guide" (so called "Red book").

(2) The total water demand of 376,3 kL/d for portion 28 of Farm 468 can be apportioned 354,3 kL/d for the lower lying areas supplied from the Faure system and 22,0 kL/d for the higher lying areas supplied from the Skilpadvlei reservoir in the Polkadraai system.

1.3 Present situation

1.3.1 Network capacity

The existing pipes of the Polkadraai system in the Baden Powell Drive have insufficient spare capacity to accommodate the proposed development. It is proposed that the development is supplied with water from the Faure system with a connection to the existing 160 mm diameter pipe on the corner of Baden Powell Drive and Annandale Road.

The Faure system is supplied with water from the City of Cape Town's Faure reservoir with a Top Water Level (TWL) of 110 m above mean sea level (m a.s.l.) and can only supply sufficient water pressure to development on portion 28 of Farm 468 below the 60 to 70 m contour (Phase 1 to Phase 13).

It is proposed that the development area above the 60 to 70 m contour level (Phase 14) be supplied with water from the newly constructed Skilpadvlei reservoir in the Polkadraai system.

The Faure system has sufficient spare capacity to accommodate the proposed Phases 1 to 13 of the development area below the 60 to 70 m contour level.

A small section of 160 mm diameter pipeline between the proposed connection point for the development and the existing 200 mm diameter pipeline that are located adjacent to the Annandale Road, on the eastern side of the Eerste River, will however experience a flow velocity of more than 1.2 m/s during peak demand conditions. This is not a concern, but in order to reinforce the total network it can be considered to upgrade this pipeline to a 200 mm diameter pipe in future.

A new dedicated supply pipeline should be constructed from the Skilpadvlei reservoir to the higher lying Phase 14 erven of portion 28 of Farm 468. The TWL of the Skilpadvlei reservoir is 168 m a.s.l. and a pressure reducing valve (PRV) should be constructed on this pipeline to reduce water pressure at the development.

The following main internal pipes will be required for the development:

Potion 28 of Farm 468 (area supplied from Polkadraai system)

- SPW3.3 : 260 m x 200 mm Ø internal network pipe
- SPW3.4 : 150 m x 200 mm Ø internal network pipe (1)

Potion 28 of Farm 468 (area supplied from Faure system)

- SFW1.1 : 280 m x 250 mm Ø internal network pipe and required to connect to existing Faure system.
- SFW1.2 : 1 550 m x 200 mm Ø internal ring feed for the development

(1) Internal pipe SPW3.4 is an emergency connection between the Polkadraai and Faure systems to improve redundancy of the system.

1.3.2 Reservoir capacity

The criteria for total reservoir volume used in the Stellenbosch Water Master Plan is 48 hours of the AADD (of the reservoir supply zone). There is sufficient spare capacity available at the existing Skilpadvlei and Faure reservoirs in order to accommodate the proposed development in the existing Polkadraai and Faure water systems.

1.4 *Implementation of the master plan*

The following master plan item are required to supply the higher lying erven of portion 28 of Farm 468 with water from the existing Skilpadvlei reservoir:

Network upgrade (Polkadraai system)

• SPW3.1 :	2 095 m x 200 mm Ø new supply pipe		R	4 214 000 *
• SPW3.2 :	New PRV to regulate water pressure		R	314 000 *
		Sub-total	R	4 528 000 *

The following master plan item is recommended to be implemented in order to improve network conveyance and fire flow to the development from the Faure system:

Network upgrade (Faure system)

• SFW1.5 :	310 m x 200 mm Ø replace existing 160 mm Ø pipe (2)	R	1 062 000 *

(* Including P & G, Contingencies and Fees, but excluding VAT - Year 2022/23 Rand Value. This is a rough estimate, which does not include major unforeseen costs).

Take note that the routes of the proposed pipelines and location of the proposed PRV are schematically shown on Figures 1 & 2 attached, but have to be finalised subsequent to detailed pipeline route and PRV position investigations.

(2) Master plan pipe SFW1.5 is not a minimum requirement in order to accommodate the proposed development in the existing water system.

2. SEWER NETWORK

2.1 *Drainage area*

There are no sewer services in the vicinity of the proposed development. The nearest bulk infrastructure is the recently constructed Blaauwklippen pumping system to the north of the development area, which discharges at the Stellenbosch Wastewater Treatment Plant (WWTP).

The proposed development is located inside the sewer priority area.

2.2 *Sewer flow*

The proposed development was taken into consideration for the June 2023 master plan for the sewer network.

The peak day dry weather flow (PDDWF) for the proposed development area is calculated as 263,4 kL/d.

2.3 Present situation

It is proposed that sewage from the development gravitates towards the lowest point of portion 28 of Farm 468, from where sewage should be pumped to the existing Blaauwklippen pumping station. There is sufficient capacity in the existing Blaauwklippen pumping system to accommodate the proposed development.

The following internal outfall sewers are proposed in order to accommodate the sewer flows from the respective smaller development nodes on portion 28 of Farm 468:

Internal network:

- SSS5.5 : 560 m x 160 mm Ø internal outfall sewer
- SSS5.6 : 400 m x 200 mm Ø internal outfall sewer
- SSS5.7 : 120 m x 160 mm Ø internal outfall sewer
- SSS5.8 : 250 m x 160 mm Ø internal outfall sewer
- SSS5.9 : 390 m x 160 mm Ø internal outfall sewer

2.4 *Implementation of the master plan*

The following master plan items are required to pump sewage from the proposed development to the existing Blaauwklippen bulk pumping station:

Network upgrade

• SSS5.1	:	4 100 m x 160 mm Ø new rising main	R 6 985 000 *
• SSS5.2	:	New Welmoed sewer pumping station (capacity = 12 L/s)	R 3 304 000 *
• SSS4.1	:	1 060 m x 315 mm Ø new bulk sewer (Stellenbosch Municipality is in the process to implement this item; currently in tender phase for construction)	Cost not included
		Total	R 10 289 000 *

(* Including P & G, Contingencies and Fees, but excluding VAT - Year 2022/23 Rand Value. This is a rough estimate, which does not include major unforeseen costs).

Take note that the routes of the proposed pipelines and location of the proposed pumping station are schematically shown on Figures 3 & 4 attached, but have to be finalised subsequent to detailed pipeline route and pumping station position investigations.

3. CONCLUSION

The developer of portion 28 of Farm 468 (Welmoed development) in Stellenbosch may be liable for the payment of a Development Contribution (as calculated by Stellenbosch Municipality) for bulk water and sewer infrastructure as per Council Policy.

The development of Phase 1 to Phase 13 below the 60 m contour line can be accommodated within the existing Faure rural water system without any upgrades required.

The development of Phase 14 on portion 28 of Farm 468 above the 60 m contour line should be supplied with water directly from the Skilpadvlei reservoir in the Polkadraai system. Master plan item SPW3.1 will be required to supply the development with bulk water from the Skilpadvlei reservoir and master plan item SPW3.2 will be required to manage static pressures at the development.

There are no sewer services in the vicinity of the proposed development and master plan items SSS4.1, SSS3.1 & SSS3.2 will be required to pump sewage from the proposed development area to the existing Blaauwklippen bulk sewer pumping station, located roughly 5.0 km to the north east of the proposed development.

The existing Blaauwklippen pumping station has sufficient spare capacity to accommodate the proposed development.

We trust you find this of value.

Yours sincerely,

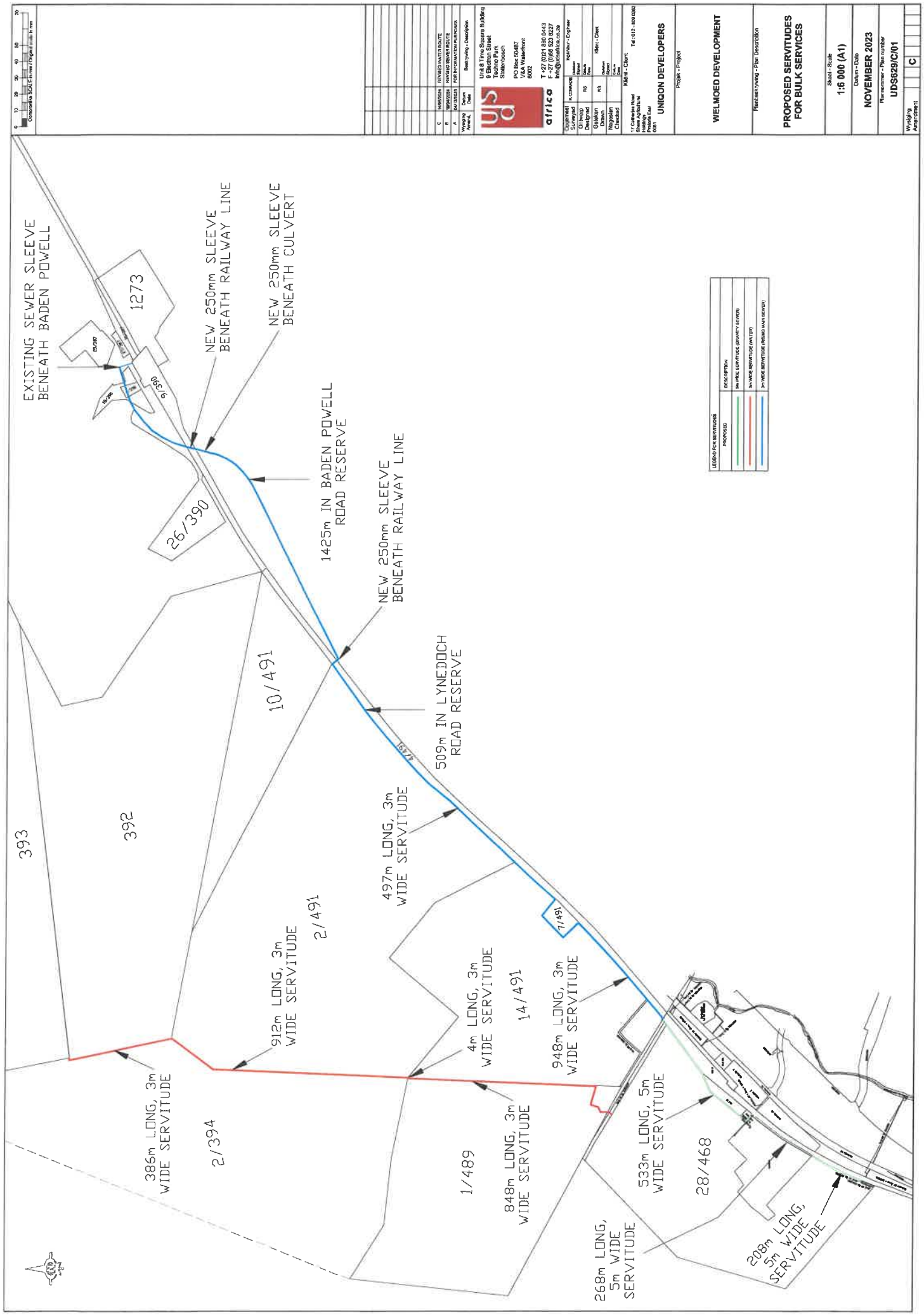
GLS CONSULTING (PTY) LTD
REG. NO.: 2007/003039/07

Per: PC DU PLESSIS

cc. The Director
Directorate: Infrastructure Services
Stellenbosch Municipality
P. O. Box 17
STELLENBOSCH
7599

Attention: Mr Paul Joubert

ANNEXURE M: SERVICES SERVITUDE PLAN


EXISTING SEWER SLEEVE
BENEATH BADEN POWELL
NEW 250mm SLEEVE
BENEATH RAILWAY LINE
NEW 250mm SLEEVE
BENEATH CULVERT
1425m IN BADEN POWELL
ROAD RESERVE
NEW 250mm SLEEVE
BENEATH RAILWAY LINE
509m IN LYNEDOCH
ROAD RESERVE
497m LONG, 3m
WIDE SERVITUDE
912m LONG, 3m
WIDE SERVITUDE
4m LONG, 3m
WIDE SERVITUDE
948m LONG, 3m
WIDE SERVITUDE
386m LONG, 3m
WIDE SERVITUDE
848m LONG, 3m
WIDE SERVITUDE
533m LONG, 5m
WIDE SERVITUDE
268m LONG,
5m WIDE
SERVITUDE
208m LONG,
5m WIDE
SERVITUDE
1273
26/390
10/491
2/491
14/491
7/491
393
392
2/394
1/489
28/468
LEGEND FOR SERVITUDES
PROPOSED
DESCRIPTION
5m WIDE SERVITUDE (GRAVITY SEWER)
3m WIDE SERVITUDE (WATER)
3m WIDE SERVITUDE (RISING MAIN SEWER)
C 14/05/2024 REVISED WATER ROUTE
B 19/04/2024 REVISED SEWER ROUTE
A 04/12/2023 FOR INFORMATION PURPOSES
Wysiging Amend. Datum Date Beskrywing - Description
ups africa
Unit 8 Time Square Building
9 Electron Street
Techno Park
Stellenbosch
PO Box 50487
V&A Waterfront
8002
T +27 (0)21 880 0443
F +27 (0)86 523 5227
info@upsafrica.co.za
Ingenieur - Engineer
Opgestel Surveyed
Ontwerp Designed
Getek Drawn
Nagesien Checked
Kliënt - Client
17 Cathedral Road
Elsies Agricultural
Holdings
Paarl
7681
Tel: 072 - 809 0382
UNIQON DEVELOPERS
Projek - Project
WIELMOED DEVELOPMENT
Planbeskrywing - Plan Description
PROPOSED SERVITUDES
FOR BULK SERVICES
Skaal - Scale
1:6 000 (A1)
Datum - Date
NOVEMBER 2023
Plannommer - Plan number
UDS629/C/01
Wysiging Amendment
C

ANNEXURE N: STORMWATER MANAGEMENT REPORT

WELMOED DEVELOPMENT

PORTION 28 OF FARM 468, LYNEDOCH, WITHIN THE STELLENBOSCH MUNICIPAL AREA, WESTERN CAPE

STORMWATER MANAGEMENT PLAN

REVISION 00

APRIL 2024

Uniqon Developers (Pty) Ltd.
17 Catherine Road
Shere Agricultural Holdings
Pretoria East
0081

UDS Africa
9 Elektron Road
Techno Park
Stellenbosch, 7600

Contents

1. Background 2

2. Locality 2

3. The development 3

4. Mean annual precipitation 3

5. Hydrology 3
5.1 Calculation method 3
5.2 Existing developed levels 4
5.3 Pre-development levels 4
5.4 Post development runoff 6
5.5 Flood lines 7

6. Best management practice 7
6.1 Protect Downstream Properties 7
6.2 Protect Floodplain developments 8
6.3 Water Quality 9
6.4 Attenuation facilities 10

7. Proposed infrastructure 9

8. Maintenance 9

9. Conclusion 12

STORMWATER MANAGEMENT PLAN FOR THE WELMOED DEVELOPMENT ON PORTION 28 OF FARM 468, LYNEDOCH, WITHIN THE STELLENBOSCH MUNICIPAL AREA, WESTERN CAPE

1. Background

UDS Africa was appointed by Mr Etienne Coetzer to compile a stormwater management plan in support of the development application for the proposed Welmoed development.

The scope of our appointment includes the compilation of a stormwater management plan to support the development application. Our mandate includes compliance with the latest Stellenbosch Municipal by-laws in order to meet the requirements regarding the quality and quantity treatment volumes of the post development stormwater run-off generated on Farm 468 Portion 28.

The site covers an area of 45.48 ha with and is currently used for agricultural purposes.

2. Locality

The site is located in Lynedoch, within the Stellenbosch Municipal area. The site is bordered to the north, east and west agricultural land and to the south by Lynedoch Road. Below is a locality plan for reference (outlined in red, area highlighted in yellow).



Figure 1: Locality plan of Portion 28 of Farm 468

3. The development

The proposed development will be large residential in nature, with a clubhouse, commercial and school component. Please refer to **Annexure A** for a copy of the site development plan prepared by Urban Studio Architects and Urban Designers. Below is a summary of the land uses to from part of the proposed development:

USE	AREA	UNITS
School	1.78 Ha	
Commercial	0.50 Ha	
Clubhouse	0.18Ha	
Mixed use/ Residential (80/Ha)	6.58 Ha	515
Residential (40/Ha)	8.74 Ha	355
Residential (allotment villas)	10.31 Ha	14

Table 1: Summary of land uses

4. Mean annual precipitation

For further hydrological calculations a MAP of 667mm is used.

Rainfall intensities for the 0.5 year RI; 24 h storm event and 1 year RI; 24 h storm event was calculated using the following formula:

$$i = \frac{(3.4 + 0.023\ MAP)\ R^{0.3}}{(0.2 + td)^{0.75}}$$

Where i = rainfall intensity; R = Recurrence Interval; td = storm duration in hours

5. Hydrology

5.1 Calculation method

The catchment area is small and the Rational Method is deemed to be a suitable method to calculate the flood peaks.

Currently stormwater from the higher lying farm 489 and 468 portion 22 is cut-off by means of a berm and diverted along the eastern and western boundary respectively.

The site itself has watershed resulting in a northern catchment area of 21.72Ha draining towards the north eastern corner of the site and a southern catchment area of 23.76Ha draining towards the south eastern corner of the site.

5.2 Current Developed Level

(for 1:50 year recurrence interval calculations)

The following catchment characteristics are applicable to the northern catchment area:

- Catchment area = 0.2172km²
- Average slope = 10.60%
- t_c = 33.94 minutes
- C = 0.43
- I = 74.04 mm/h (for 1:50 year)

Peak flow with a recurrence interval of 50 years is calculated as follows:

= 0.95 (CIA)/3.6

= 0.95 (0.43 x 74.04 x 0.2172) /3.6 = **1.825m³/s**

The following catchment characteristics are applicable to the southern catchment area:

- Catchment area = 0.2376km²
- Average slope = 12.17%
- t_c = 32.22 minutes
- C = 0.43
- I = 76.19 mm/h (for 1:50 year)

Peak flow with a recurrence interval of 50 years is calculated as follows:

= 0.95(CIA)/3.6

= 0.95(0.43 x 76.19 x 0.2376)/3.6 = **2.054m³/s**

5.3 Pre-developed Level

(for 1:10 year recurrence interval calculations)

The following catchment characteristics are applicable to the northern catchment area:

- Catchment area = 0.2172km²
- Average slope = 10.60%
- t_c = 33.94 minutes
- C = 0.43
- I = 45.69 mm/h (for 1:10 year)

Peak flow with a recurrence interval of 10 years is calculated as follows:

= 0.85(CIA)/3.6

= 0.85(0.43 x 45.69 x 0.2172)/3.6 = **1.007m³/s**

The following catchment characteristics are applicable to the southern catchment area:

- Catchment area = 0.2376km²
- Average slope = 12.17%
- t_c = 32.22 minutes
- C = 0.43
- I = 47.01 mm/h (for 1:10 year)

Peak flow with a recurrence interval of 10 years is calculated as follows:

= 0.85(CIA)/3.6

= 0.85(0.43 x 47.01 x 0.2376)/3.6 = **1.134m³/s**

5.4 Post development runoff

The catchment characteristics of the northern catchment area will change as follows once developed:

- t_c = 18.67 minutes
- C = 0.61

The flood peaks for the post-development scenario are calculated as follows:

Post Development run-off							
Recurrence Interval	0.5 year: 24 hr event	1 year: 24 hr event	2 Year	5 Year	10 Year	20 Year	50 Year
Rainfall Intensity (mm/h)	1.395	1.718	38.16	50.24	61.85	76.14	100.23
Peak run-off (m^3/ s)	0.038	0.047	1.048	1.471	1.925	2.509	3.486

Table 2: Post development run-off for northern catchment

The catchment characteristics of the southern catchment area will change as follows once developed:

- t_c = 17.82 minutes
- C = 0.61

The flood peaks for the post-development scenario are calculated as follows:

Post Development run-off							
Recurrence Interval	0.5 year: 24 hr event	1 year: 24 hr event	2 Year	5 Year	10 Year	20 Year	50 Year
Rainfall Intensity (mm/h)	1.395	1.718	38.98	51.32	63.17	77.77	102.38
Peak run-off (m^3/ s)	0.042	0.052	1.171	1.644	2.150	2.803	3.895

Table 3: Post development run-off for southern catchment

5.5 Flood lines

A flood line study was completed by AED in June 2023 for the Eerste River located further east of the site. Flood lines were found not to affect Farm 468 Portion 28. Refer to **Annexure B** for a copy of the report.

6. Best management practice

In order to reduce impacts of urban stormwater systems on receiving waters, all stormwater management systems shall be planned and designed in accordance with best practice criteria and guidelines laid down by council, to support water sensitive urban design principles and the following specific sustainable urban drainage system objectives:

- Improve the quality of the runoff;
- Control the quantity and rate of runoff, and
- Encourage natural groundwater recharge

The BMP (Best Management Practice) proposed to improve the quality and control of the quantity of the stormwater runoff by means of providing an attenuation pond. The attenuation pond has the abilities to reduce the suspended solids (80%) and total phosphorous (45%) to the levels required by the Urban Stormwater Impact Policy and to provide storage capacity to reduce the rate of runoff.

6.1 Protect Downstream Properties

The downstream properties must be protected against fairly frequent nuisance floods by reducing the post-developed peak flows with recurrence interval up to 10 years to the undeveloped levels.

The storage volume required for the northern catchment is calculated by the Abt and Grigg Method, and is calculated as follow:

$V = Q_p.t_c(1-\alpha)^2$, where

V = storage volume in (m^3)

Q_p = the post-development peak discharge in (m^3/s)

t_c = time of concentration in (seconds)

α = pre-development / post-development discharge ratio

$V = 1.925 \times 1120 \times (1-0.523)^2$ = **489.71 m^3**

The storage volume required for the southern catchment is calculated by the Abt and Grigg Method, and is calculated as follow:

$V = Q_p.t_c(1-\alpha)^2$, where

V = storage volume in (m^3)

Q_p = the post-development peak discharge in (m^3/s)

t_c = time of concentration in (seconds)

α = pre-development / post-development discharge ratio

$V = 2.15 \times 1069 \times (1-0.527)^2 =$ **513.63 m^3**

6.2 Protect Floodplain developments

Floodplain developments are to be protected by limiting the post-development run-offs to that of the existing development run-offs for storms with a recurrence interval of up to 50 years.

The storage volume required for the northern catchment is calculated by the Abt and Grigg Method, and is calculated as follow:

$V = Q_p.t_c(1-\alpha)^2$, where

V = storage volume in (m^3)

Q_p = the post-development peak discharge in (m^3/s)

t_c = time of concentration in (seconds)

α = pre-development / post-development discharge ratio

$V = 3.486 \times 1120 \times (1-0.218)^2 =$ **887.02 m^3**

The storage volume required for the southern catchment is calculated by the Abt and Grigg Method, and is calculated as follow:

$V = Q_p.t_c(1-\alpha)^2$, where

V = storage volume in (m^3)

Q_p = the post-development peak discharge in (m^3/s)

t_c = time of concentration in (seconds)

α = pre-development / post-development discharge ratio

$V = 3.895 \times 1069 \times (1-0.527)^2 =$ **930.35 m³**

The storage capacity must accommodate the largest value between the protection of downstream properties and protection of floodplain developments. Thus the storage capacity required in terms of quantity control for the northern catchment is **887.02 m³** and **930.35m³** for the southern catchment.

6.3 Water Quality

The water quality volume is calculated by using the following formula as recommended in The Neighborhood Planning and Design Guide, Section L4.1.2:

Northern catchment:

WQV = P x C x A x 10

WQV = water quality volume in (m³)

P = total rainfall depth in (mm)

C = the runoff coefficient

A = drainage area in (ha)

V = 25 x 0.61 x 21.72 x 10 = **3 312.30m³**

Southern catchment:

WQV = P x C x A x 10

WQV = water quality volume in (m³)

P = total rainfall depth in (mm)

C = the runoff coefficient

A = drainage area in (ha)

V = 25 x 0.61 x 23.76 x 10 = **3 623.40m³**

Therefor a total treatment volume (quantity and quality) of 4 199.32m^3 will be required for the northern catchment area and a total treatment volume of 4 553.75m^3 for the southern catchment area.

6.4 Attenuation facilities

For the northern catchment area, stormwater will collect in a series of stormwater swales parallel to the roads, before discharging into a swale to the west and south of B1, from where it will discharge into a detention facility which is located on the north eastern corner of the site.

For the southern catchment area, stormwater will collect in a series of stormwater swales parallel to the roads, from where it will discharge into detention facilities located north of B11 and south of B15. These detention facilities will accommodate approximately 20% of the required treatment volume for the southern catchment area.

It is proposed that two further detention facilities are constructed between Baden Powell Drive and Lynedoch road. As part of the proposal it is proposed that the culvert beneath Lynedoch Road is upgraded to an 1800 x 900 rectangular culvert. Refer to **Annexure A** for the site development plan showing the positions of the detention facilities.

The development will be phased. Refer to **Annexure C** for the phasing plan. The required stormwater infrastructure for each phase of the development will be determined once the site development plan for each phase becomes available.

7. Proposed infrastructure

It is proposed that swales are created adjacent to the roads to collect stormwater during small rainfall events. Inlets and a piped stormwater system will be provided below the swale in order to accommodate larger rainfall events.

Due to the steepness of the site, energy breakers will be constructed within the swales and backdrop manholes will be utilised in order to limit the flows within the stormwater pipes.

8. Maintenance

The home owners association will be responsible for the following maintenance activities:

Description of infrastructure	Description of activities to be carried out	Timeline for implementation
Inlet structures and manholes	• Clean and remove litter • Clean and remove sand and silt • Inspect for damages and implement remedial action	6 month basis (at least once before winter)
Pipework	• Clean and remove litter • Clean and remove sand and silt • Inspect for damages and implement remedial action	6 month basis (at least once before winter)
Head wall and gabion structures	• Clean and remove litter • Clean and remove sand and silt • Inspect for damages and implement remedial action	6 month basis (at least once before winter)
Vegetated channels	• Clean and remove litter • Maintain grass to a height of below 50mm • Remove sediment from channel as required	Continuous, but not less than once per month
Embankments of vegetated channels, swales and attenuation ponds	• Inspect embankment for signs of erosion • Implement remedial action as required	6 month basis
Plant species	• Inspect plant species for successful establishment. If unsuccessful plant new/ different species.	6 month basis

Table 4: Maintenance Schedule

9. Conclusion

It has been determined that the provision of attenuation facilities with a combined capacity of **8 753.07m^3** will satisfy the stormwater quantity and quality requirements for the proposed Welmoed Development on Farm 468 Portion 28.

Please do not hesitate to contact the undersigned should you require any additional information.

Yours faithfully,



Compiled by:

Ruaan Siebrits (Pr Tech Eng)

Attachments:

Annexure A – Site Development Plan
Annexure B – Flood line study
Annexure C – Phasing plan

ANNEXURE A



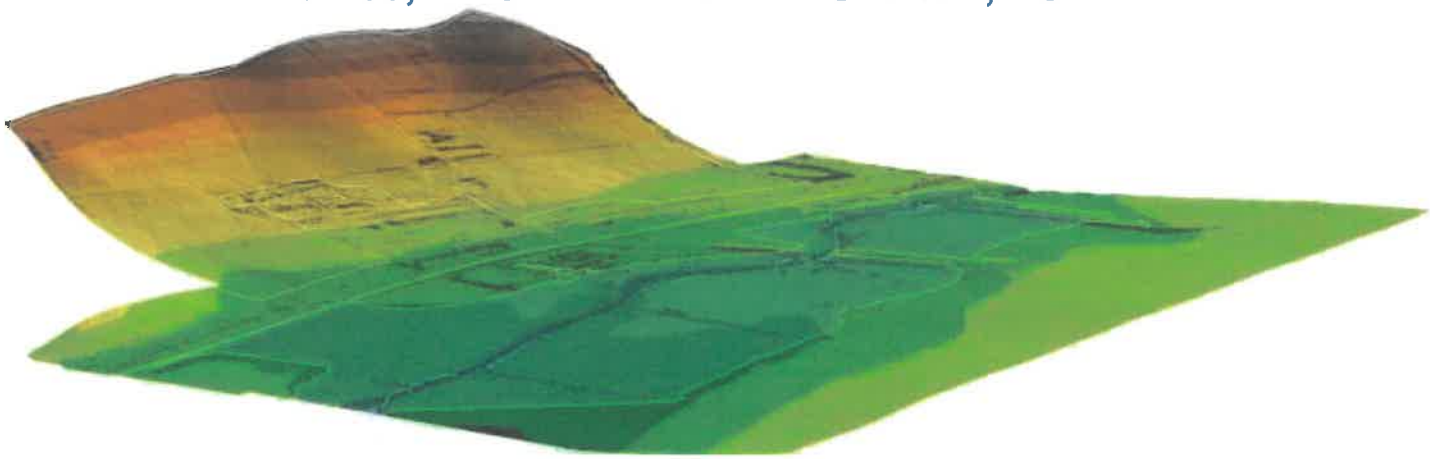
PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Alottment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024

WELMOED URBANSTUDIO architects & urban designers

ANNEXURE B

100-YEAR FLOOD LINES FOR THE EERSTE RIVER AT PORTIONS 27 & 28 OF THE FARM WELMOED ESTATE NO 468, WESTERN CAPE PROVINCE, RSA



Compiled by

Garfield Krige
Pr.Sci.Nat. Aquatic Science (Reg. No. 400068/10)

and

Al Zylstra
Pr.Eng. (Reg. No. 730439)

of

African Environmental Development
129 Malmani Rd
Sterkfontein Country Estates 1739

Tel: 083 657 0560
E-mail: info@aed.co.za

Report Number AED0450/2023
Date of Report: 02/06/2023

Revision Number: 00

This page is intentionally left blank (for back-to-back printing purposes)

This report may be cited as follows:

Krige W. G. & Zylstra A. A. (2023): 100-YEAR FLOOD LINES FOR THE EERSTE RIVER AT PORTIONS 27 & 28 OF THE FARM WELMOED ESTATE NO 468, WESTERN CAPE PROVINCE, RSA. Report No. **AED0450 Revision 00**, African Environmental Development

Cover Image: A 3-D DTM of the terrain surrounding the study area, showing the 100-year floodplain of the Eerste River

Prepared for:

UDS Africa

Time Square Building
9 Electron St, Techno Park
Stellenbosch 7600
PO Box 50487, V&A Waterfront
Cape Town 8002
Tel: 021 880 0443 / 072 6519568
Email: ruaan@udsafrica.co.za

Prepared by:

African Environmental Development

129 Malmani Rd,
Sterkfontein Country Estates,
Krugersdorp, RSA 1739
Tel: +27 83 657 0560
Email: info@aed.co.za
garfield@aed.co.za
Website: www.aed.co.za

Table of Contents

LIST OF ACRONYMS AND ABBREVIATIONS III

1 INTRODUCTION AND BACKGROUND 1

1.1 STUDY AREA 1

1.2 THE CATCHMENT OF THE EERSTE RIVER 3

1.3 THE SHAPE AND COVERAGE OF THE EERSTE RIVER CATCHMENT 7

1.4 ELEVATION INFORMATION USED 7

1.5 BACKGROUND TO FLOOD LINES, FLOODPLAINS AND AREAS OF INUNDATION . 8

1.6 LEGAL CONSIDERATIONS 9

2 DESIGN STORM AND FLOOD LINE MODELLING 10

2.1 METHODOLOGY FLOOD LINES 10

2.2 METHODOLOGY FOR BRIDGE BACKWATER CALCULATIONS 12

2.3 RESULTS 12

2.4 DISCHARGE OFF STORMS WITH RIS OF 1- TO 100-YEARS FALLING OVER THE CATCHMENTS AT THE STUDY AREA 18

2.5 ANNANDALE ROAD BRIDGE BACKWATER CALCULATIONS 20

2.6 COMMENTS RELATING TO THE FLOOD LINES 22

2.6.1 Extent of the flood lines at the study areas 22

2.6.2 Units used in this report 22

3 CERTIFICATION OF METHODS USED 25

4 REFERENCES 26

APPENDIX 1: CAD FILES AND CERTIFIED DRAWING 27

APPENDIX 2: EXCEL WORKBOOK AREA-WEIGHTED CATCHMENT MEAN ANNUAL PRECIPITATION CALCULATIONS 27

APPENDIX 3: SURVEY DRAWING OF ANNANDALE RD BRIDGE 27

List of Acronyms and Abbreviations

Item	Description
~	Approximately (e.g. ~10 m wide = "approximately 10 m wide")
>	Greater than
<	Less than
3-D or 3D	Three dimensional
AED	African Environmental Development
℄	Centreline
CAD	Computer Aided Drawing
DTM	Digital Terrain Model
DEM	Digital Elevation Model
GIS	Geographic Information Service
HRU	Hydrological Research Unit (a division of the Civil Engineering Department of the University of the Witwatersrand in South Africa)
mamsl	Metres above mean sea level (elevation)
MAP	Mean annual precipitation (rainfall, measured in millimetres)
MAR	Mean annual run-off (the amount of the annual rainfall that reaches a watercourse, measured in millimetres)
N	North
P_e	Probability
RI	Return interval (pertaining to floods, e.g. RI of 100-years)
RIs	Plural of RI (Return Intervals)
S	South
SG	Surveyor General (e.g. SG Diagram)
TC	Time of Concentration (time for a storm to reach its maximum rate of rainfall)

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

100-YEAR FLOOD LINES FOR THE EERSTE RIVER AT PORTIONS 27 & 28 OF THE FARM WELMOED ESTATE NO 468, WESTERN CAPE PROVINCE, RSA

1 Introduction and Background

African Environmental Development (AED) was commissioned by ***Mr Ruaan Siebrits*** of ***UDS Africa***, to develop the 100-year flood lines for the Eerste River at Portions 27 and 28 of the farm Welmoed Estate No 468. The project locates in the Eerste River catchment in the Stellenbosch Municipality, Western Cape Province. The goal of this study was to model the 100-year flood lines for this river in proximity to Portions 27 and 28, hereafter referred to as the "*study area*", as the 100-year floodplain would likely affect Portion 27. This report is a brief description of the methodology used, the assumptions made and a discussion of the resultant 100-year flood lines of this watercourse.

1.1 Study Area

The study area locates in the area of jurisdiction of the Stellenbosch Municipality in the Western Cape Province. The Eerste River drains a mostly rural area with initial steep mountainous surfaces with very high rainfall in the upper reaches of the catchment, and flat surfaces in the downstream parts of the catchment with much lower rainfall.

The Eerste River at the study area drains a surface area of 330.366 Km² to the north, northeast and east of the study area. In comparison to the area at the study area, which receives a Mean Annual Precipitation (MAP) in the vicinity of low to mid 600s mm/a, the eastern part of the catchment receives a very high MAP. In particular the upper reaches of the Eerste River (where the Jonkershoek River rises) receives a MAP in the high 2000s mm/a, even exceeding 3000 mm/a in places and to a lesser extent, the upper reaches of its tributary, the Klippies River, which receives a MAP of over 2000 mm/a in places. Refer to Figure 2 for details of the catchment's rainfall.

Although the Eerste River rises in a mountainous region with steep slopes, at the study area, the river flows onto a wide floodplain with very low slopes. The velocity of

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

flowing water in the river would diminish once this flat area is reached, which implies that the floodplain would be exceptionally wide.

There is a bridge at the study area where Annandale Road passes over the river. It was thus also necessary to include the backwater, produced by this bridge, in the flood model of the river, as it would be highly likely that this bridge would increase the elevation of the 100-year floodplain upstream from this bridge. Please refer to ***Photos 1***, ***2*** and ***3*** for details of this bridge. The surveyor, Johan Louw of *Neil Woodin Surveys*, took these photos on 09/05/2023 during a detailed survey of the bridge.



Photo 1: The road surface of the Annandale Road Bridge, viewing from north to south

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za



Photo 2: The right-hand abutment of the Annandale Rd Bridge across the Eerste River, viewing the intake side of the bridge



Photo 3: The left-hand abutment of the Annandale Rd Bridge, viewing from the intake side of the bridge. (Note: Left and right banks of rivers are always referred to as viewing from up- to downstream)

1.2 The Catchment of the Eerste River

The catchment of the Eerste River is 330.366 Km².

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

The catchment upstream from the study area comprises of 2 full and one partial quaternary catchment, quaternary catchments G22F, G22G (full catchments) and G22H (partial catchment - ending at the study area just upstream from the confluence of the Vlaeberg River with the Eerste River). Refer to ***Figures 1*** and ***2*** for the catchment of the Eerste River and the general area at, and around the study area.

As stated above, the catchment of the Eerste River up to the study area falls across three quaternary catchments, Quaternary Catchments G22F, G22G and G22H. The three catchments have mean annual precipitation (MAP) values of 1 464.50 mm/a, 753.64,mm/a and 669.23 mm/a respectively (*Bailey & Pitman, 2012*). They fall within *Veld Zone 2*, the "*Sclerophylious Bush*" in terms of the Midgley-classification (*Midgley, 1972*). However, as there is a huge difference in the amount of annual precipitation each one of these catchments receive and also within each of the catchments, and as the MAP plays a very important role in the flood model, it was also essential to divide the catchment into smaller sub-catchments and then to determine the surface area of each of the sub-catchments to produce an area-weighted MAP for the total catchment together with the MAP of each of the sub-catchments. Thus, the 1-minute x 1-minute map, shown in ***Figure 2***, was produced. The data that was used to produce ***Figure 2*** was obtained from the Water Research Commission WR2012 document (*Bailey & Pitman, 2012*).

Thus, ***Figure 2*** uses degrees and minutes to create a set of tiles, each comprising of a 1-minute x 1-minute tile (we refer to "tiles" as they are not squares, even though they appear to be square), with rows and columns much like a spreadsheet. The X-axis (columns) in ***Figure 2*** shows the coordinates (degrees and minutes) of the columns while the first row of the Y-axis shows the coordinates in Deg/Min and in the rest we have replaced the coordinates with numbers from 1 to 14, to tie in with the row numbers of the MS Excel Workbook where the area-weighted MAP was calculated. This workbook is attached in ***Appendix 2*** of this report.

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

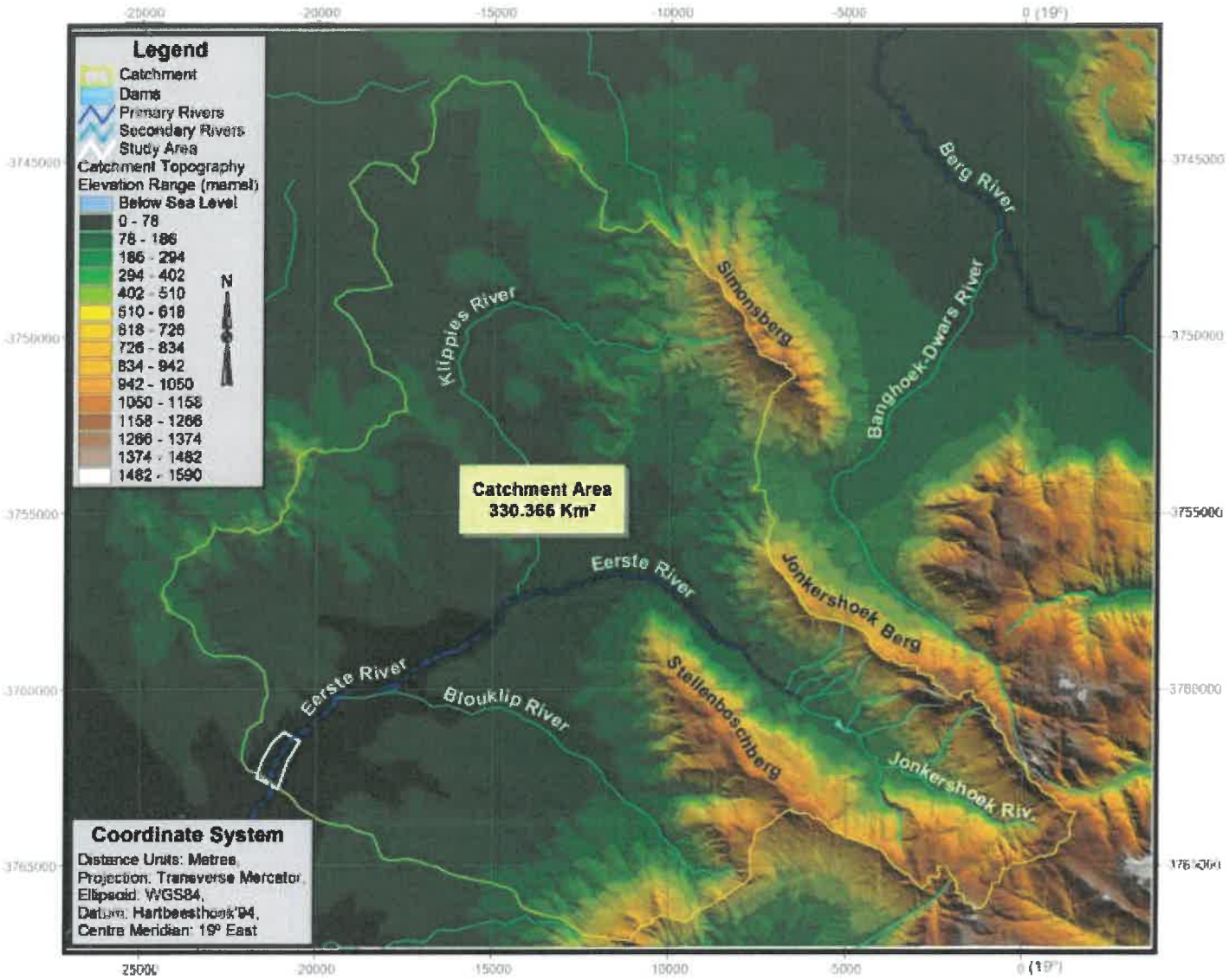


Figure 1: The study area (white polygon), showing the catchment of the Eerste River. Topography produced using the SG 5-m elevation data

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

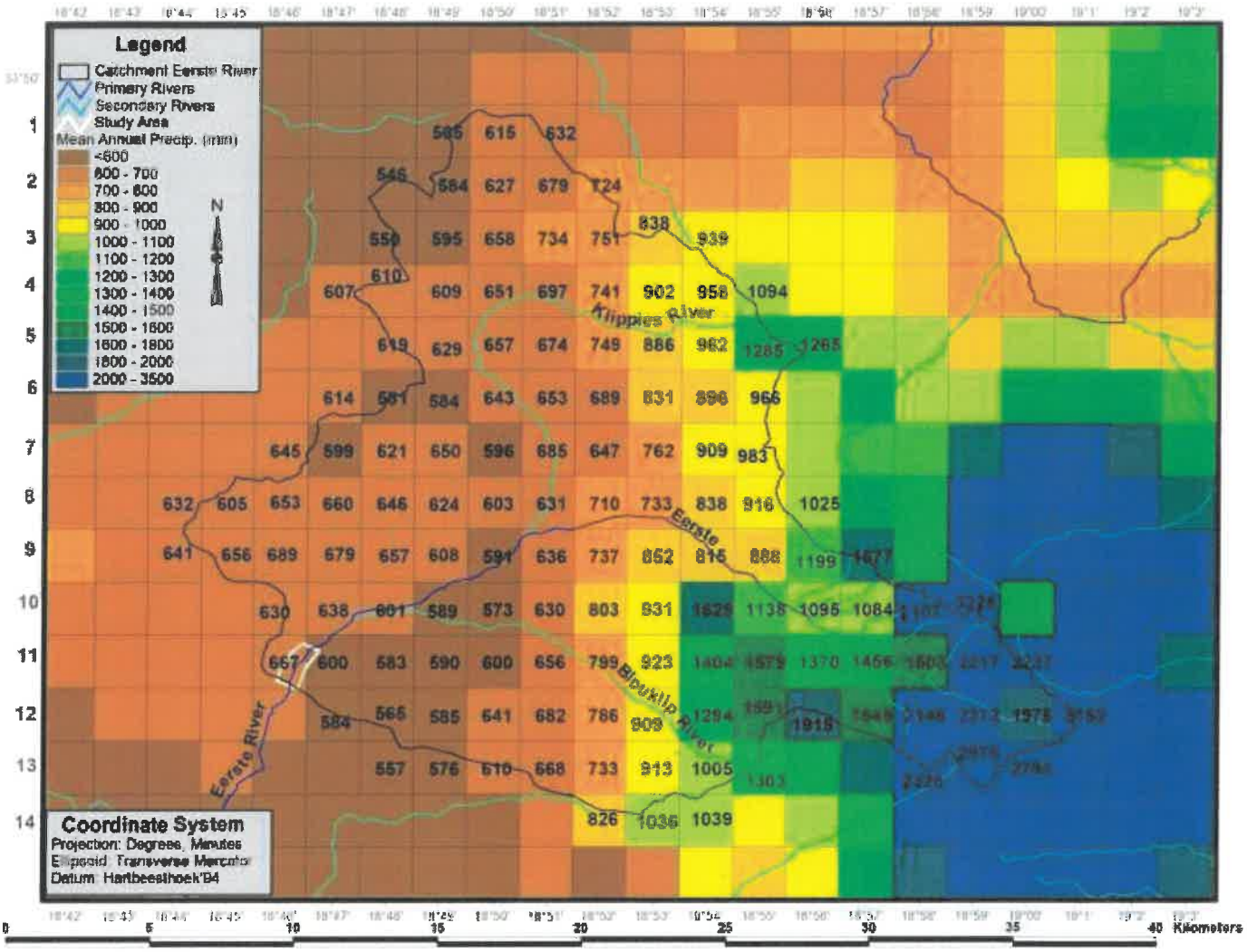


Figure 2: The Eerste River catchment showing 1' x 1' tiles with the MAP written in each of these tiles. The surface area of the tiles around the perimeter of the catchment that were cut into smaller pieces were determined, while the areas of the full ones in the centre of the catchment were added, to calculate a single area-weighted MAP for the catchment. This is done in the workbook in **Appendix 2**

Each tile was allocated its MAP and its surface area and thus it was possible to determine a single area-weighted MAP for the entire catchment up to the study area. This area-weighted MAP was calculated as **921.01-mm/a**. We also calculated the simple average of the MAP of the entire catchment as being 954.39 mm/a, but this value did not take cognisance of the areas of the tiles. Additionally, if the average of the MAP of the three quaternary catchments are determined, it is 962.46 mm/a, again a value not linked to the area of the tiles. So both these values were ignored and only the area-weighted MAP of 921.01 mm/a used in the flood model.

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

1.3 The shape and coverage of the Eerste River catchment

As can be seen in ***Figure 1***, the catchment of the Eerste River is somewhat triangularly shaped (as opposed to a more elongated shape of most "regular" catchments). This suggests that, rainfall falling along the upper side of the triangle (the side that includes the Jonkershoek Berg and Simonsberg - see ***Figure 1***), drained by the Jonkershoek/Eerste River and the Klippies River, would reach the confluence of these two rivers more-or-less simultaneously. This will give rise to a higher discharge downstream from the confluence than if this catchment had been an elongated catchment. In an elongated catchment, the rainfall falling in the downstream and central parts of the catchment would have left the catchment by the time the rainfall falling in the upper reaches of the catchment reaches its "outlet". In this triangular catchment, however, all rainfall falling along the longest side of the triangular catchment would reach the catchment's "outlet" at the same time, leading to more flashy floods in the downstream parts of this catchment (at the study area), compared to an elongated one. Thus, the hydrographs of triangular (and rounded) catchments would reach a peak discharge (Q in m^3/s) long before the peak in a more elongated catchment of the same size and the same general area would be reached. The time from the beginning of the flood to the end thereof is therefore shorter in a triangularly shaped catchment. Thus, a storm would produce a flood, which is overall shorter in duration, but its peak flow rate (Q) would be higher. In the case of elongated catchments, the flood would have a longer duration, but would not have as high a peak flow as the rounded one.

There is a measure of mitigation to the above in that virtually the entire catchment is rural, particularly its upper reaches where the highest rainfall would occur. This well-vegetated part of the catchment would (to a certain extent) attenuate the floodwaters a little. All this information was incorporated the flood model.

1.4 Elevation information used

The 0.5-m contour lines used for this project were produced using the survey data supplied by your client. AED was under the impression that the survey was produced using LiDAR surveying techniques, however, after working with the contour lines, it appeared that the survey might have been done using photogrammetry surveying techniques. Generally speaking, AED considers LiDAR a very good technique for

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

surveying elevations at, and around wetlands and watercourses, where it is not always possible for surveyors on foot to gain access. Furthermore, being very narrow laser beams, a LiDAR survey can penetrate all but the densest of vegetation, providing true ground elevations under tree covers. Trees and dense vegetation are often associated with rivers and wetlands.

Photogrammetry cannot penetrate vegetation and is less suitable for our purposes, particularly under trees lining watercourses. The "jumbled" contour lines in the lower part of the Eerste River at the study area gave the impression that the survey might have used photogrammetry and not LiDAR. It must be acknowledged that the accuracy of the flood lines produced by AED is directly related to the accuracy of the contour lines used. AED, however, considers the survey data as being suitable for modelling the flood lines of the Eerste River.

1.5 Background to Flood Lines, Floodplains and Areas of Inundation

Note: Although this section mostly refers to a 100-year flood, it is true for floods with any return interval (RI).

A 100-year flood is a flood event that has a 1% probability of occurring in any given year. The 100-year flood is also referred to as the 1% flood, since its annual exceedance probability is 1%, or as having a return interval of 100-years. The 100-year flood is generally expressed as a flow rate (m^3/s). Based on the expected 100-year flood flow rate in a given stream or river, the flood's water level can be mapped as an area of inundation. The resulting floodplain map is referred to as the 100-year floodplain, which may be very important in how close to the stream buildings or other infrastructure/activities are allowed.

A common misconception exists that a 100-year flood is likely to occur only once every 100 years. In fact, statistically, there is an approximately **63.4 %** chance of one 100-year floods occurring in any given 100-year period. The **Probability** (P_e) of one of a specifically sized flood occurring during any return interval, exceeding the specifically sized flood severity, can be expressed as:

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

$$P_e = 1 - \left[1 - \left(\frac{1}{T}\right)\right]^n$$

...where P_e is the probability, T is the return interval of a given storm (e.g. 100-year, 50-year, 20-year, etc.), and n is the number of years. The exceedance probability P_e is also described as the natural, inherent, or hydraulic risk of failure when, e.g. referring to dams, bridges, etc. However, the expected value of the number of 100-year floods occurring in any 100-year period is 1. In other words, 100-year floods have a 1% chance of occurring in any given year (P_e = 0.01), 10-year floods have a 10% chance of occurring in any given year (P_e = 0.1), 50-year floods have a 2% chance of occurring in any given year (P_e = 0.02), etc. The percent chance of an *x-year* flood occurring in a single year can be calculated by dividing 100 by *x*.

1.6 Legal Considerations

In terms of Section 144 of the **National Water Act** of 1998 (Act 36 of 1998), a flood line, representing the highest elevation that would probably be reached during a storm with a return interval of 100 years, must be indicated on all plans for the establishment of townships. The term, "*establishment of townships*" includes the subdivision of stands or farm portions in existing townships, if the 100-year flood lines are not already indicated on these plans, or when the land-use category of a particular portion of land is changed.

The purpose of this section of the act is to inform developers/landowners or residents/occupants/tenants/land-users of the dangers of flooding.

The earlier version of the **National Building Regulations and Building Standards Act** (Act 103 of 1977) referred to the 50-year flood lines. The newer version refers to areas that are "*prone to flooding*". Due to this discrepancy between different legislations, most municipalities now require both the 50- and 100-year flood lines to be indicated on plans, even though the National Water Act supersedes the National Building Regulations and Building Standards Act.

According to the Constitution of South Africa no legislation can supersede another. National, Provincial and Local Legislation (By-Laws) are all on the same level and

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

must be adhered to. Similarly, older and newer legislation pertaining to the same entity are also on the same level.

Being the higher of the two, the 100-year flood lines are obviously the safer of the two flood line sets. AED is confident that there would not be any additional benefit to also model the 50-year flood lines. The 100-year flood lines are appended as DXF and Shape and KMZ files in ***Appendix 1***.

2 Design Storm and Flood Line Modelling

2.1 Methodology Flood Lines

The determination of flood lines is done in two steps, **1)** modelling a succession of "*design storms*", each of them with a specific duration (1 hour, 2 hours, 24-hours, etc.) each producing a particular discharge in m³/s and, **2)** routing the highest discharge produced in Step 1 through cross sections across representative reaches of the rivers/streams at a study area, which then assigns an elevation on each side of the centreline (℄) of the stream to which the floodwaters would rise at that particular cross section. The flood lines are then drawn using these elevations at the cross sections as guides. The flood lines indicate the area that will be inundated during a 100-year flooding event at the study area.

The first part of the process comprises the modelling of a succession of "design storms" with a statistical RI of 100-years and durations ranging from 1 to 24 hours, falling over the catchment of the river at study area during a single rainfall event with a RI of 100-years.

Where a catchment is smaller that approximately 50 Km², design storms are derived using a deterministic approach, as opposed to the purely statistical methods used for larger catchments (i.e. catchments larger than ~100 Km²). This is done as a result of the difficulty of extrapolating the frequency analyses of peak discharges and experience envelope diagrams for small areas, as the range of enveloped values becomes extremely wide as the catchment area decreases. Another reason is the problem of attempting to assign recurrence intervals to these small experience envelopes. Hence, for catchments under ~50 Km², the acceptable procedure is to employ the original Rational Method (Q = CIA), an Empirical Method developed by

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

the HRU, and the Amended Rational Method, as researched, designed and published in Reports No. 1/72, 'Design Flood Determination in South Africa', 1972 and 1/74, 'A Simple Procedure for Synthesizing Direct Runoff Hydrographs' 1974, produced by a joint venture between the CSIR and the Hydrological Research Unit (HRU) (a division of the Department of Civil Engineering at the University of the Witwatersrand). The discharge is then derived using a weighting system linked to the surface area of the catchment.

Where a catchment is larger that ~100 Km², the standard statistical unit-hydrograph HRU model, as described by Bauer & Midgley (Bauer & Midgley, *1974*), is used. Storms with durations of 1 to 24 hours are synthesised, using modelling techniques described in both Reports No 1/72 "Design Flood Determination in South Africa" (*Midgley, 1972*) and No 1/74 "A Simple Procedure for Synthesizing Direct Run-off Hydrographs" *(Bauer & Midgley, 1974)* and using software developed by AED. Using the modelling techniques described by these documents, direct run-off hydrographs are then derived for the different storm durations. The hydrographs that produced the highest discharge is selected.

If the catchment is between 50 and 100 Km², both methods are done and the one producing the greater of the two discharges is selected as the preferred model.

With a catchment of 330.366 Km², the flood discharge in the Eerste River at the study area was derived using the standard statistical unit-hydrograph HRU model (for larger catchments), as its catchment is significantly larger than 100 Km². The highest discharges (produced by a 7-hour storm) for the Eerste River catchment was selected to plot the 100-year flood lines.

In the second part of the process, the discharges (flow - Q, in m³/s), produced by the design storm that produced the highest discharge, were routed through cross sections across the Eerste River, using Mannings theory for Open Channel Flow (*Chow, 1959*) and using software developed by AED. Ten cross sections were plotted across representative reaches of the Eerste River of which Cross Section 5 was plotted as close as possible to the Annandale Rd Bridge on its upstream side, Cross Section 6 was plotted across the bridge and Cross Section 7 immediately

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

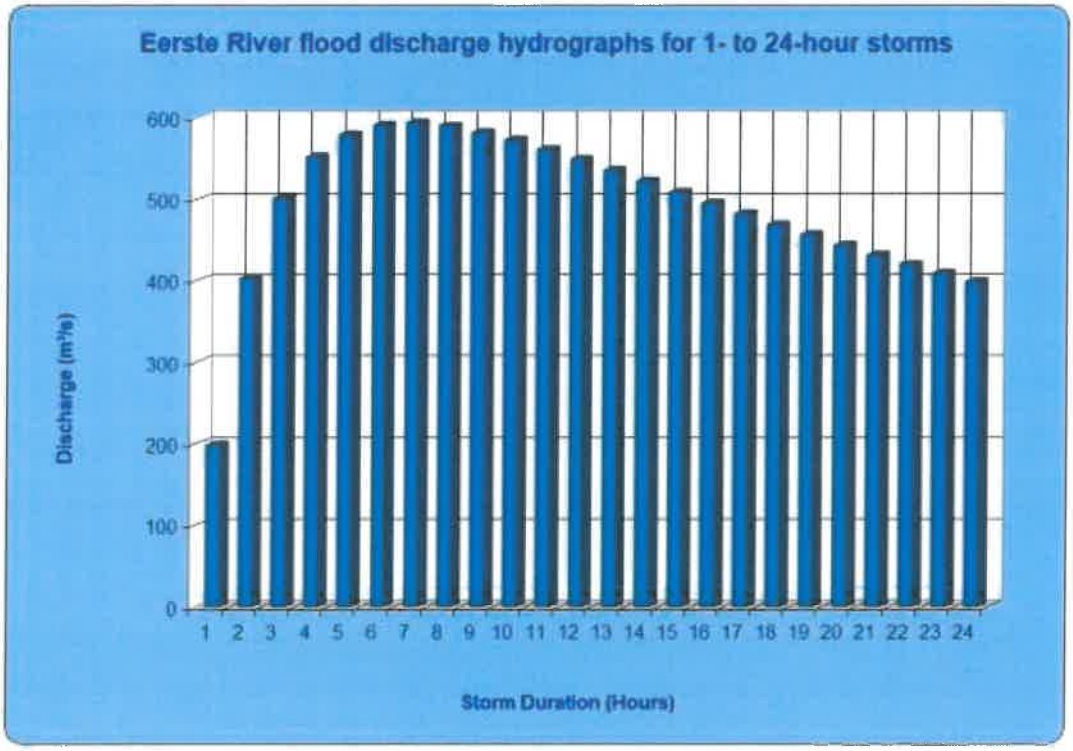
downstream of the bridge. These three cross sections would also be used as Cross Sections 1, 2 and 3 in the Bridge Backwater Model. The Cross Sections are shown in ***Figure 4***.

2.2 Methodology for Bridge Backwater Calculations

AED used the methodology described in the publication, "Hydraulics of Bridge Waterways" (Bradley, 1978) to determine the backwater produced by the Annandale Rd Bridge over the Eerste River.

2.3 Results

Table 1 summarises the discharge of the Eerste River at the study area for the 100-year return interval, using the aforementioned hydrological methodology.



Graph 1: The hydrographs for a 100-year flood in the Eerste River at the study area. A storm of 7 hours in duration will produce the highest peak flow rate (of 592.83 m³/s)

The 100-year flood lines were plotted through the 10 cross sections across the Eerste River, and are shown in ***Figures 3*** to ***7***.

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

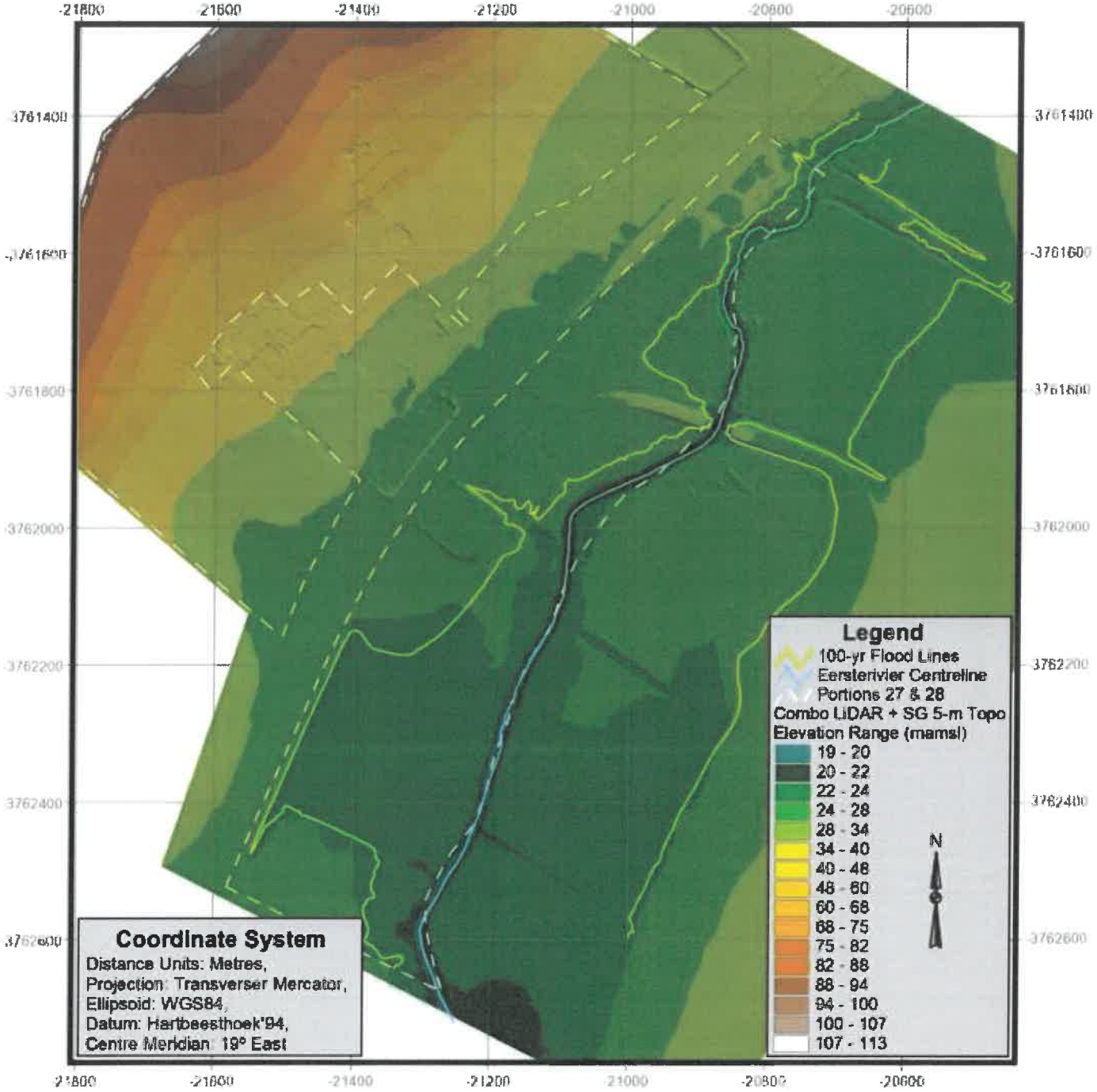


Figure 3: The 100-year flood lines of the Eerste River at the study area on a backdrop of the local topography, indicates a very wide floodplain due to the extremely low gradient of the river at this site

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

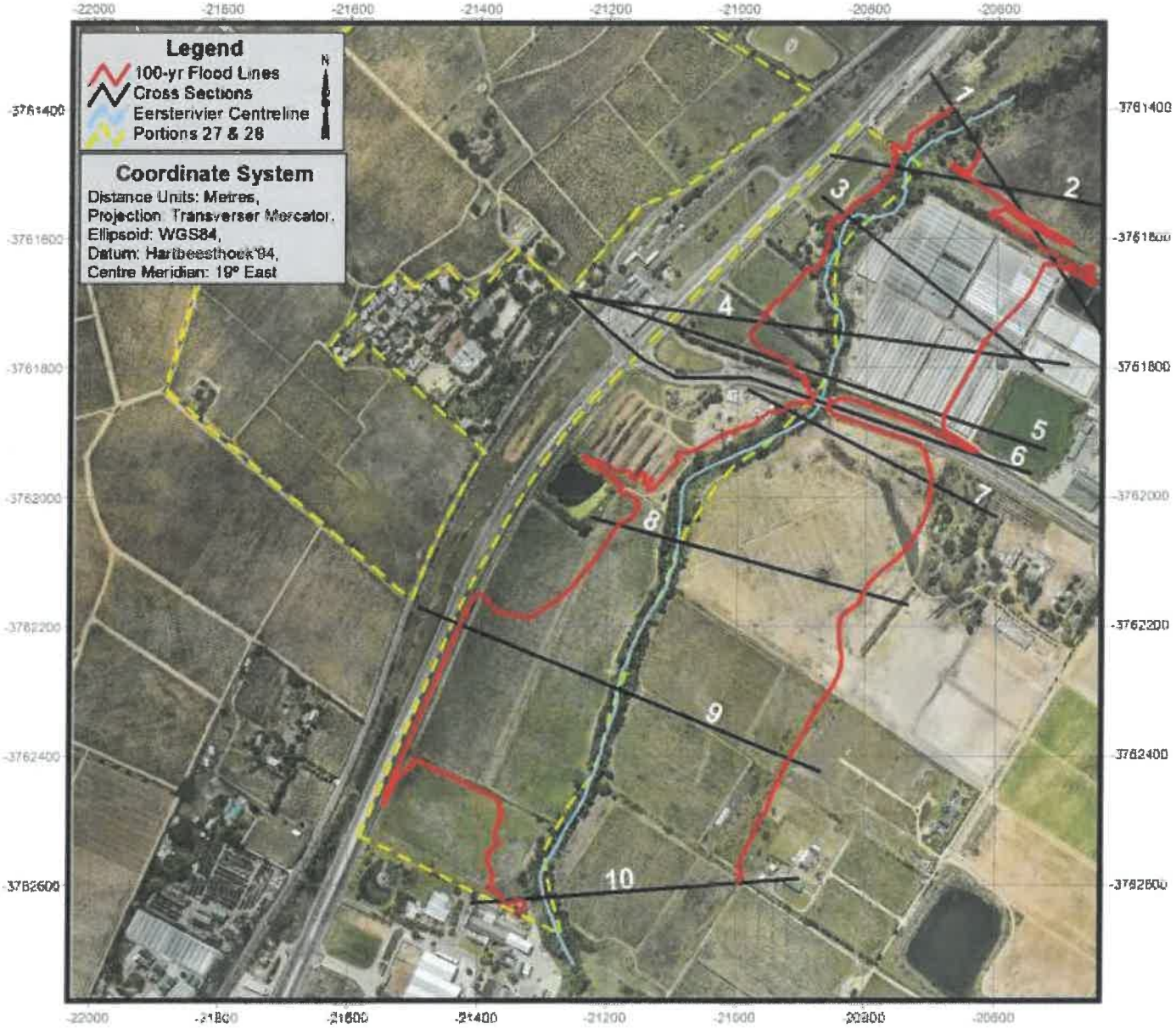


Figure 4: The 100-year flood lines of the Eerste River at the study area on a backdrop an orthophoto recently surveyed by the client's surveyors, indicates a very wide floodplain due to the extremely low gradient of the river at this site. It can be seen from both this figure and Figure 3 that, the Annandale Rd Bridge will not be overtopped

Also shown are the 10 cross sections across the Eerste River used in the hydrological model

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

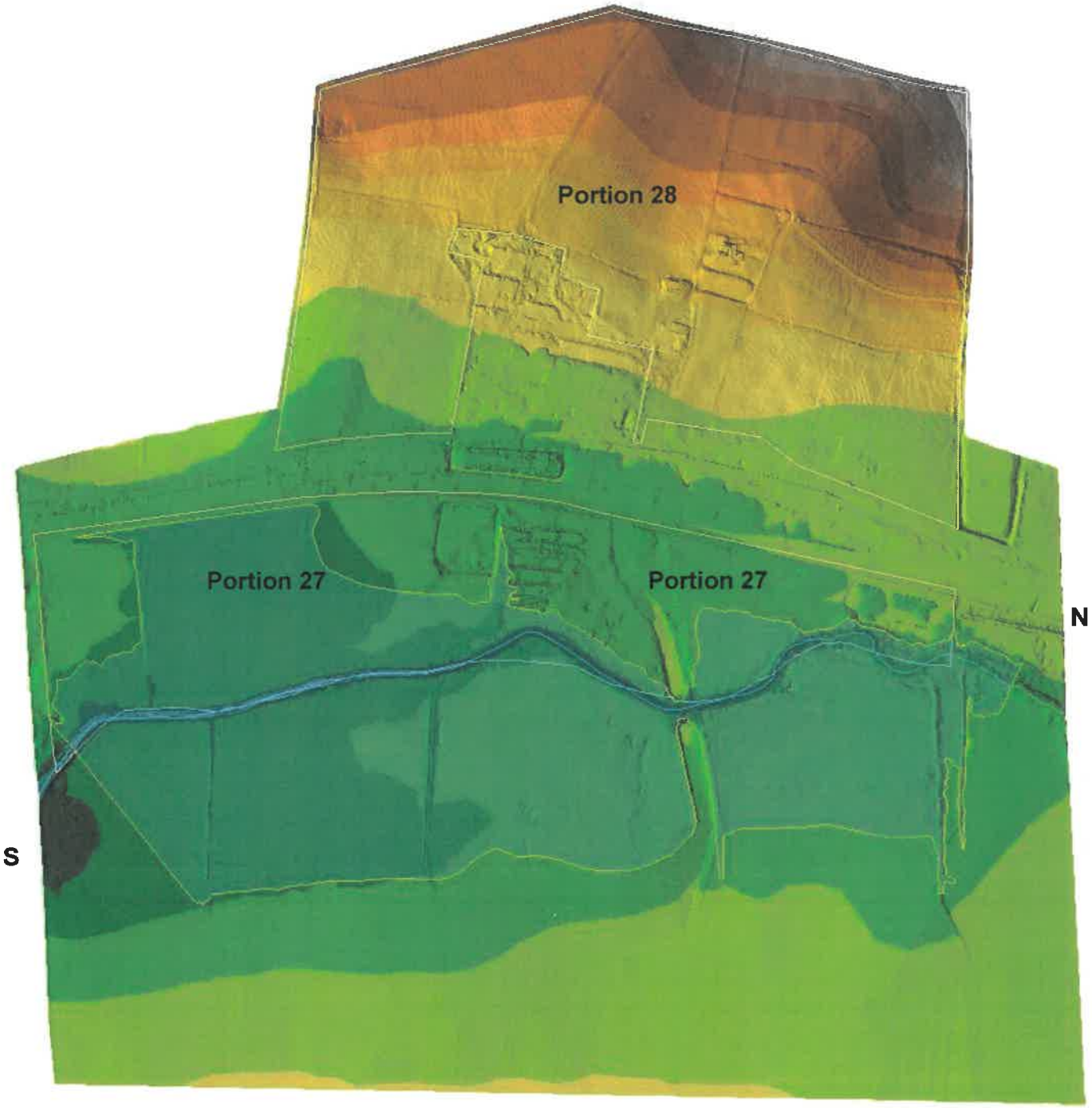


Figure 5: The 100-year floodplain of the Eerste River at the study area

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

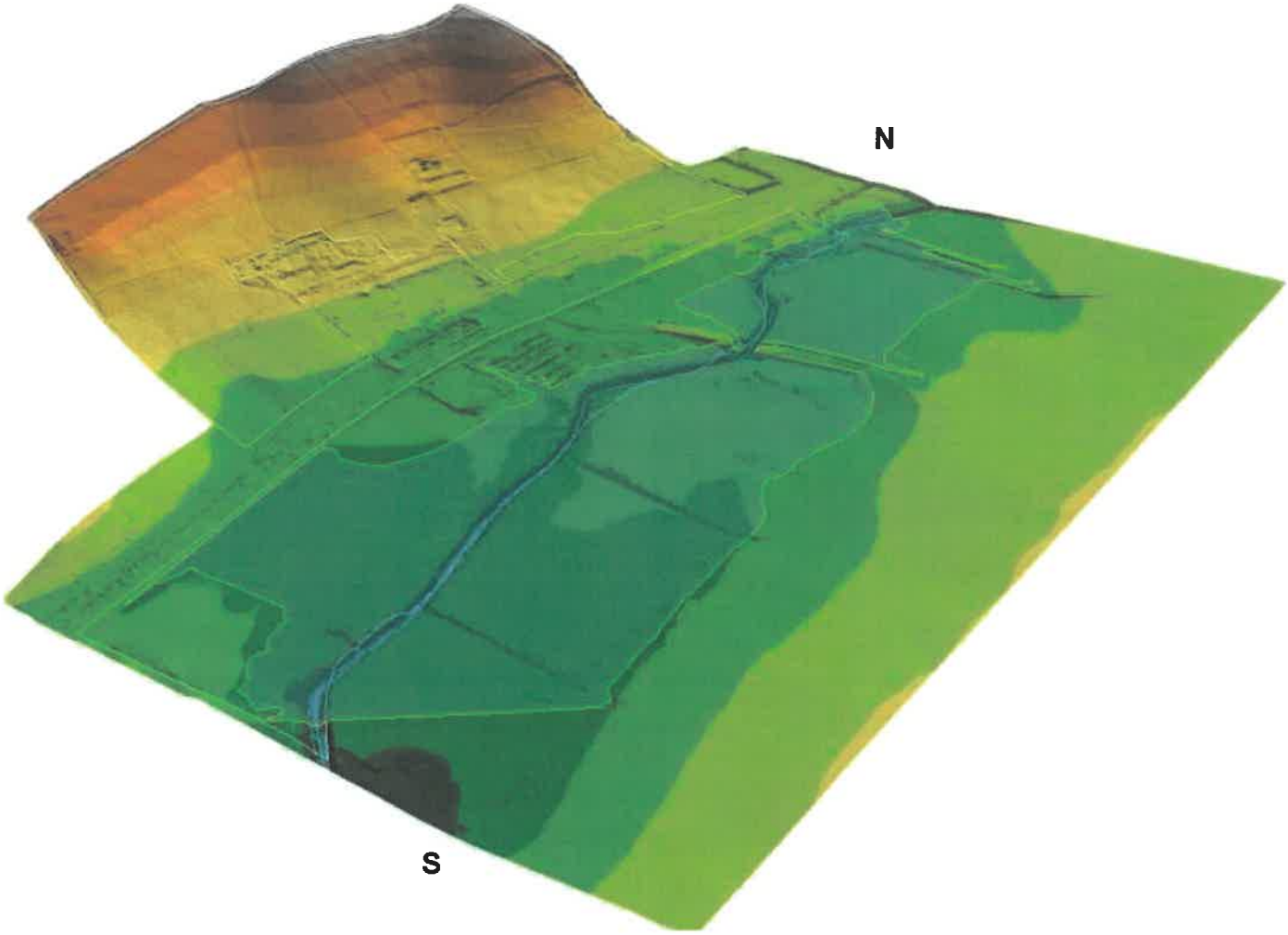


Figure 6: A 3D DTM showing the areas of inundation produced by 100-year storms falling over the catchments of the Eerste River. Please note that a **vertical exaggeration factor of 2.5x** was used to increase the sense of depth, i.e. the topography appears 2½ times deeper or higher.

As can be seen, the bridge at the Annandale Road crossing will not be overtopped during a 100-year flood

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

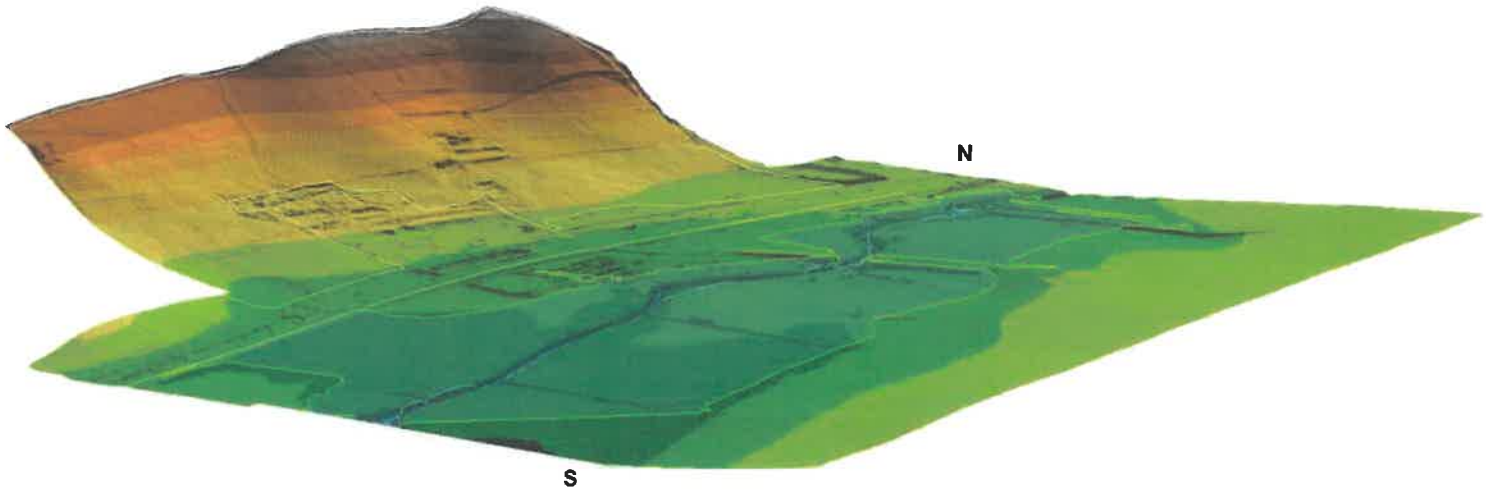


Figure 7: A 3D DTM showing the areas of inundation produced by 100-year storms falling over the catchment of the Eerste River. Please note that a **vertical exaggeration factor of 2.5x** was used to increase the sense of depth, i.e. the topography appears 2½ times deeper or higher. As can be seen, the bridge at the Annandale Road crossing will not be overtopped during a 100-year flood

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

2.4 Discharge off storms with RIs of 1- to 100-years falling over the catchments at the study area

Graph 1 summarises the *RI vs. Discharge* relationship for the Eerste River at the study area. The graph also contain its formula:

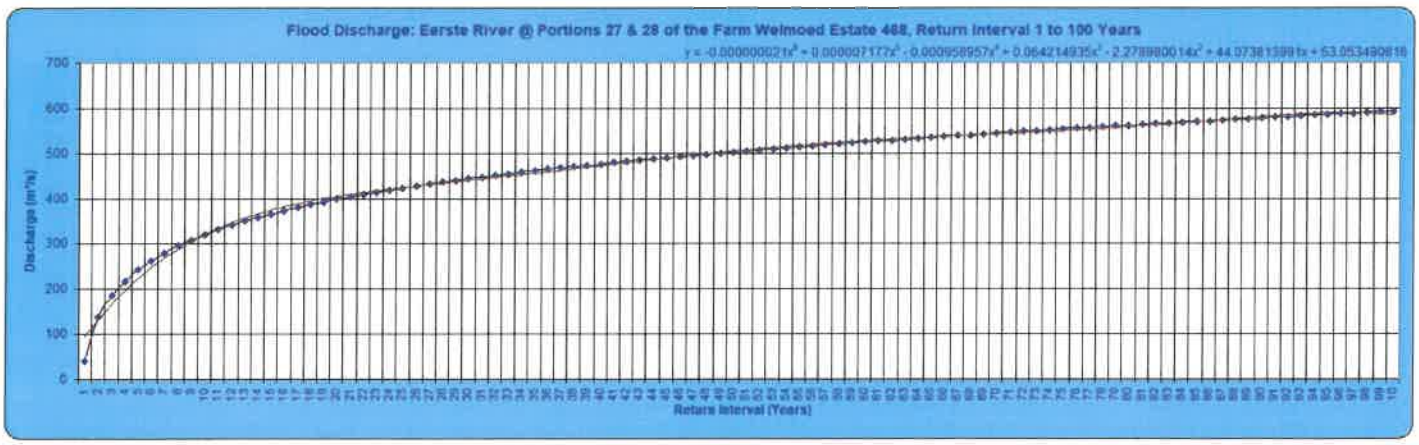
Eerste River:

$$y = -0.000000021x^6 + 0.000007177x^5 - 0.000958957x^4 + 0.064214935x^3 - 2.278980014x^2 + 44.073813991x + 53.053490816$$

The discharge can either be read off the graph directly, or the formula can be used to determine the discharge for a particular RI more accurately. It must further be noted that the graph and formula is specific to this particular catchment and cannot be used anywhere else.

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za



Graph 2: The discharge off storms with RIs ranging from 1- to 100-years, falling over the catchment of the Eerste River.

From the red regression line (trend line) is can be seen that the formula is only accurate after about the 8-year mark. After that the red regression line plots almost perfectly on top of the blue line of the actual graph

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

2.5 Annandale Road Bridge backwater calculations

There is a bridge across the Eerste River at the study area (bridge No 0618). It was constructed in 2018. It was considered highly likely that this bridge would produce backwater during a 100-year flood, which could increase the extent of the 100-year floodplain at the study area (Portion 27). This bridge is shown in ***Photos 1*** to ***3***.

For this reason it was necessary to also model the bridge backwater for this bridge under the 100-year flood flow conditions.

From the photos it can be seen that this bridge consist of a single rectangular portal, with no piers under the bridge. The surveyors, *Neil Woodin Surveys*, surveyed the bridge on 09/05/2023. A detailed drawing of this survey (in PDF format) is attached in ***Appendix 3***, the dimensions of which were used in our backwater model. The CAD file of this drawing is also available, if required.

The leading edges of the abutments were finished off in a rectangular format, i.e. presenting the flowing water with a flat surface to get around (rather than a angled surface, channelling the floodwaters into the portal).

The backwater was modelled using two different techniques. The first was done using Bradley's backwater methodology described in the publication, "*Hydraulics of Bridge Waterways*" (*Bradley, 1978*), and using software developed by AED, while the second was done where the portal was modelled as an open channel (this could be done, as there were no piers). Both methods produced results roughly within the same ballpark values, but the Bridge Backwater method, being the more reliable method, produced a higher backwater elevation and these values were preferred.

During a 100-year flood, the maximum elevation of the floodwaters just before the water surface begins to drop away when entering the bridge at L*, as described in Bradley's publication, differed by 42 cm between the two methods (elevations of 25.52- and 25.94-mamsl for the Open Channel and the Bridge Backwater methods respectively). L* is the distance from the leading edge of the bridge to the maximum backwater.

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

Bradley's calculations indicated that the water level would begin dropping away some 23.287 m before reaching the bridge intake (L* = 23.287 m). The difference between the inlet water elevation of the bridge and its water outlet elevation (Δh) would be 1.378-m (i.e. the drop in water level before and after the bridge).

Interestingly, the water level on the outflow side of the bridge is at a lower elevation as that at Cross Section 7 further downstream. This implies that, due to the higher velocity of the water flowing through the bridge portal (7.598 m/s), a hydraulic jump would occur immediately downstream from the bridge where the water level would abruptly rise from 24.65- to 25.65-mamsl, a 1-m jump of exactly 1 metre. This scenario is shown in ***Figure 8***.

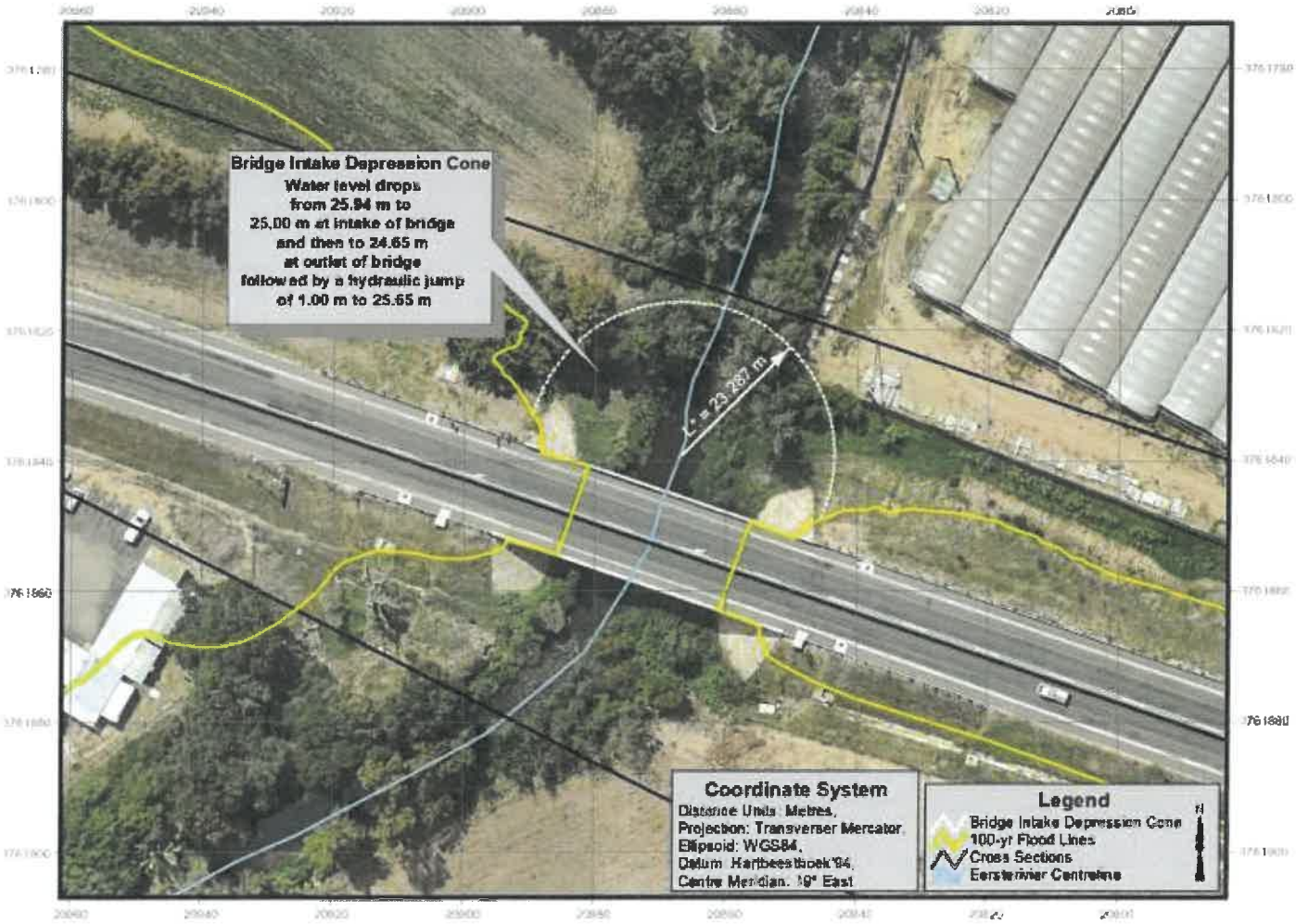


Figure 8: The depression that would form at the intake side of the bridge (dotted line) will begin forming some 23.287 m upstream from the bridge. The distance is referred to as L*, the distance to maximum backwater. At the outlet of the bridge, a 1-m hydraulic jump would occur

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

A hydraulic jump is a phenomenon, which is frequently observed in open channel flow such as rivers and spillways. When liquid at high velocity discharges into a zone of lower velocity, a rather abrupt rise occurs in the liquid surface. The rapidly flowing liquid is abruptly slowed and increases in height, converting some of the flow's initial kinetic energy into an increase in potential energy, with some energy irreversibly lost through turbulence to heat. In an open channel flow, this manifests as the fast flow is rapidly slowed down and piled up on top of itself, similar to how a shockwave forms. It was first observed and documented by Leonardo da Vinci in the 1500s.

Our calculations confirmed that the bridge would not be overtopped, implying that it was constructed to allow a 100-year flood to pass under it without being overtopped.

2.6 Comments relating to the Flood Lines

2.6.1 Extent of the flood lines at the study areas

The floodplain of the 100-year flood in the Eerste River would impact on Portion 27, but not on Portion 28 at the study area. Due to the very low slope of the river at the study area, the floodplain would spread out very wide on both sides of the stream's centreline.

In most instances, the 100-year flood lines exceed the 32-m buffer, measured from the centre of the stream (as this is a reasonably narrow stream channel under normal flow conditions). In some parts, the 100-year flood line on Portion 27 and the 32-m line almost run on top of each other. Refer to ***Figure 9*** for details of the 32-m buffer (black & white lines) in relation to the 100-year flood lines (yellow lines).

The backwater created by the bridge at Annandale Rd played a role in elevating the 100-year floodplain upstream from the bridge to a point roughly halfway between Cross Sections 4 and 5 (refer to ***Figure 4*** for the cross sections).

2.6.2 Units used in this report

All drawings were produced using the following parameters: **Distance Units**: Metres, **Projection**: Transverse Mercator, **Datum**: Hartbeesthoek'94, **Ellipsoid**: WGS84 and the **Centre Meridian** (Longitude of Origin or "LO"): 19º East (i.e. WG19º).

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

The GIS program, *ArcView 3.2a* and its extension, *3D Analyst*, were used to produce all the drawings in this document. Please note the **X** and **Y** coordinates in the drawing have been allocated positive values to north and east and negative values to south and west.

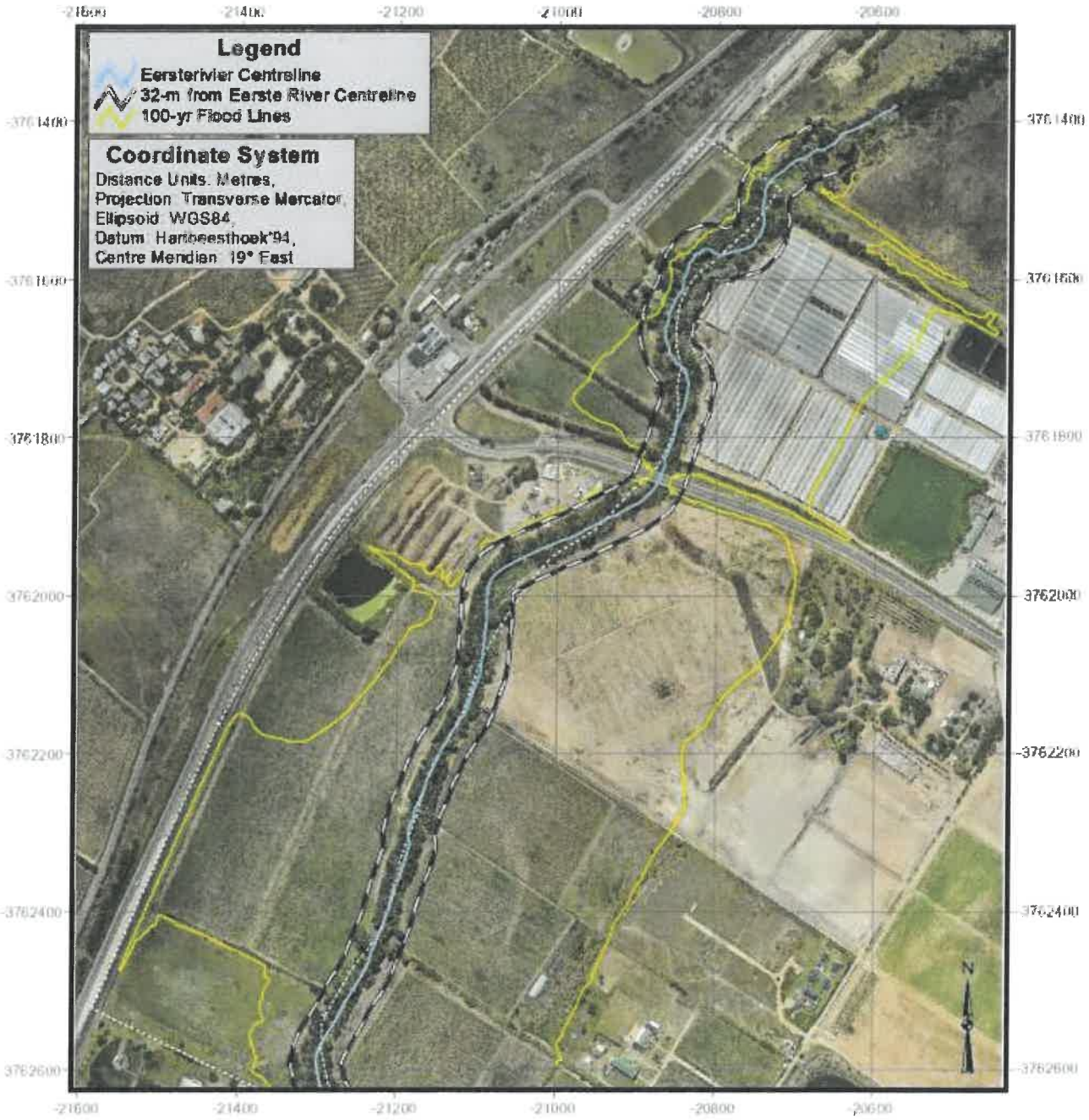


Figure 9: The 32-m buffer area (32-m from the centreline of the Eerste River) in relation to the 100-year flood lines

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

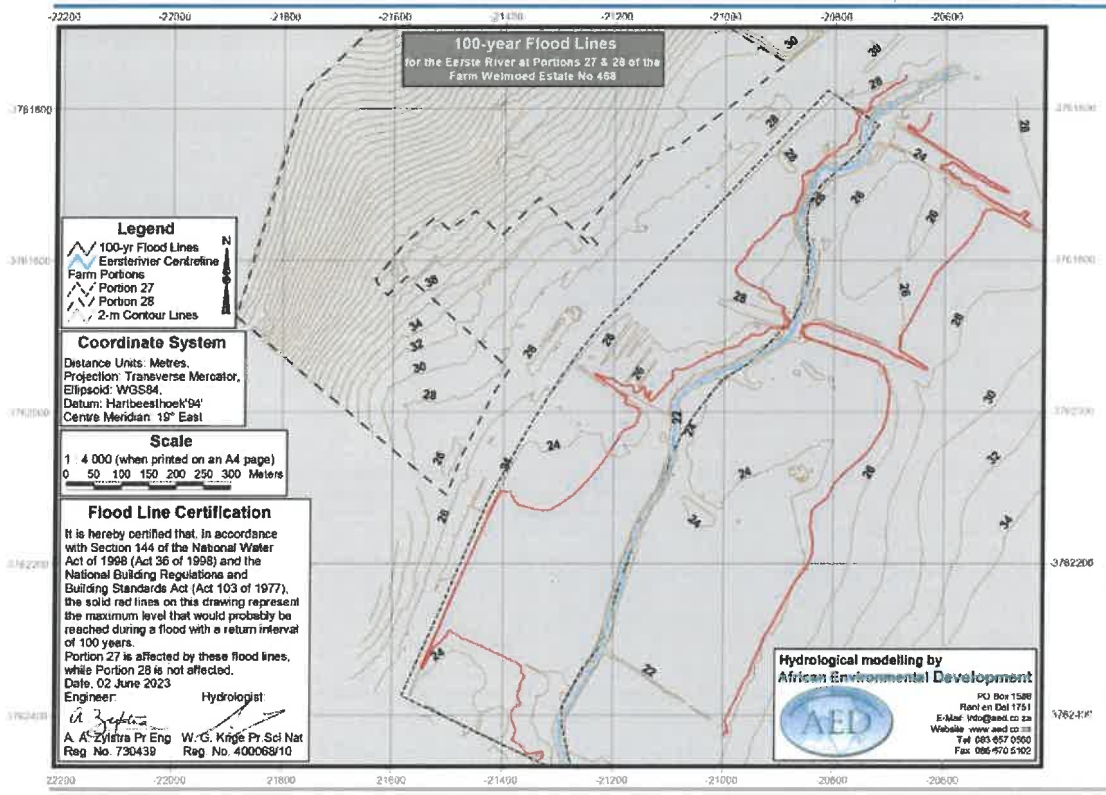


Figure 10: The 100-year flood lines of the Eerste River (red lines).

Although 2-m contour lines are shown in this drawing, AED actually used 0.5-m contour lines to model the flood through the cross sections and through the bridge.

This is a low-resolution copy of the high-resolution certified drawing appended to this document in ***Appendix 1***

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

3 Certification of Methods Used

100-Year Flood Lines:

The Eerste River at Portions 27 and 28 of the farm Welmoed Estate No 468 District Stellenbosch, Western Cape Province, RSA

05/06/2023

TO WHOM IT MAY CONCERN,

This is to certify that the 100-year flood discharge for the above-mentioned watercourse at the above site were derived using methods described in the *Report No 1/74 "A Simple Procedure for Synthesizing Direct Runoff Hydrographs"* of the *Hydrological Research Unit*, a division of the Department of Civil Engineering of the University of the Witwatersrand, and using software developed by AED.

The 100-year return interval storms were synthesized from direct run-off hydrographs using methods described in *Report No. 1/72 "Design Flood Determination in South Africa"* of the same unit and also using software developed by AED.

Both Reports 1/72 and 1/74 were developed as a joint venture between the CSIR and the University of the Witwatersrand and are considered to be accurate methods, particularly for use under South African rainfall conditions.

The flood flow rates, determined in terms of paragraph 1, were then routed through cross-sections, plotted across the stream, using Mannings theory for open channel flow and using software developed by AED. The design flood through these cross sections produced the flood elevations for the 100-year return interval storm, as indicated in the accompanying CAD files.

The Bridge Backwater for the Annandale Road Bridge was modelled using modelling techniques described in the publication, "*Hydraulics of Bridge Waterways*" by Joseph N Bradley (Bradley 1978) and using software developed by AED.

The 0.5-m contour lines were produced using the elevation information acquired from the client and was surveyed on 10/03/2023. Premier Mapping conducted the survey. The survey produced contour lines that were sufficiently accurate for the modelling of the 100-year flood lines in this stream.

A. A. Zylstra
Pr.Eng. (Reg. No.730439)

W. G. Krige
Pr.Sci.Nat (Reg. No. 40068/10)

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

4 References

Bailey, A. K. & Pitman W. V.: (2012): Water Resources of South Africa 2012 Study (WR2012) Version 1 Water Research Commission Project No K5/2143/1

Bauer, S. W., Midgley, D. C.; (1974) CSIR/University of the Witwatersrand Report No. 1/74, 'A Simple Procedure for Synthesizing Direct Runoff Hydrographs'

Bradley, Joseph. N.; (1978) 'Hydraulics of Bridge Waterways'

Chow, Ven Te; (1959). 'Open Channel Hydraulics', McGraw Hill Book Company, Re-issue 1998

Midgley, D. C.; Pitman, W, V.; Middleton, B. J. (1994). 'Surface Water Resources of South Africa', Water Research Commission Report No. 298/94

Midgley, D. C.; (1972) CSIR/University of the Witwatersrand Report No. 1/72, 'Design Flood Determination in South Africa'

Middleton, B. J.; Bailey, A. K. (2005): Water Resources of South Africa, 2005 (WR2005) Version 1. Water Research Commission Project No. K5/1491

SANRAL; (2007); 'The South African National Roads Agency Limited Drainage Manual' 5th Edition, 2nd Print, SANRAL Publication

SANRAL; (2013); 'The South African National Roads Agency SOC Limited Drainage Manual Application Guide' 6th Edition, Fully Revised and Extended, SANRAL Publication

---

African Environmental Development
No 129 Malmani Road
Sterkfontein Country Estates
Krugersdorp

African Environmental Development
PO Box 1588
Rant-en-Dal 1751
Tel: - 083 657 0560
Fax:- 086 670 5102
E-mail: - garfield@aed.co.za
http://www.aed.co.za

Appendix 1: CAD Files and Certified Drawing



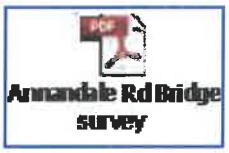
Please double-click on the above icon to open the zipped folder containing the CAD file in DXF and Shape file formats, as well as images of the certified drawings in jpeg file format

Appendix 2: Excel Workbook Area-weighted Catchment Mean Annual Precipitation calculations



Please double-click on the above icon to open the file

Appendix 3: Survey drawing of Annandale Rd Bridge



Please double-click on the above icon to open the file

ANNEXURE C

Subdivision (Erf) reference	Land use	Phase	Comment
1	Private open space, street, place of assembly	1	
2	Educational school	1	
3	Commercial, business	1	
4	Residential, business, mixed-use	1	
5	Private open space, street	2	
6	Private open space, outdoor sport, stormwater management	6	
7	Residential, business, mixed-use	2	
8	Residential, business, mixed-use	3	
9	Private open space, street	4	
10	Residential, business, mixed-use	4	
11	Place of assembly, business, mixed-use	4	
12	Residential	5	
13	Private open space, outdoor sport	6	
14	Private open space, street	7	
15	Residential	7	
16	Residential	8	
17	Private open space, street	9	
18	Private open space, outdoor sport, stormwater management	9	
19	Residential	10	
20	Residential	10	
21	Residential	11	
22	Private open space, outdoor sport, stormwater management	9	
23	Residential	12	
24	Private open space, outdoor sport	14	
25	Residential	13	
26	Residential	19	
27	Private open space, street	15	
28	Residential	16	
29	Residential	17	
30	Residential	18	
31	Private open space, outdoor sport, stormwater management	15	
32	Private open space, outdoor sport	17	
33	Private open space, outdoor sport	20	
34	Private open space, street	21	
35	Private open space, street	21	
36	Residential	22	
37	Residential	23	
38	Residential	24	
39	Residential	25	
40	Residential	26	
41	Residential	27	
42	Private open space, outdoor sport, street	28	
43	Residential	29	
44	Residential	30	
45	Private open space, outdoor sport, street	31	
46	Residential	32	
47	Private open space, outdoor sport, street	33	
Remainder Road	Public road	1	



PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Alottment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Block Plan (PORTION 28) REV 05.2 | 1:2000 (@A1) | 28.03.2024

WELMOED

URBANSTUDIO
architects & urban designers

ANNEXURE O: ELECTRICAL ENGINEERING SERVICES REPORT

PORTION 28 OF FARM WELMOED ESTATE

NO. 468, STELLENBOSCH

INFRASTRUCTURE REPORT

ELECTRICAL SERVICES

APRIL 2024

Report By:
DM Consulting Engineers Cape (Pty) Ltd

DM
CONSULTING ENGINEERS
Office 112, The Cliffs 1, 3 Niagara Street,
Tyger Falls Boulevard, Bellville, 7530
+27 (0)21 914 1004 info@dmce.co.za
www.dmce.co.za
WE ALSO HAVE OFFICES IN THE NORTH WEST PROVINCE

Contents

1. Abbreviations 3

2. List of Tables 4

3. List of Figures 4

4. Introduction 5

5. Existing Infrastructure 6

a) Electrical supply from Eskom 6

6. Design development 10

a) Scope of works 10

7. Estimated load 10

a) Capacity availability confirmation from ESKOM 12

b) Future After Diversity Maximum Demand (ADMD) 12

c) PV Solar estimation 13

d) Eskom upgrading proposal. 14

8. Costing 14

a) Eskom estimation costs 14

b) Direct construction cost estimation 15

9. Conclusion 16

10. Annexure A 17

1. Abbreviations

ADMD	:	After diversity maximum demand
ATS	:	Automatic Transfer Switch
BDMD	:	Before diversity maximum demand
c/kWh	:	cent per kilo-watt-per hour
CEF	:	Cost Estimate Fee
CEL	:	Cost Estimate Letter
CNC	:	Customer Network Centre
DB	:	Distribution Board
DMCE	:	DM Consulting Engineers Cape (Pty) Ltd
DMS	:	Department of Water and Sanitation
EMP	:	Environmental Management Plan
HV	:	High voltage
kV	:	kilovolt
kVA	:	kilo-volt-ampere
kW	:	kilowatt
kWh	:	kilo-watt-per hour
kWp	:	kilowatt-peak
LPU	:	Large Power User
LV	:	Low voltage
MD	:	Maximum Demand
MDB	:	Main Distribution Board
MSub	:	Miniature substation
MV	:	Medium voltage
NE	:	Northeast
NMD	:	Notified Maximum Demand
NW	:	Northwest
POC	:	Point of consumption
POS	:	Point of supply
PV	:	Photovoltaic
SANS	:	South African National Standards
SDP	:	Site development plan
SE	:	Southeast
SOC	:	State owned company
SW	:	Southwest

2. List of Tables

Table 1: Load calculation summary 11
Table 2: Load calculation - Residential 13
Table 3: Load calculation – Commercial & Summary 13
Table 4: Potential PV Solar generation 13
Table 4: Eskom Process 14
Table 5: Eskom budget estimations 15
Table 6: Direct construction cost estimation 15

3. List of Figures

Figure 1: Location of site. 5
Figure 2: Site development plan 6
Figure 3: Existing Eskom network 7
Figure 4: Proposed POS 7
Figure 5: Lynedoch Substation load profile 8
Figure 6: Eskom MV network 9
Figure 7: Diversity factor example 12

5

4. Introduction

DMCE has been instructed by the client; Uniqon Developers (Pty) Ltd to report on the electrical infrastructure for PORTION 28 OF FARM WELMOED ESTATE NO. 468, STELLENBOSCH and compile an infrastructure report of the site, including load estimation and capacity confirmation of electrical services for the proposed development.



Figure 1: Location of site.

6

PORTION 28 LAND USE TABLE		
Site area	45.60 Ha	
Land use	Area	Units
School Component (A2)	1.78 Ha	
Commercial (A1,B5)	0.50 Ha	
Clubhouse Component(B5)	0.18 Ha	
Allied Use Component (B1-4)	0.7 Ha	515 units
Residential (@30 du/ha)	5.88 Ha	
Residential (@40 du/ha)	8.74 Ha	355 units
Allotment Villas	10.31 Ha	14 units
Total	28.09 Ha	884 units
Detention & SW area	1.15 Ha	
Indigenous slopes	6.45 Ha	
Roads & squares	4.66 Ha	
Private open space	4.04 Ha	



Figure 2: Site development plan

5. Existing Infrastructure

a) Electrical supply from Eskom

There is currently an existing 11kV overhead Eskom line operating along the southeast side of the property, fed from Lynedoch Substation; feeder 1. Various transformers and switching points have been identified (See figure 3). The supply point, "FSARail" has been identified and communicated to Eskom for capacity simulations and confirmation (See Figure 4). The final point of supply (POS) will be determined, identified, and communicated by Eskom.

7



Figure 3: Existing Eskom network



Figure 4: Proposed POS

8

The development is expected to be fed from Lynedoch substation via Lynedoch Farmers 1 feeder. The Substation is equipped with one 10MVA 66/11kV transformer. A peak demand of 9.3MVA to date was recorded on the transformer. Lynedoch Farmers 1 will experience thermal and low voltage constraints should additional load be applied. Voltage regulators will be considered by Eskom. The load on the feeder is currently 4.5MVA and is expected to grow more than that as there are LPUs which are not fully utilising their capacity to date.

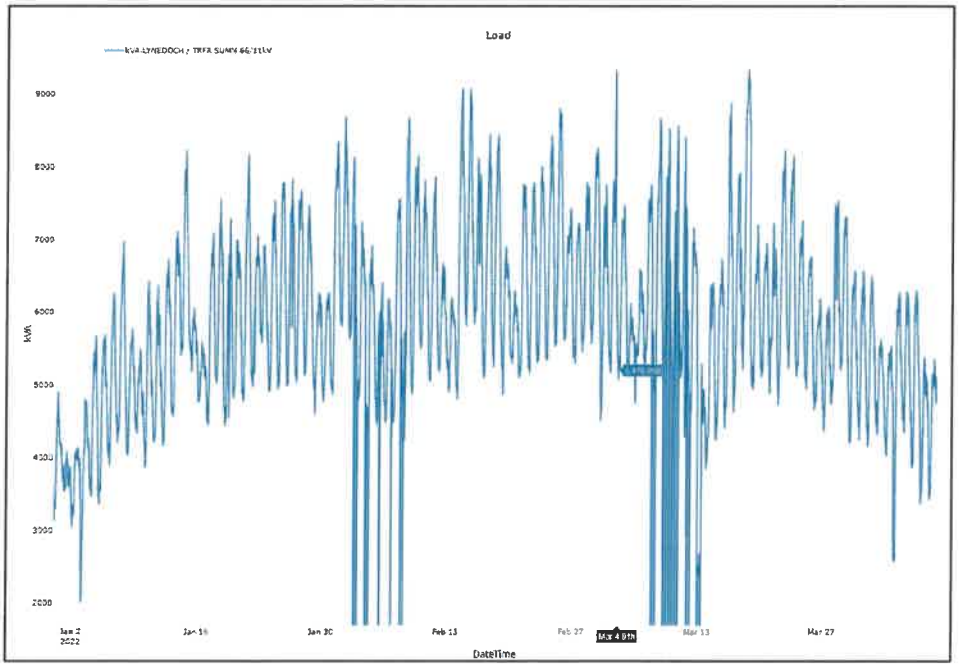


Figure 5: Lynedoch Substation load profile

The following strengthening options must be considered to make capacity available for Welmoed, Portion 28 development.

Option 1:

Transfer load to interconnecting feeders to de-load both the substation and Lynedoch farmers 1 feeder. The amount of load that can be transferred is limited due to the capacity limitations of the interconnecting feeders. This approach is considered a temporary solution and upgrading of the substation transformer will still be required eventually. Eskom confirms 650kVA can be made available of the required maximum demand (MD). See Annexure A.

9

Option 2:

Construct as second overhead feeder (approximately 4km) from Lynedoch substation to the development to share the current load. This option will also require upgrading of the Lynedoch Substation transformer.

This option will require an approved route between Lynedoch substation and Welmoed, Portion 28. Wayleaves assuring legal right of way will be required prior to construction. The overhead powerline will become Eskom property after construction. A selfbuild project may be considered to speed along the process. See figure 6.

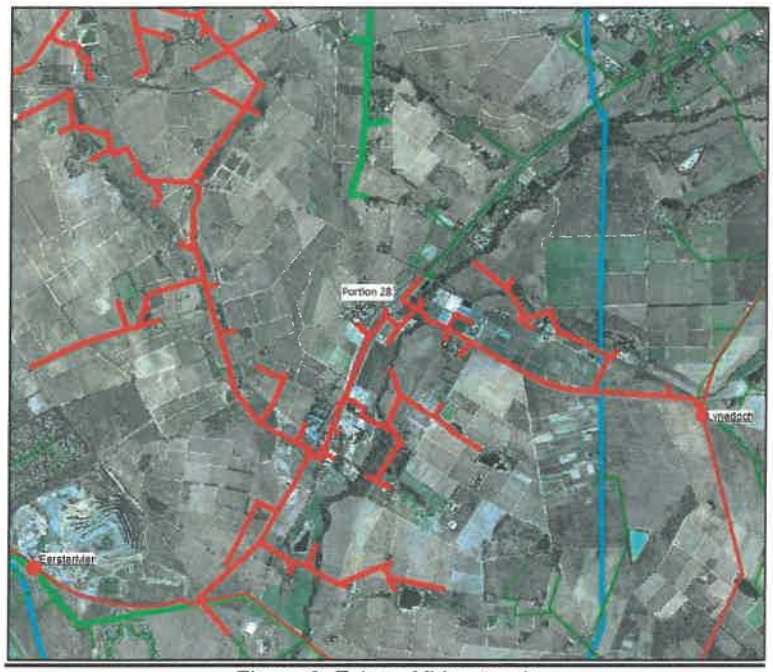


Figure 6: Eskom MV network

Option 3:

Construct as new overhead feeder (approximately 5km) from Eersterivier substation to Welmoed, Portion 28 to share the current load. Written confirmation of the viability of this option is still outstanding from the planner responsible for the Eersterivier Substation.

This option (as with option 2) will require an approved route between Eersterivier substation and Welmoed, Portion 28. Wayleaves assuring legal right of way will be required prior to construction. The overhead powerline will become Eskom property after construction. A selfbuild project may be considered to speed along the process. See figure 6.

10

A project evaluation model analysis will be conducted by Eskom to determine which option yields the least-life cycle cost between option 2&3. The analysis combined with the require confirmation from the network operator for Eersterivier substation will influence Eskom's preference between option 2 and 3 respectively.

6. Design development

a) Scope of works

The scope of works for the proposed development may be listed as follows:

1. Conduct a load estimation of the development.
2. Confirm sufficient capacity available from Eskom for the development.
3. Examine potential PV Solar generation for the development.
4. Apply for MV Bulk supply point from Eskom.
5. Provide recommendations.

7. Estimated load

The development allows for 886 residential dwellings with potential allowance for future density increase applications. A design load of 2.5kVA is calculated for each dwelling. The follow alternative energy measures will be employed at each dwelling to limit energy consumption form the national Eskom grid:

1. Gas stoves
2. Gas geyser
3. Gas ovens
4. 5kW PV Solar system

PV Solar efficiency of each induvial dwelling cannot be declared at present. Information such as roof structure, direction, roof tilt and shading information is not

available at present. Allowance for the PV Solar shortfalls have been made in the design load.

Item	Building Type	Block	Residential Type	Area (m²)	No. of Units	kVA/Unit	Total Load (kVA)
1	Residential	B1	Standard Unit		55	2,5	137,5
2	Residential	B2	Standard Unit		56	2,5	140
3	Residential	B3	Standard Unit		56	2,5	140
4	Residential	B4	Standard Unit		86	2,5	215
5	Residential	B5	Standard Unit		20	2,5	50
6	Residential	B6	Standard Unit		71	2,5	177,5
7	Residential	B7	Standard Unit		37	2,5	92,5
8	Residential	B8	Standard Unit		106	2,5	265
9	Residential	B9	Standard Unit		52	2,5	130
10	Residential	B10.1	Standard Unit	258200	4	2,5	10
11	Residential	B10.2	Standard Unit		5	2,5	12,5
12	Residential	B11	Standard Unit		23	2,5	57,5
13	Residential	B12	Standard Unit		46	2,5	115
14	Residential	B13	Standard Unit		48	2,5	120
15	Residential	B14	Standard Unit		105	2,5	262,5
16	Residential	B15	Standard Unit		30	2,5	75
17	Residential	B16	Standard Unit		49	2,5	122,5
18	Residential	-	Standard Unit		22	2,5	55
19	Residential	C1-14	Alottment Villa		14	2,5	35
					885		
			Total Load (KVA)				2212,50
			Diversity				0,90
			ADMD (KVA)				1991,25

Page 1

Table 1: Load calculation – Residential

COMMERCIAL SPACES								
Item	Building	Level	Commercial Space Type	Qty	Area (m²)	VA/m²	Total Load (VA)	Total Load (KVA)
1	-	All	School component	1	17800	85	1513000	1513
2	-	All	Commercial component	1	5000	85	425000	425
3	-	All	Clubhouse component	1	1800	40	72000	72
4	-	All	Mixed use component	1	7000	65	455000	455
5	External lighting	-	-	1	-	-	-	5,00
					31600			
					Total Load (KVA)			2470,00
					Diversity			0,80
					ADMD (KVA)			1976,00
					Total Load (Residential + Commercial Spaces)			4188,50
					Diversity			0,50
					ADMD (KVA)			2094,25

Page 1

Table 2: Load calculation – Commercial & Summary

Formal applications to Eskom for capacity allocations will increase over time in required NMD with relation to growth of the development. This allows time for Eskom to perform necessary upgrading and preparations towards 2.1MVA NMD. An increase NMD application for 2.6MVA will be submitted for future density increase applications after the designed number of consumers is reached (1500).

12

a) Capacity availability confirmation from ESKOM

A revised scope of works has been issued to Eskom following a meeting conducted on the 7th of June 2023. Eskom will provide feedback regarding the maximum allowed capacity available on the Lynedoch Substation Feeder 1 (See Annexure A).

b) Future After Diversity Maximum Demand (ADMD)

ADMD is the after diversified Maximum Demand (MD).

The ADMD is determined as follows:

1. The Maximum Demands (MD) for each dwelling is determined using appropriate kVA/dwelling values.
2. A diversity factor is factored in for the complete development (885 connections). The diversity factors decrease as the number of connections increases.

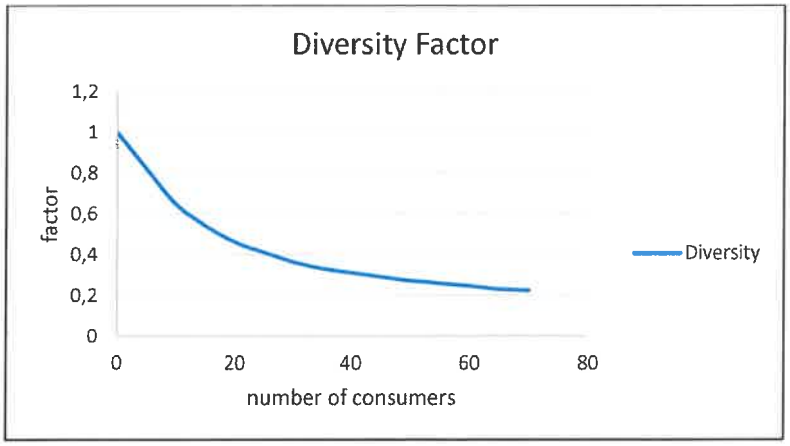


Figure 7: Diversity factor example

3. The MD and ADMD are determined from the sums of the separate dwelling MDs and ADMDs.

The site's MD is calculated at 4.2MVA (BDMD) and 2.1MVA (ADMD) respectively. As illustrated below in Table 3, the number of consumers is expected to be reached over a construction period of 6 years. The final phasing of the project to be confirmed by

13

the developer. Required application for a 2.1MVA NMD supply will follow the number of designed consumers (885) including the planned commercial area.

Phase	Expected year of construction	Number of Units	kVA required @ 2.5kVA design load	kVA demand with Diversity
Phase 1	2025	150	375	187.5
Phase 2	2026	150	375	187.5
Phase 3	2027	150	375	187.5
Phase 4	2028	150	375	187.5
Phase 5	2029	150	375	187.5
Phase 6	2030	135	340	170
		885	2 215	1 108

Table 3: Future expected load increase

c) PV Solar estimation

As previously mentioned, each dwelling will be equipped with a 5kW PV Solar system. Limiting factor cannot be declared at present. A design efficiency of 60% is selected to consider.

PORTION 28, WELMOED ESTATE

PV SOLAR CALCULATION 2023/07/18

Item No.	No of dwellings	Area	Design Load (kW)	(kW) - TOTAL
1	886	Portion 28, Welmoed Estate	5.0	4 430
A		Potential capacity		4 430
B		Expected supply capacity	60%	2 658

Table 4: Potential PV Solar generation

d) Eskom upgrading proposal.

A MV bulk supply point with metering will be supplied, installed, tested, and commissioned by Eskom for the development. Eskom is required to confirm capacity in writing (see annexure A).

8. Costing

a) Eskom estimation costs

A formal application was submitted to Eskom on the 22 of May 2023. A follow up meeting was conducted with members of Eskom on the 7th of June 2023 and a revised scope of works was issued to Eskom on the 10th of July 2023. Eskom is required to provide written confirmation of capacity available for the development on the supply feeder. Eskom-process can be summarised as follow:

Step 1	Submit application to Eskom
Step 2	Pay cost estimate (CE) fee – This fee can vary depending on the project R33 436,00. We will request an invoice and assigned reference number after submitting the application.
Step 3	Project is loaded on system and network planning is consulted about the project. Scope of works is advised.
Step 4	Cost Estimate Letter (CEL) is issued for payment by the customer. Amount depends on network planning and cannot be predicted in advance.
Step 5	Budget quotation is issued for payment by the customer. Cost Estimate Fee and Cost Estimate letter amount is deducted from this amount, and the difference is for the client's account. Amount depends on network planning findings and cannot be predicted in advance.
Step 6	Project is handed over to design, construction and closing.

Table 2: Eskom Process

15

Preliminary budget estimations

The following costs are estimated to be paid to Eskom for a MV Bulk point supply:

	Description	Amount
1	Cost estimation fee	R33 436.00
2	Cost estimation letter	R100 000.00
3	Budget quotation	R1 500 000.00
	Total (excl. VAT)	R1 633 436.00

Table 3: Eskom budget estimations

All amounts listed above are VAT excl.

This is a high-level cost estimation. Correspondence and approvals are still required from Eskom.

b) Direct construction cost estimation

The follow estimation is allowed for regarding direct construction cost for the development. The estimation only allows for MV underground reticulation up until each miniature substation. Final positions of the miniature substations will be identified and confirmed during construction phase of the development.

	Description	Amount
1	MV Cable	R3 060 000.00
2	5 Way RMU	R700 000.00
3	Miniature Substations	R5 635 000.00
4	Delivery	R89 800.00
5	Installations	R758 784.00
6	Prelim & Generals	R102 435.84
7	OHS	R30 000.00
8	Testing & Commissioning	R30 000.00
	Total (excl. VAT)	R10 406 019.84

Table 4: Direct construction cost estimation

16

This is a high-level cost estimation. More detailed design will be required to conclude a more accurate cost figure.

9. Conclusion

To conclude this report, the following is evident:

1. Alternative energy sources such as gas and PV Solar will be used for the development. LED street lightning recommended.
2. The NMD for the development will increase in relation to construction of the development. Application for increase to a 2MVA NMD supply will follow the completion of the designed consumers (886).
3. The annual energy consumed form the grid will be reduced by the proposed PV solar system.
4. Ring feed MV reticulation recommended for the development MV network.
5. MV underground armoured cable design has been allowed for. Overhead MV reticulation recommended as a more cost-effective approach, subject to development allowance for MV overhead line reticulation.
6. Option 1 is recommended to start the project and establish a point of supply for the development. Instruction to proceed required.
7. Option 2 is recommended to supply remaining demand to the development. Approved overhead line route to be confirmed.

Compiled by:

JP LOURENS
SENIOR PROJECT ENGINEER

Approved by:

D. R. MÜLLER
Pr Eng

DM CONSULTING ENGINEERS CAPE (PTY) LTD

17

10. Annexure A

Eskom

Mr. Jaco van Rooyen
DM Consulting Engineers Cape
PO Box 3125
DURBANVILLE
7551

Date:
17 August 2023

Enquiries: JP Du Preez
Tel +27 21 915 2076

Dear Mr. Van Rooyen

SUPPLY OF ELECTRICITY
PROPOSED SUPPLY: PTN 28 OF THE FARM 468, WELMOED ESTATE, STELLENBOSCH

With reference to your ENQUIRY at Eskom, I advise that Eskom is the licensed Distributor to the property above.

Capacity of 650 kVA can be made available on the Lynedoch / Farmers 1 feeder to supply the initial load.

The method of supplying the electricity will be determined once details are made available. The formal quote process will confirm spare capacity available and a proposal to supply such development. Execution of making supply available will only be initiated on acceptance of a formal budget quote. The date to make a point of supply available will be confirmed during this process.

Should you require any further information please contact Pieter du Preez on the telephone numbers mentioned above, and be assured of Eskom's best service at all times.

Yours faithfully

JP Du Preez
Key Customer Relations Officer

Group Customer Service
80 Voortrekker Road, Bellville, 7530
P.O. Box 2100, Bellville, 7535 SA
Tel +27 86 003 7566 www.eskom.co.za
Eskom Holdings SOC Limited Reg No 2002/015527/06

ANNEXURE P: VISUAL-CULTURAL LANDSCAPE IMPACT ASSESSMENT

CULTURAL LANDSCAPE & VISUAL IMPACT STUDY FOR THE PROPOSED HIGH DENSITY RESIDENTIAL WITH ADDITIONAL FACILITIES ON PORTION 28 WELMOED FARM 468, STELLENBOSCH.

CASE NUMBER: HWC23040509AM0411

August 2023





Bottom image, SMHS CMP, http://stellenboschheritage.co.za/smhs/map/landscape-unit-pdfs/c-eerste-river/c08.pdf

Prepared for

Billy Visser Trust

by

claire abrahamse
architecture | urban design | heritage

SMArchS Urbanism (MIT), BArch (UCT), BAS (UCT), SACAP, CIfA, APHP, UDISA

2nd Floor, Wale Street Chambers, 38 Wale Street, Cape Town, 8001
E: claire@claireabrahamse.co.za T: 021 426 2668 M: 083 718 1919

CULTURAL LANDSCAPE & VISUAL IMPACT STUDY FOR THE PROPOSED HIGH DENSITY RESIDENTIAL WITH ADDITIONAL FACILITIES ON PORTION 28 WELMOED FARM 468, STELLENBOSCH.

CASE NUMBER: HWC23040509AM0411

August 2023

INTRODUCTION, PURPOSE OF THIS STUDY AND METHODOLOGICAL APPROACH

PURPOSE OF THIS STUDY

A Notification of Intent to Develop (hereafter NID) for the above property was discussed at Heritage Western Cape on the 4th May 2023. Since HWC have reason to believe that the proposed development will impact heritage resources, a Heritage Impact Assessment was called for, which in addition to satisfying the provisions of Section 38 (3) of the National Heritage Resources Act (Act 25 of 1999), additionally called for a "Visual Impact Assessment".

In consultation with the primary heritage consultant, Ms. Emmylou Bailey, it was determined that a Visual Impact Assessment of the cultural landscape and rooted in the cultural landscape context of the site would be appropriate in this instance, especially since extensive technical visual assessment of the Stellenbosch Municipal Area was undertaken as part of the 2018 Stellenbosch Municipality Heritage Survey, led by Prof. F. Todeschini and Mr. L. Jansen, with the author of this report being part of the consultant team.

This study therefore aims to address the specialist Visual Impact Assessment requirement of the Response to the NID. It looks to analyse and assess the visual setting and character of the wider site, located at the Lynedoch intersection between the Annandale Road and the R310, at the Lynedoch railway station.

Through this analysis, the study also looks to establish the predominant agricultural and settlement patterns and associated visual absorption potential of the site. Following this analysis, heritage-based design indicators that set parameters for potential development in order to allow for it to remain within acceptable levels of impact are then derived for the site. These are intended to be incorporated into the Phase 1 Heritage Impact Assessment being prepared for the site.

METHODOLOGY

It is important to note that, although it is located within a predominantly rural setting, the Lynedoch precinct and subject site are also located within the approved urban edge area (Figure A). This small and contained urban node is focussed on the road intersection and railway station. As such, a more townscape-type analysis, with landscape considerations in terms of periphery, is considered appropriate here.

The study sets out to:

- Establish the Cultural Landscape Visual Assessment Methodology.
- Understand the Development of the Broader Site and its Cultural Landscape over time.
- Analyse the Receiving Environment and underling Landscape Character of the site. This is done at two scales:
    - The Local Setting of the site: Field of View and Outward Vistas, and
    - The "Townscape" Setting of the site and village node, and Major Character-Giving Elements.
- This allows for the determination of the Site Character, which in turn influences the heritage-based indicators that will underpin the visual impact assessment of the proposed development.
- A review as to whether any development is acceptable within this setting is undertaken.
- The findings of this analysis then influence the heritage-based guidelines and indicators that form the conclusion to this study.

Because this site is located within a rural "skirt" to an historic settlement in the Cape, and because it already combines elements of settlement (hotel and University of Stellenbosch Sustainability Institute, surrounding residential development, railway station and a small commercial node) within a setting of historic farmland, it is clear that a "visual study" must include aesthetic, cultural and spiritual/genus loci aspects of both the urban and rural environment that are closely juxtaposed within this node, and which taken together contribute to the local character of an area and its sense of place.

Therefore, methodologies associated with a townscape analysis are also relevant here.

Fortunately, the landscape character of the site and its surrounds has also been closely studied and documented by Todeschini, Jansen et al as part of the 2018 Stellenbosch Municipality Heritage Survey, as well as by Viridian Consulting in the 2018 Visibility Analysis for the SMHS, and this work is relied on in this analysis.

INTRODUCTION

The Cultural Landscape Study and Visual-Townscape Study of the site have revealed elements within the landscape that are fundamental to its character. It follows that, to preserve heritage significance (particularly the tangible and landscape heritage significance associated with physical elements) these fundamental elements must be protected and enhanced during the future development and densification of the site.

Heritage indicators and guidelines give direction to new developments. New development at Lynedoch, Portion 28 of Farm 468, Welmoed, must be cognisant of and responsive to the cultural landscape, built environment and landscape "patterns" that precede it. Thus there is a need to understand the underpinning logic and spatial patterns/materiality of the place, and to recognise and reinforce such patterns in the new developments.

The analysis of the site has given rise to heritage-based indicators to development. The assessors believe these must be stringently followed to ensure that the heritage significance of the surrounds is preserved and enhanced, but which they believe are not so onerous as to completely limit the development and densification of the site.

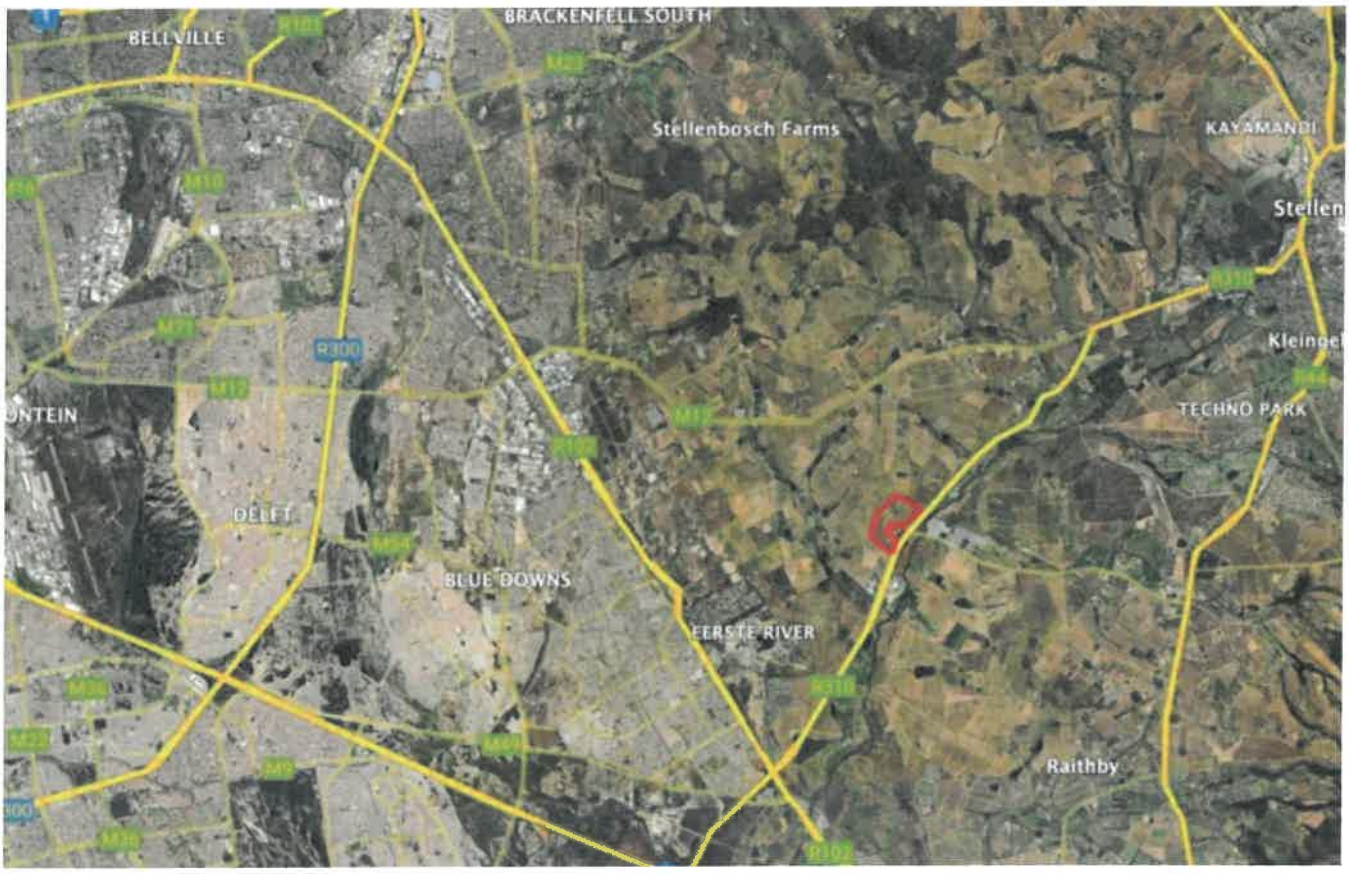


Figure 1: Locality Plan (Source: NID document submitted to HWC, Bailey).



Figure 2: Site Plan (Source: NID document submitted to HWC, Bailey).

THE RECEIVING ENVIRONMENT

DEVELOPMENT OF THE SITE AND ITS CULTURAL LANDSCAPE.

The subject site and its environs have always comprised highly fertile agricultural land, most especially for grazing livestock. Malan writes that:

> In his 1967 review of the ESA [Early Stone Age] from Stellenbosch, Seddon listed a total of 22 known ESA sites in and around Stellenbosch, although conceding that the "only place where numerous artefacts are to be found in situ is opposite the monument already mentioned; at the Bosman's Crossing site". They were: Gleneagles Hotel (2), Olives Farm, Lynedoch, Spier, Vlottenberg winery, Louishoogte site, Blaauklip vegentable garden and golf course, Vredenberg, Bosman's Crossing, General Box Factory, Suikerbosrand, Altavona, Blake's Quarry, Simts' Quarry, Schoongezicht, Rustenberg, Lorraine, Rozendal, Coetzenberg, GlenConner and Old Nectar" (2018: 7).

The subject site incorporates both the Gleneagles Hotel (now part of the Sustainability Institute) and Lynedoch, so these gentle, east-facing slopes were occupied by pre-colonial people.

However, following colonisation at the Cape by the Dutch, and their gradual expansion into the interior, the slopes of Lynedoch appear to have been of less importance than the land within the valley bottom. Vos writes that Commander van der Stel ventured into this part of the peninsula in 1679, in search of arable land for the cultivation of grain to supplement that being produced closer to the fort at Cape Town (1998: 1). Within 4 years, 30 families had settled along the Eerste River to farm the land, with the encouragement that they were allowed to claim as much land as they could cultivate within 3 years (Guelke, 1974: 117).

Among the first grants along the Eerste River were the farms Vergenoegd, Meerlust, Klein Welmoed, Welmoed, Spier, Vlottenberg and Vredenburgh.

The land that would become Lynedoch was part of the farm Welmoed (Figure 3). Welmoed was first granted to Henning Huysing in 1680 and transferred to Jacobus van der Heyden in 1696. In 1725 it came into the ownership of Andries Schutte through his marriage to van der Heyden's widow Hester, and in 1725 the farm was sold to Jan de Villiers. In 1797, Welmoed was purchased by Pieter Gerhard van der Byl, and would remain in the van der Byl family for many generations, and until the end of the 19th Century (van der Bijl, 2000: 86). However, it is only in the 1902 map that the name "Lyndoch" first appears on the side of the small hill providing the backdrop to Welmoed (Figure 5).

Records in the Cape Archives link the name to the inter-marriage of the van der Byl's with the Grahams of Cape Town, together with the emergence of the railway line. The South African Railways & Harbour Board undertook some research into the names of their stations in 1920, and wrote to the Town Clerk at Stellenbosch:

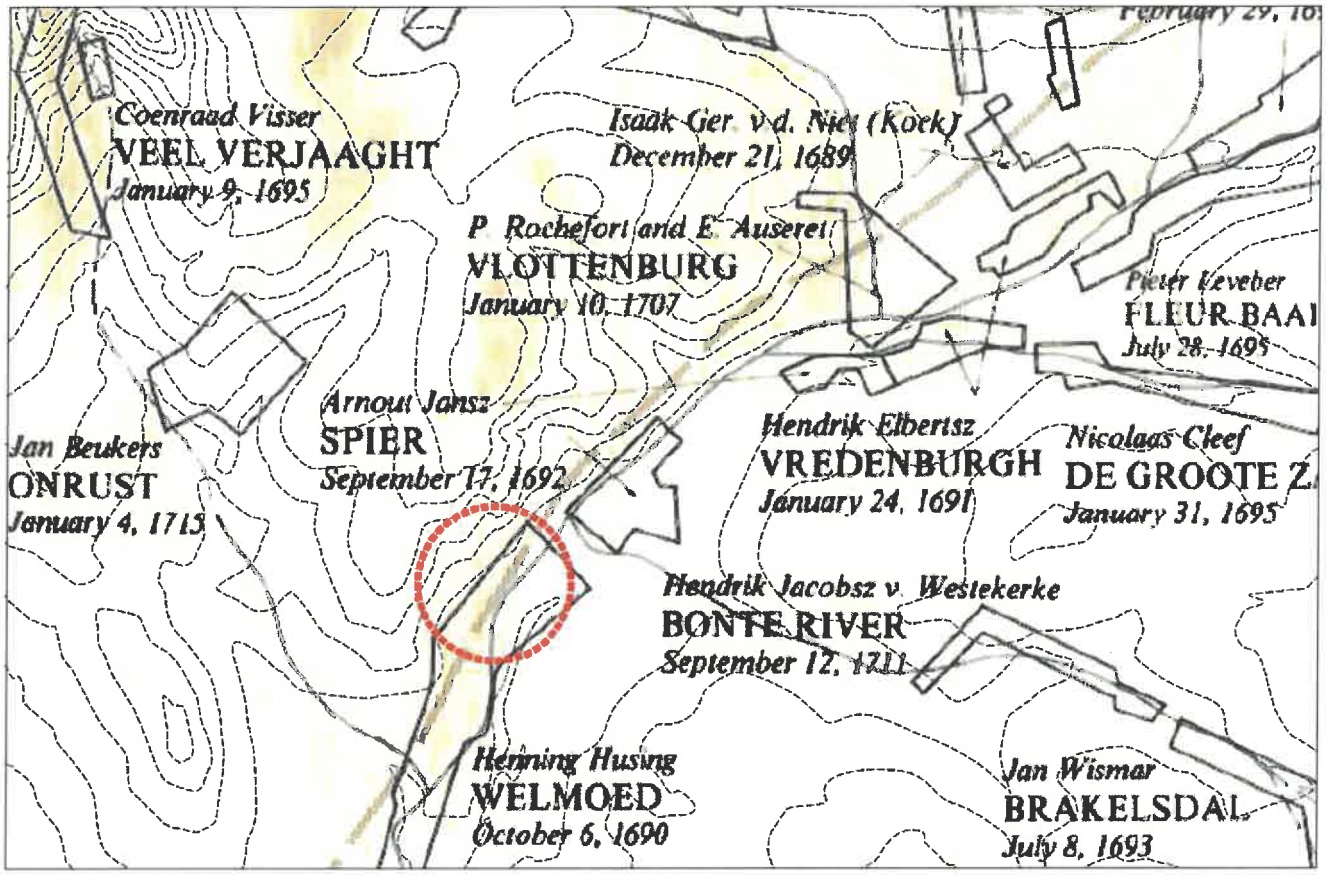


Figure 3: Detail from Guelke's 1657 - 1750 Southwestern Cape Colony Map, showing the first freehold farm grants made during this time. Present day Lynedoch, indicated in a red dashed circle, was part of the historic Welmoed grant of 1690.

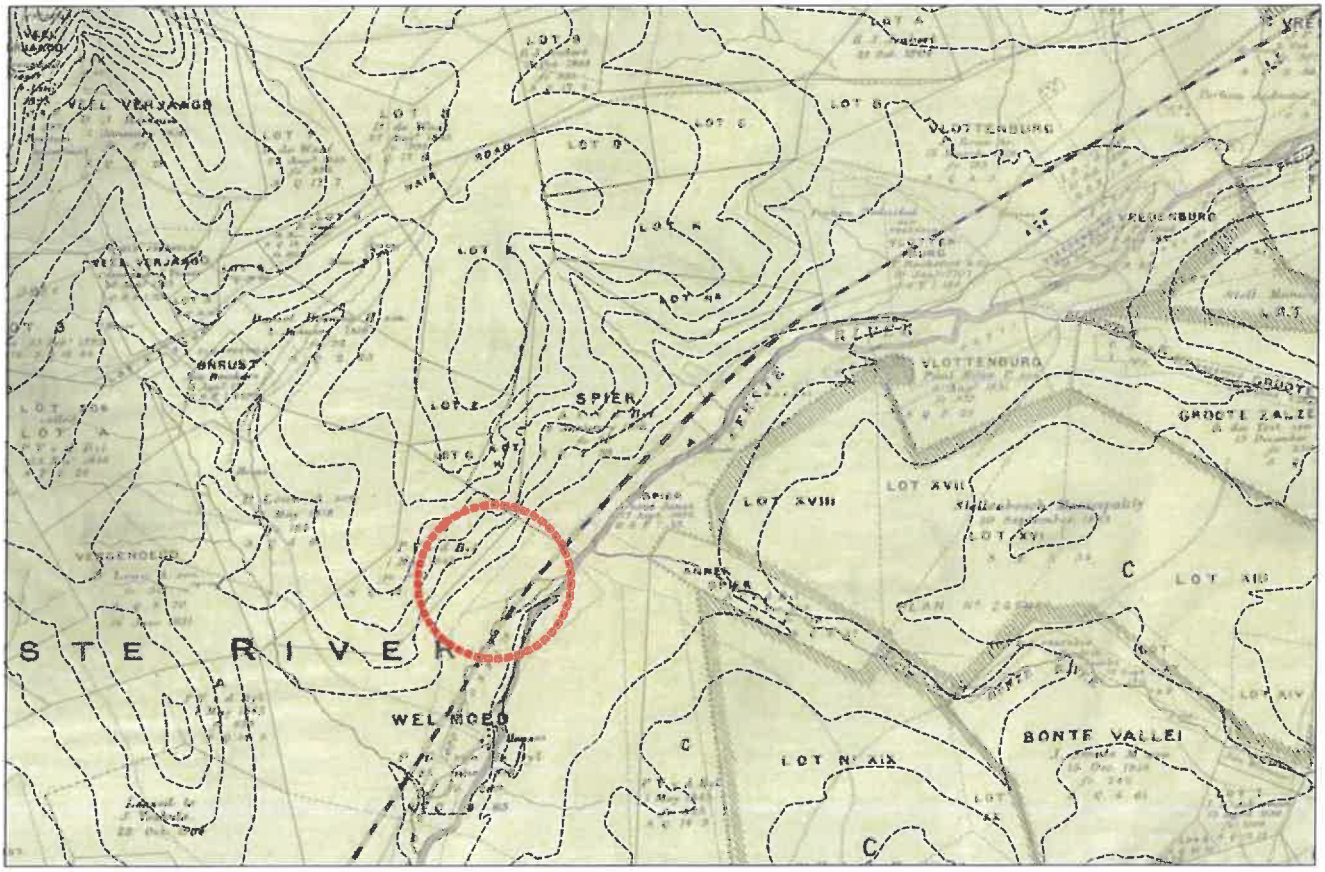


Figure 3: Detail from the 1890 Divisional Map for the Stellenbosch District. The subject site is indicated by means of a dashed red circle. (Source: UCT Digital Maps Collection).

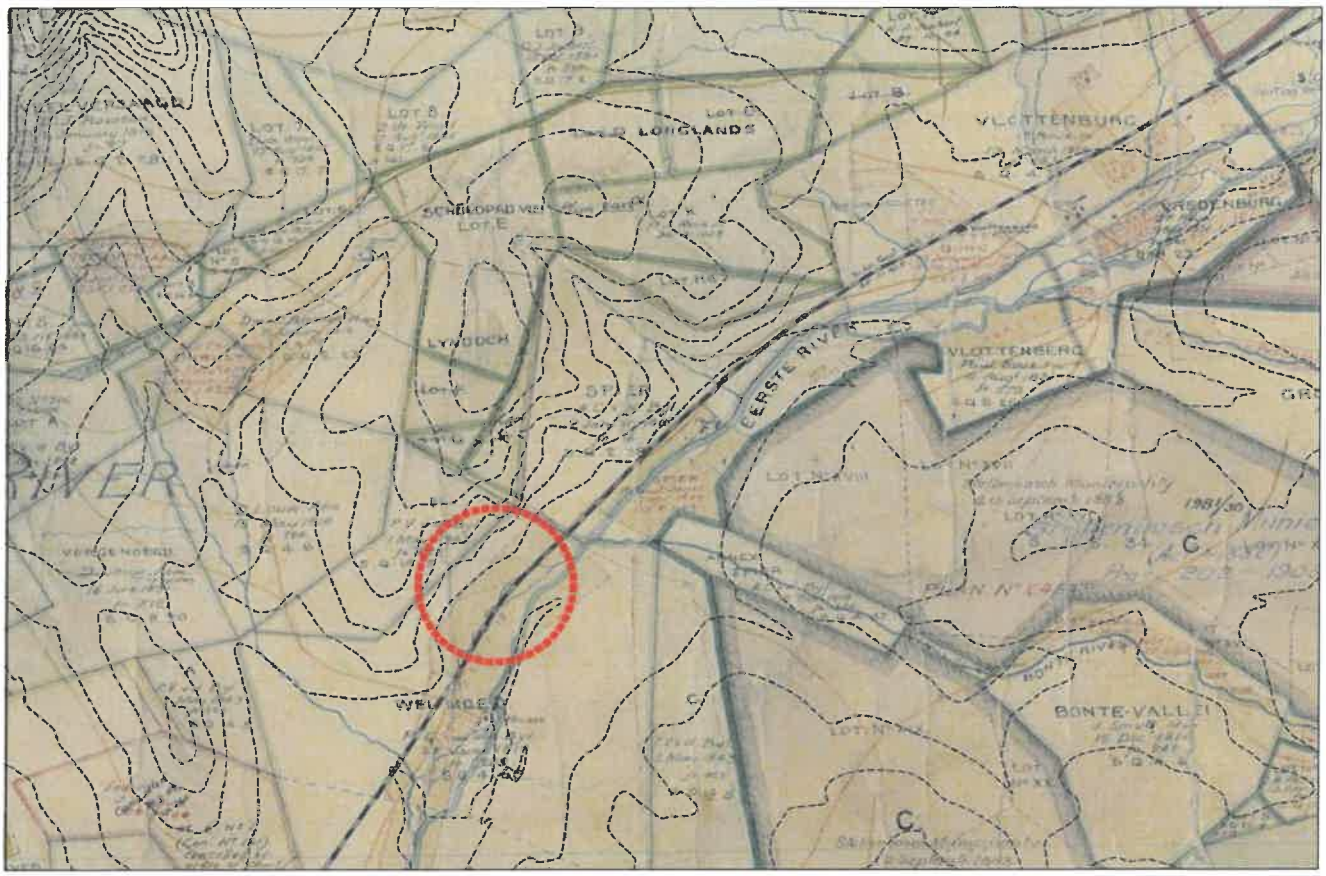


Figure 5: Detail from the 1902 map of Stellenbosch by Brink, which indicates the first use of the term "Lyndoch" adjacent to the site (indicated by means of a dashed red circle).
(Source: KAB Map M4/208).

According to the old timetables which were in our possession, the Station was shewn therein both as "Lyndoch" and "Lynedock". The spelling "Lyndoch" appears to have been finally adopted in 1904 and has since continued to be used.

The Town Clerk must have consulted more widely and managed to contact John Graham who lived in the grand house Monorgan in Newlands, close to the cricket ground. Mr. Graham wrote as follows:

18th February 1920
Monorgan,
Newlands

I think I have arrived at the history of the name "Lynedock". Judge Cloete married a daughter of Robert Graham, a cousin and very intimate friend of Lord Lynedoch. The Judge's son, Laurence, married a sister of Laurence v.d. Byl.... By the intermarriage and acquaintanceship circumstances probably obtained which induced one of the v.d. Byl's to adopt the name for his farm.

May I suggest that your records, or rather those of the Divisional Council, preserve the correct spelling viz: Lynedoch. The e is frequently omitted and sometimes k is substituted for h.

Yours faithfully,
John Graham.

P.S. It is quite likely that one of the v.d. Byl's met Lord Lynedoch in Scotland.

Sir Thomas Lynedoch Graham was a well-known South African judge and politician, as well as a keen sportsman. He won the South African Doubles Lawn Tennis competition in 1891 and represented the Western Province Cricket Club as a fast bowler (https://esat.sun.ac.za/index.php/Thomas_Graham). In his capacity as Attorney-General of the Cape, Graham also acted as Prime Minister of the Cape Colony for a short time in 1902 (while the Prime Minister travelled to London for the Coronation of Edward VII) and was Judge-President of the Supreme Court of South Africa from 1913 until his retirement in 1937

(https://heinonline.org/HOL/LandingPage?handle=hein.journals/soaf21&div=27&id=&page=).

It seems likely that this Graham was the one after whom Lynedoch was named, although the reference leads back to the same Lord Lynedoch: Thomas Graham's great-uncle, John Graham, "was commissioned in the British Army, joining the 90th Regiment of Foot, which had been raised in 1794 by his kinsman, Thomas Graham of Balgowan [Scotland] (later Lord Lynedoch)" (Robson, 2011: 238). John Graham eventually attained the rank of Major and fought in the Battle of Blaauwberg in 1806, leading to the re-occupation of the Cape by the British. He evidently acquitted himself well, as he was promoted to Lieutenant Colonel and was given charge of the Cape Regiment based at Wynberg (Robson, 2011: 283). The border wars in the Eastern Cape brought Graham to the area, and the military base he established there would grow in Grahamstown.

The establishment of a railway station was a key moment in the

establishment of settlement at Lynedoch. Photographs taken from the train form part of the Juritz Collection at the Cape Archives on the 19th October 1891, including at Lynedoch Station, are a rare 19th Century record of the landscape (Figure 6A, B and C).

It seems that the hotel at Lynedoch was established around 1920, with the transfer of land on both sides of the river to Mr. R. L. Kramer. By 1930, the hotel was known as "Glen Eagles", entrenching the Scottish connection to the place (Figure 7).

The SG Diagram of 1920 indicates that the land was sold to J. H. S. Hertzog in 1931, while the 1938 diagram indicates that a smaller portion of this property, centred on the hotel, was transferred to Charles Kramer in the same year. The diagram indicates the main building, some outbuildings as well as a swimming pool or dam behind, fed from a spring higher up the slope, as well as a pipeline from the reservoir – also located above the property (Figure 8).

The 1944 aerial photography for the property indicate the formal and well-treed setting for the hotel, as well as the swimming pool or dam to the west of the hotel building (Figure 9). The farm buildings to the north are also apparent at this date. Almost all the surrounding land is under cultivation.



Figure 6B: View of Klein Welmoed, taken on the 19th October 1891. (Source: KAB, Juritz Collection, Photo 214).



Figure 6C: View of Vredenberg, taken on the 19th October 1891. (Source: KAB, Juritz Collection, Photo 215).



Figure 6A: View of the Lynedoch Station, taken on the 19th October 1891. (Source: KAB, Juritz Collection, Photo 216).

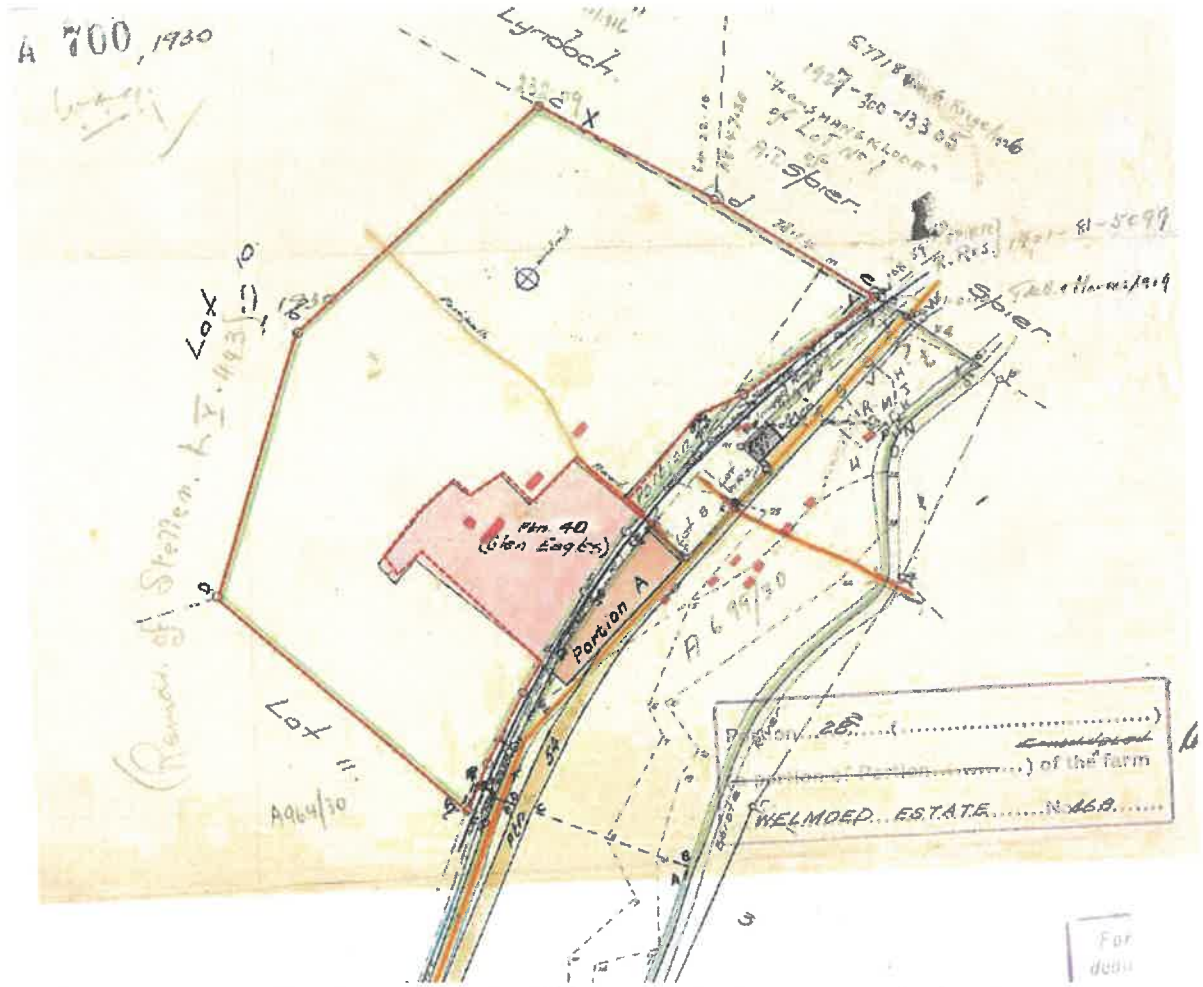


Figure 7: 1930 SG Diagram of the site, with buildings indicated, and the name "Glen Eagles" reflected for the hotel. (Source: Surveyor General Diagram A700/1930).

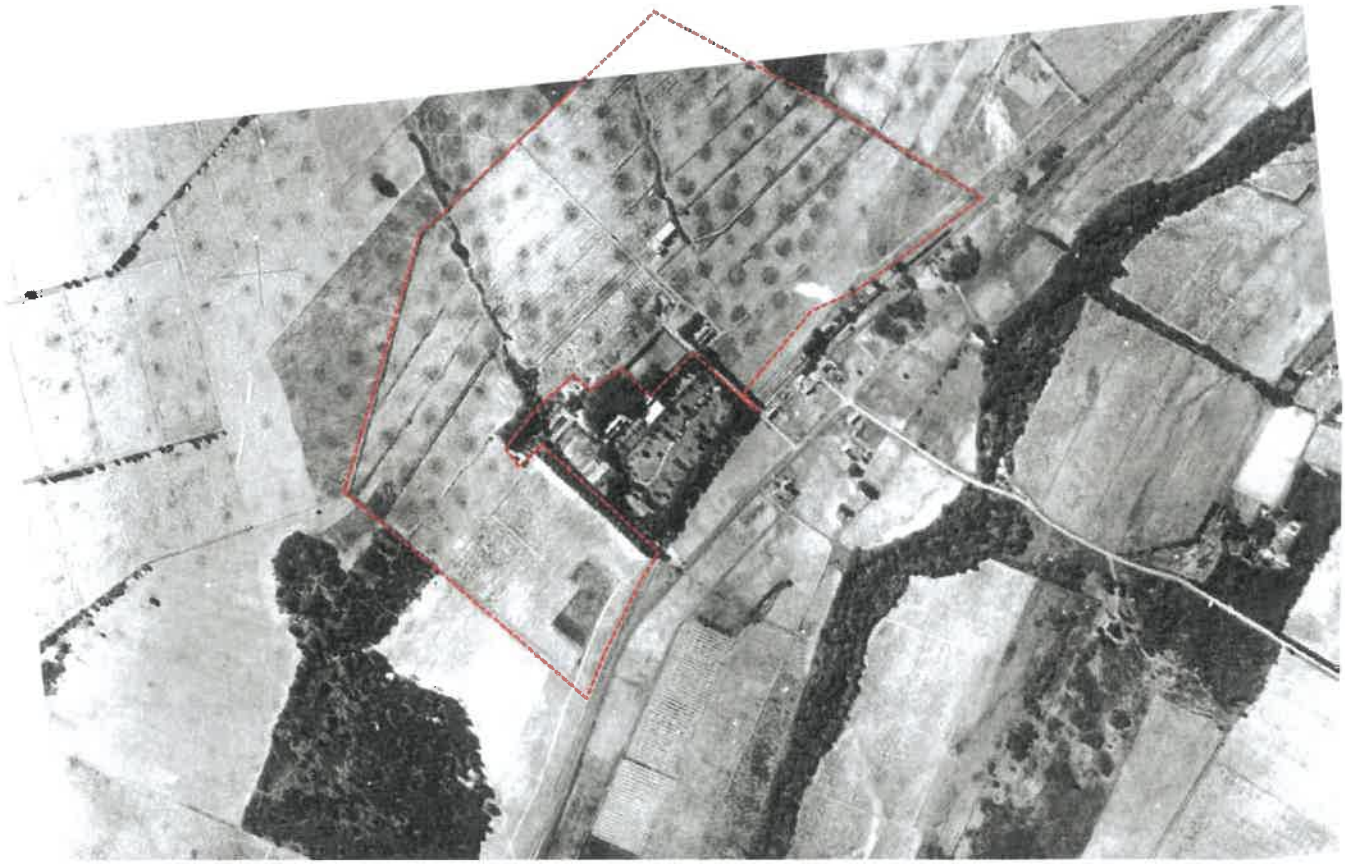


Figure 8: 1944 aerial photography for the site, indicating the landscaped gardens surrounding the hotel. (Source: NGI Mowbray).

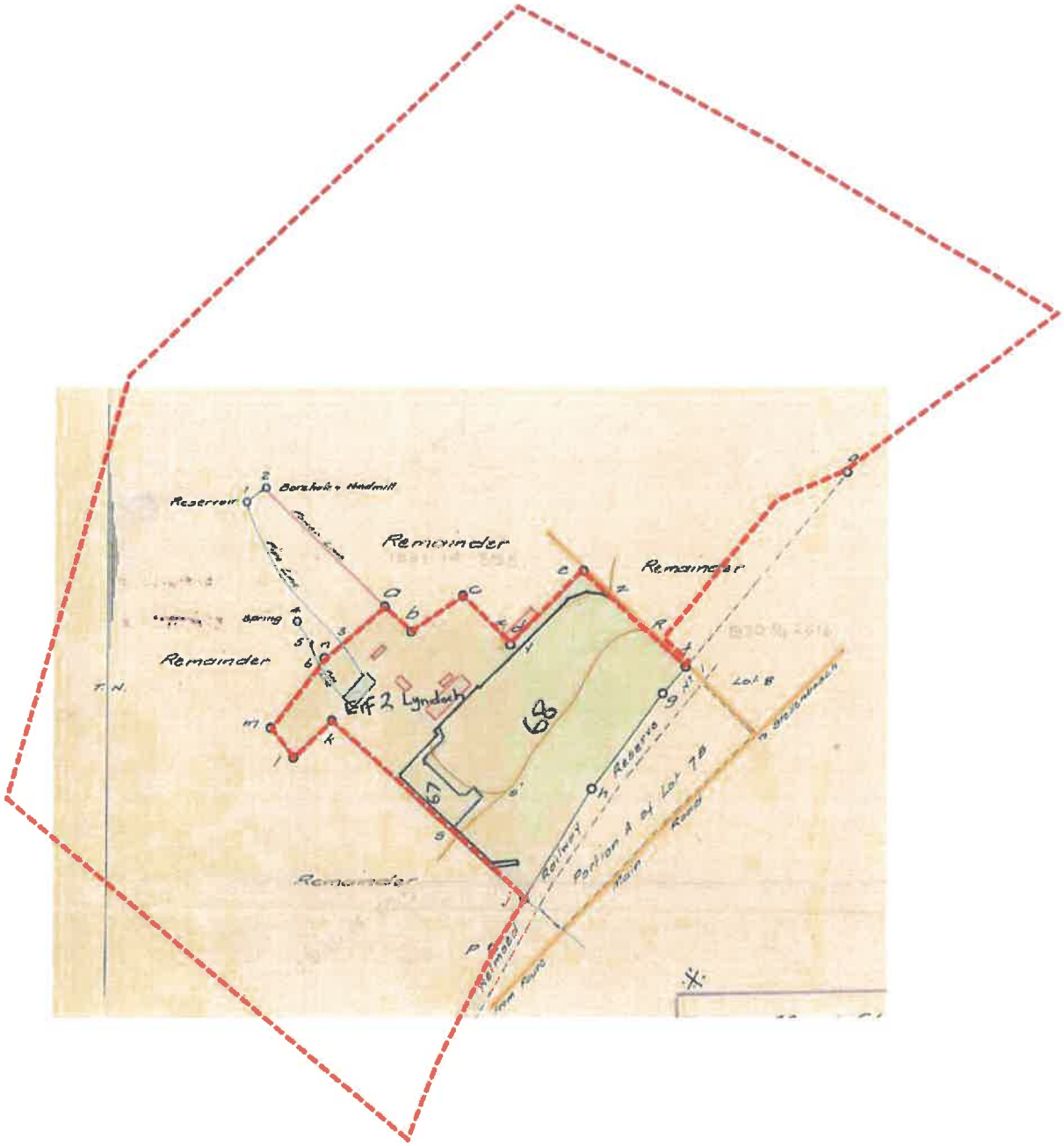


Figure 9: 1938 SG Diagram of the site, with buildings indicated, as well as water sources and roadways. (Source: Surveyor General Diagram 2912/1938).

Records at the Cape Archives indicate that in 1951, the new owner, Mr. F. Varney, applied to the Stellenbosch Council for a rezoning of the land to allow him to obtain a Liquor License for the hotel. This was approved in 1954 (KAB, 4/STB, 4/1/26: T24/108).

In 1968, the tree canopy has been thinned out and more agricultural buildings added to the north-west of the hotel, but the settlement remains a hamlet much as it did in 1938 (Figure 10). It is important to note the small dam to the south-east of the hotel in this aerial photograph – the land here is still very wet and has characteristics of the wetland.

In 1999, Stellenbosch University decided to establish its Sustainability Institute on the property. It has been run successfully since, to the extent that in 2004 an area behind the old hotel was subdivided to form a so-called "Eco Village", a community which aims to demonstrate a more sustainable model of living, both in terms of resource use and social justice/ inclusivity (https://lynedochecovillage.wordpress.com). The village contains homes built entirely from alternative materials, with an internal waste management system, an on-site water and sewerage treatment system and extensive recycling (Figure 11).

The surrounding slopes have remained under cultivation with vineyards throughout, but the Municipality's recent planning documentation has indicated that the wider Lynedoch area has been included inside an urban edge (Figure 12).

The historic patterns at Lynedoch have been interpreted as Figure 13.

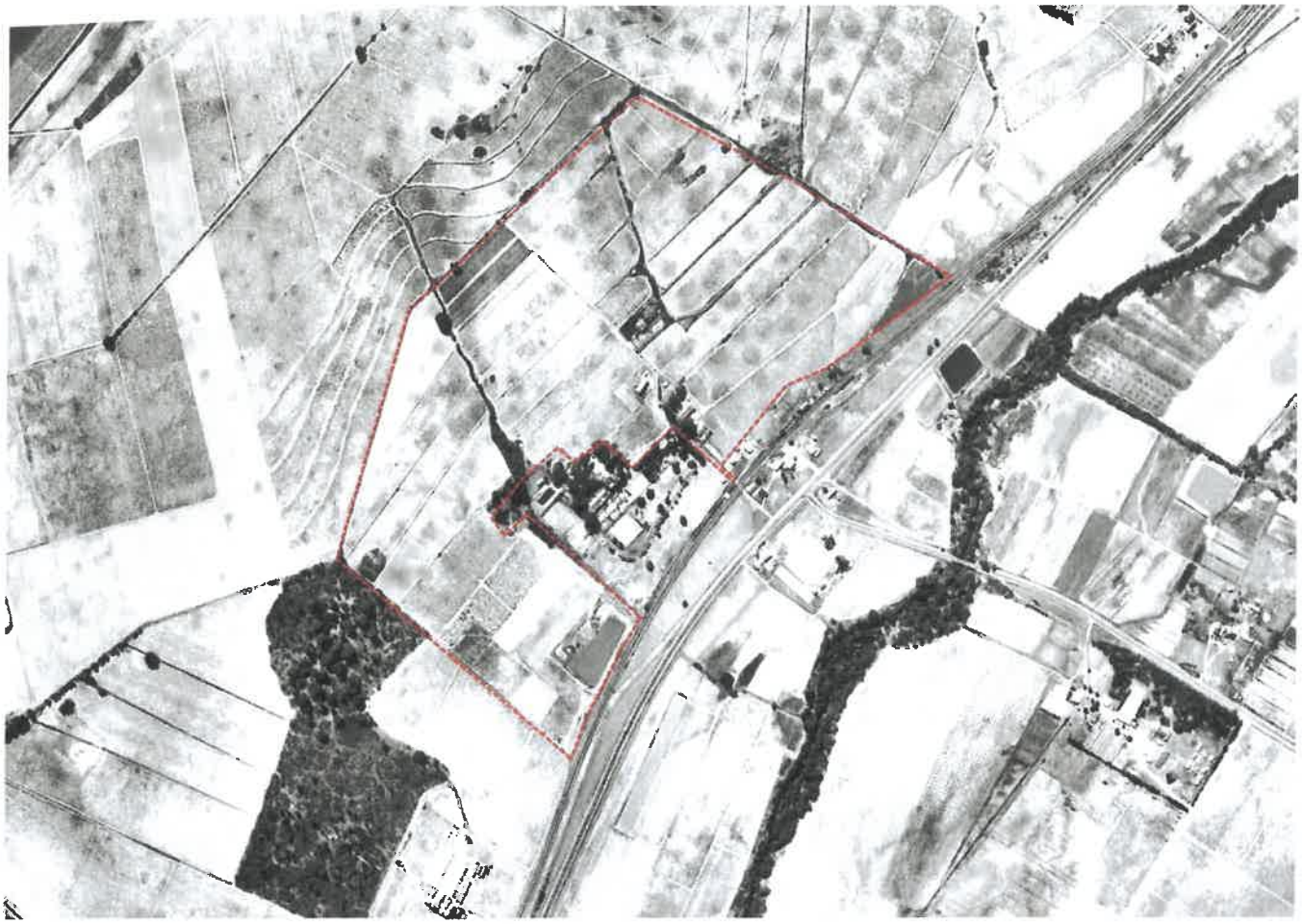


Figure 10: 1968 aerial photography for the site, indicating the landscaped gardens surrounding the hotel, with the tree canopy thinned out since 1944. The dam to the south-east of the site is also evident. (Source: NGI Mowbray).



Figure 11: 2022 aerial photography for the site, indicating the new Eco Village and the Sustainability Institute development. (Source: Cape Farm Mapper)

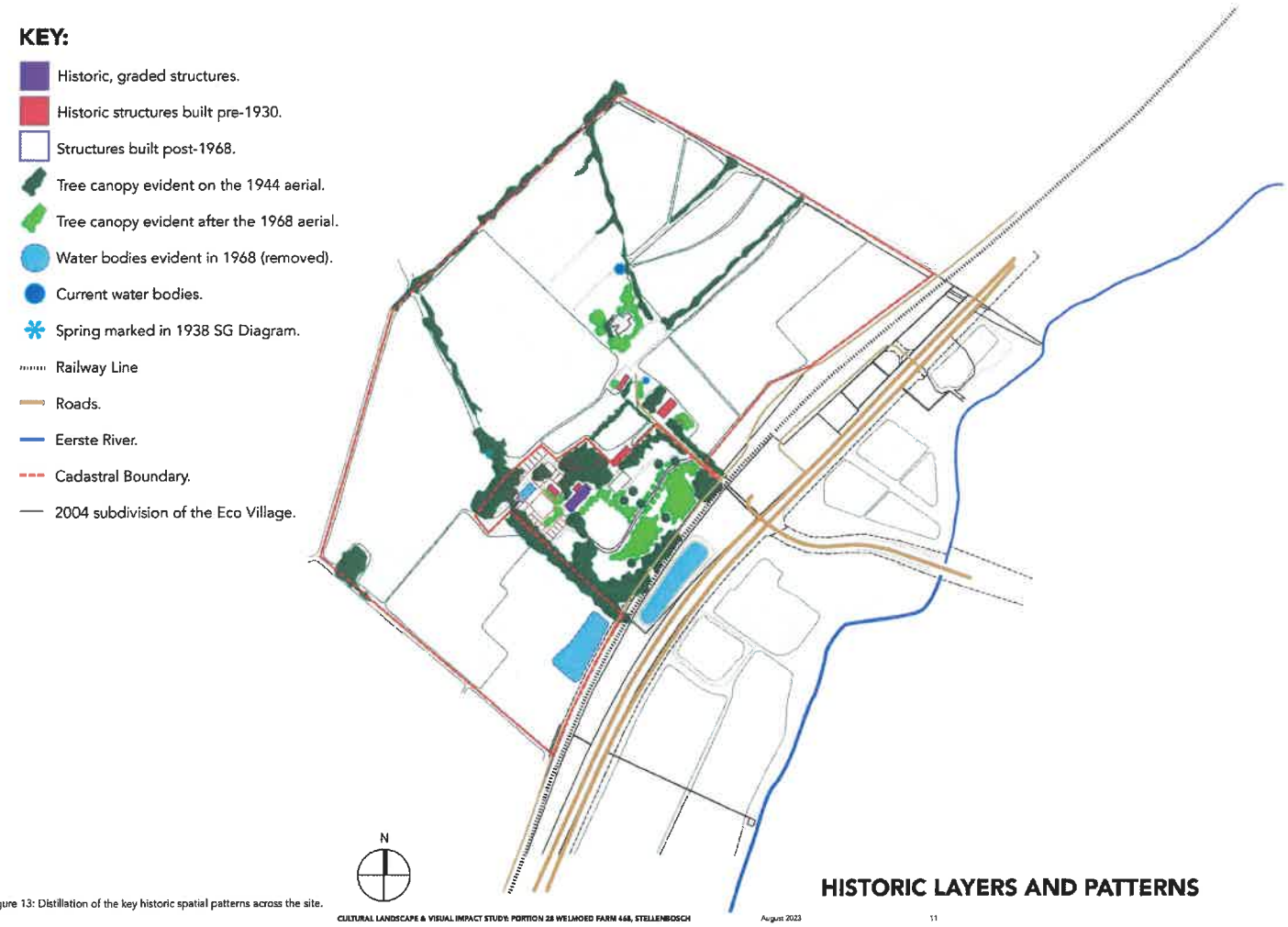


Figure 13: Distillation of the key historic spatial patterns across the site.

PLANNING FRAMEWORK AND THE URBAN EDGE

The Stellenbosch Municipality Heritage Survey consultancy group commented to the Acting Direction of Planning and Economic Development of the Stellenbosch Municipality on the 16th April 2018, and in review of the proposed urban edge at Lynedoch noted that following:

Lynedoch's layout and form has become extremely convoluted since the 'upgrading' of the R310 in the vicinity of the Annandale intersection. Historically, the western side of the settlement took direct access off the R101 across the rail line at a level crossing. This has now been closed for safety reasons.

Only direct pedestrian and cycle access is available over the rail line at Lyndedoch station. The main approach to Lynedoch village west of the rail line by road is now via Vlottenberg, some 3kms to the east, resulting in a 6km long dog leg access route.

The road access management regime imposed by the provincial department of transport along the R101 is likely to only permit direct access onto the property concerned for unsignalized full intersections (SFIs) or high volume driveways (HVDs) every 500 to 600m. The main access is likely to occur off the road. This limited access regime is likely to result in a highly inappropriate walled off-high security character to this section of the R101, completely at odds with its proposed designation as a Class III heritage route.

Furthermore, the urban geometric design and street furniture used in the recent upgrading of the section of the R101 from Lynedoch to the western municipal boundary was considered to be so out of keeping with the rural character of this section of the route that concerned stakeholders took the road upgrading project on judicial review. This resulted in there being no further extensions to the upgrading project east of Annandale road.

It should be further considered that all of the retail, public transport and education facilities at Lynedoch are on the west side of the R101. This means that any future residents on the east side of the R101 will have to cross over this rural arterial road to get to these facilities.

Sadly, and inescapably it has been the experience that pedestrian deaths from motor vehicle conclusions result when there are different land uses straddling arterial routes. Although pedestrians are meant to use pedestrian crossings it is usually too expensive to put in a sufficient number to create sufficient convenience for pedestrians not to take short cuts. Furthermore, the recent upgrading of the R101 has resulted in an increase in vehicle average speeds which, may that be a welcome result in terms of vehicle travelling times further increases the risk of pedestrian accidents. It is a sine qua non that speed kills. Thus it can be confidently, but again sadly, stated that this has been the experience of all urban areas straddling high speed rural arterials. It would be interesting to investigate the status of vehicle accidents in this vicinity since the upgrading of this section of the R101 was completed.

Taking the above into account it is now considered that urban development east of the R101 will be inappropriate, mainly for safety reasons.

Secondary, but still important, reasons include the loss of rural character that would occur at Lynedoch village, partly due to the likely access regime and partly due to the likelihood that a gated estate would be constructed due to both safety and access conditions.

This means that the Lynedoch Urban Edge should be moved westwards to lie along the R101".

(http://www.stellenboschheritage.co.za/wp-content/uploads/APPENDIX-8_Act-70-of-70-Exclusion_Heritage-Response.pdf - see page 17).

The 2019 Stellenbosch SDF entrenched the urban edge around Lynedoch, into which the subject site falls. However, the associated diagram clearly indicates that the envisioned infill development is quite contained, essentially creating an interlinking footprint of urban expansion to the north of the Sustainability Institute, which does not extend closer towards Spier than the Lynedoch Station.

The SDF identifies Lynedoch as follows:

Lynedoch is a unique settlement – named Lynedoch Eco Village – situated halfway between Khayalitsha and Stellenbosch on the R310 and at the intersection of the R310 and Annandale Road. The village is home to the Sustainability Institute, which offers a number of degree and other education and training programmes in partnership with the University of Stellenbosch and other organisations, a number of schools, guest facility, and residences.

Development commenced almost 20 years ago, managed by a non-profit company called the Lynedoch Development Company (LDC). International and local development aid funders and local banks assisted to fund the development. Technical and institutional arrangements and procedures for the development of the village were structured to meet ecological, social and economic sustainability. The Lynedoch Home Owners Association (LHOA) was established to take primary responsibility for service delivery.

Achieving social inclusivity remains a key aim. The Constitution of the LHOA imposes on all home owners severe restrictions on resale by making it compulsory that any seller of any property must first offer the property to the LHOA and only then offer it to a third party at a price that is not lower than the price proposed to the LHOA.

Further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate (Stellenbosch SDF, 2019: 94).

This seems to indicate that a similar model of development should be expanded at Lynedoch. Both the SDF and the comment of the Stellenbosch Municipality Heritage Survey consultancy group indicate that a gated village or security village type of development would be undesirable at this location.

See Figure 14.



Figure 14: The Lynedoch node, as illustrated in the 2019 SDF for Stellenbosch. The urban edge is indicated via a black line, but it should also be noted that a large area is designated as "green areas retained". (SDF, 2019: 94).

THE UNDERLYING LANDSCAPE CHARACTER OF THE SITE.

The wider Eerste River Valley.

The Stellenbosch Municipality Heritage Survey (2018, hereafter SMHS) identifies that the Eerste River Floodplain Area... exhibits typical layering and pattern of settlement that includes historic structures at Vredenberg (C14), Troughend (C13), Vredenheim (C12), Spier, Welmoed (C11), Klein Welmoed (Usana) (C10)and Meerlust (C09). Enclosed views are found towards the Eerste River with the Helderberg beyond. A number of wetlands are found towards the river as water drains towards the lowest point in the landscape. Granite outcroppings are a typical element found on all farms, together with their composition of river and historic structures....

The area has a degree of historical, architectural, scenic, aesthetic and contextual significance.

Under strict guidelines, potential for development is found along the railway line nodes at Vlottenburg (C06 and C07) and Lynedoch (C08).

The subject site is similarly east-facing, with expansive views extending up to the mountain peaks of the Helderberg (Figure T, page X).

The primary means of moving through this valley bottom is along the R310. After passing Welmoed, the slopes of the hill system against which Lynedoch is set become gradually visible, until shortly before Spier where a ridgeline encloses the fan-shaped valley (see Figure T). The vineyards within this valley are very old, and the pattern of fields seems to have been consistent for much of the 20th Century, with rocky granite outcrops defining natural areas of vegetation.

These elements combine in areas to form a layered and complex rural landscape of very high scenic significance: the Lynedoch hillside forms part of the backdrop for over 70% of the heritage sites in the Eerste River Valley, and so its agricultural natures gives context to historic werf spaces. Therefore the SHMS has identified this part of the R310 as a scenic route (Figure 15).

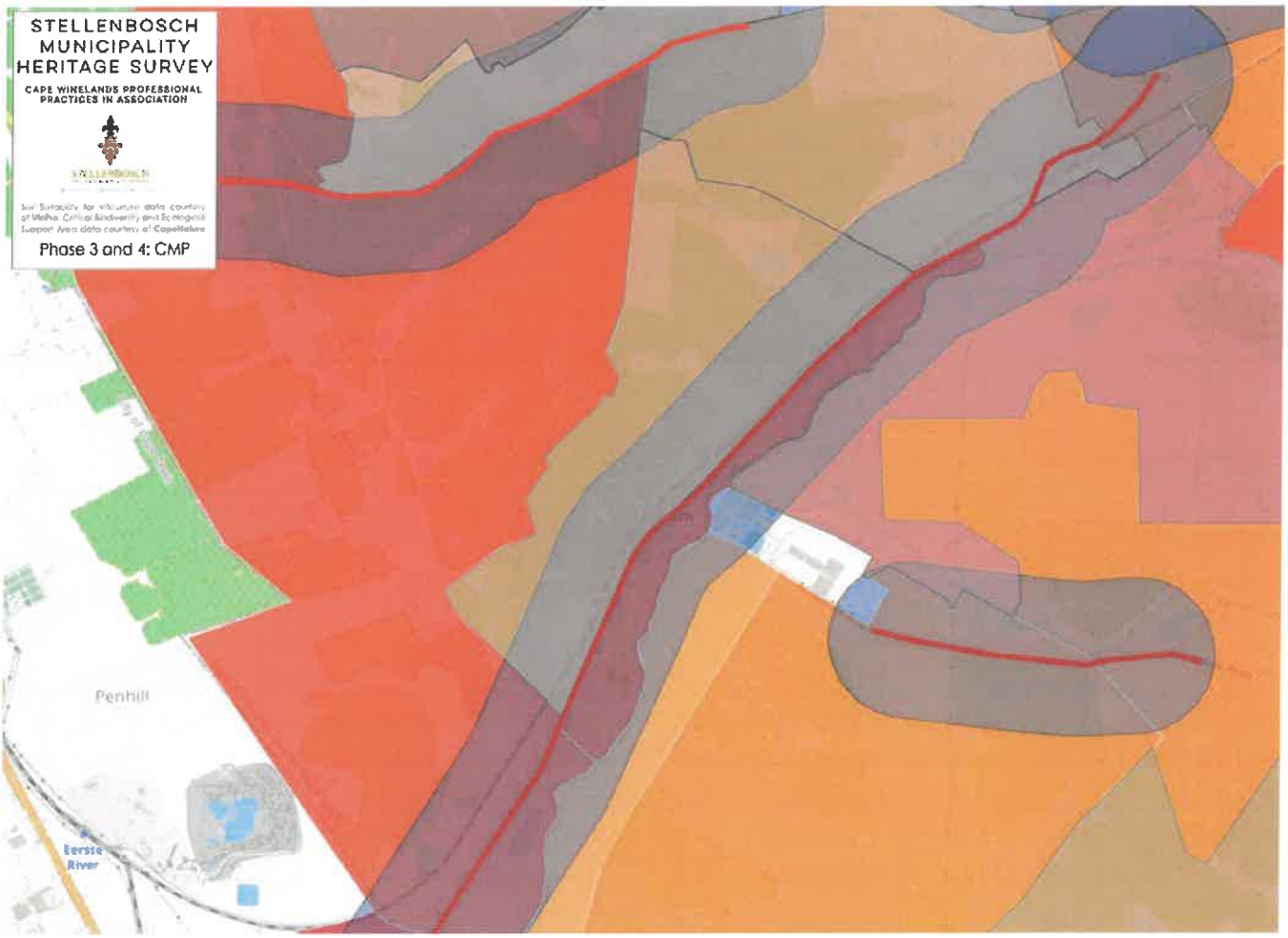


Figure 15: The SMHS CMP grading map indicates that the site falls within a Grade IIIB landscape unit, and along a Grade IIIA scenic route with a 500m buffer. (Source: http://stellenboschheritage.co.za/smhs/map/#15/-33.9804/18.7795).

The Landscape Unit Scale.

The Stellenbosch Municipal Heritage Survey states that the Lynedoch Nodes landscape is a **fine grained scattered, yet ordered landscape** (2018):

> The Land unit features gradual south-east facing slopes with a single drainage line just off the northern boundary leading into the Eerste River. The contrast with the flat floodplains of the Eerste River elevates the scenic quality. It is visible from Baden Powell Drive as well as the Annandale road with expansive views back towards the Stellenbosch mountain range. Characteristically rural in character with a textured balance in its coloured patchwork of vineyards interlaced with vegetated edges and small pockets of settlement. Most of this pocket has high soil suitability for vineyards. The railway line forms the southern boundary to this land unit. Early Stone Age tools found were found on the slopes of this land unit, and a first freehold farm is found on a large stretch of the south-eastern boundary.
>
> The Sustainability Institute's Eco Village (with school and wetland) is a good example of integration of mixed income and use. The hamlet is situated around ESA sites recorded (Seddon 1967) the Drie Gewels Hotel, one of the finest examples of Cape Revival houses within the winelands. In the 1980's it hosted music concerts associated with the Voelvry movement (a genre of anti-apartheid Afrikaans music). The site has a degree of architectural, landmark, historical, artistic and contextual significance next to the R310. The Eco Village is situated in close proximity to Lynedoch railway station, which has a very invasive and bulky concrete pedestrian bridge over the road, and a giant strawberry is the landmark for a filling station and store.
>
> The edge of the rolling hills adds value to the to the scenic route as one enters the Cape Winelands from the N2. Its typology is of a very fine grain with a scattered, yet ordered feel. Taking into account the history and associations of this landscape unit, any form of development especially needs to challenge the current tendencies (gated exclusion) and to pioneer an integrated society.

The site falls within this rather "patchwork" environment and has been graded IIIB. The R310 in this area is identified as a IIIA scenic route. It additionally has over 70% visibility from within the wider Valley Basin and therefore forms part of a wider landscape of exceptional scenic qualities. The visual impact of potential development must therefore be carefully considered, as "maintenance of the green and open agricultural character" of this landscape unit is important.

The SMHS specifically noted that the following would erode landscape character here:

- Over-scaled private dwellings.
- Gated residential estates.
- Suburban development.

The Site.

The landscape around Lynedoch is largely cultivated as vineyards, with a clear system of drainage furrows and windbreaks, as well as outcrops of granite that form pockets of natural vegetation. The Eerste River drains to the south, and the hilly landscape abruptly meets the flat river base, creating a series of wetland areas between the bands of infrastructure laid into this narrow, flat area between hill and river (railway line and roadways). The landscape unit is presently in transition, as the old hotel ("Gleneagles" and later "Drie Gewels") was bought by the University of Stellenbosch for their Sustainability Institute. This has seen expansion at the node, with academic and educational buildings established, as well as the Lynedoch "Eco Village. However, the growth remains modest and the settlement is still of the scale appropriate for a "hamlet", although some inappropriate development has occurred around the station.

This entire property and the south-east facing slope of the hill system has been graded IIIB.

Internally, the site retains buildings and spaces related to its agricultural uses – three barn structures as well as two houses and two circular farm dams cluster around the main driveway up from the station.

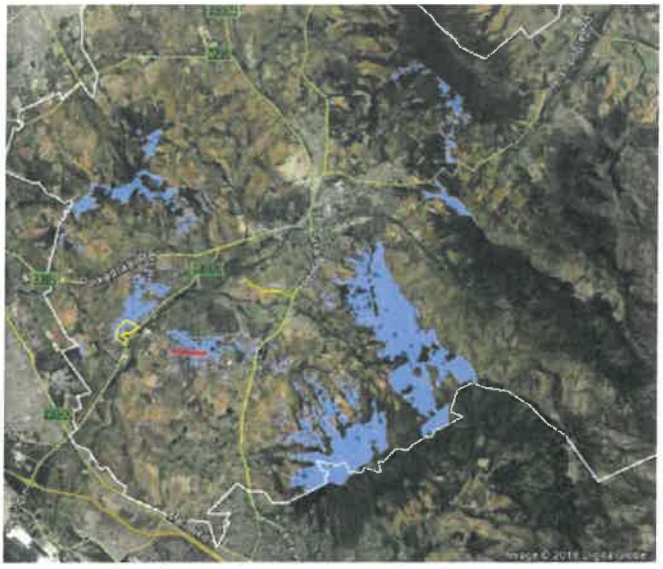
Visual Assessment Criteria in this Settling.

The landscape character of the site and its context has been extensively analysed as part of the Stellenbosch Municipality Heritage Survey (2018). In addition, the Impact Assessment Criteria identified by Obholzer in his 2005 "DEA&DP Guideline for Involving Visual and Aesthetic Specialists in EIA Processes" was consulted. The visual criteria and considerations that inform a visual impact assessment are as follows:

Visual Exposure and Viewshed Area

The visual exposure of the area is the geographic area form which the project will be visible (the "view catchment area"). It analyses the degree to which the site is visually apparent from the identified key viewpoints surrounding the site (Figure 16). Visual exposure and resultant impact tends to diminish with distance: the further away you are away from the development, the lower its visual impact. Visual exposure is defined as follows:

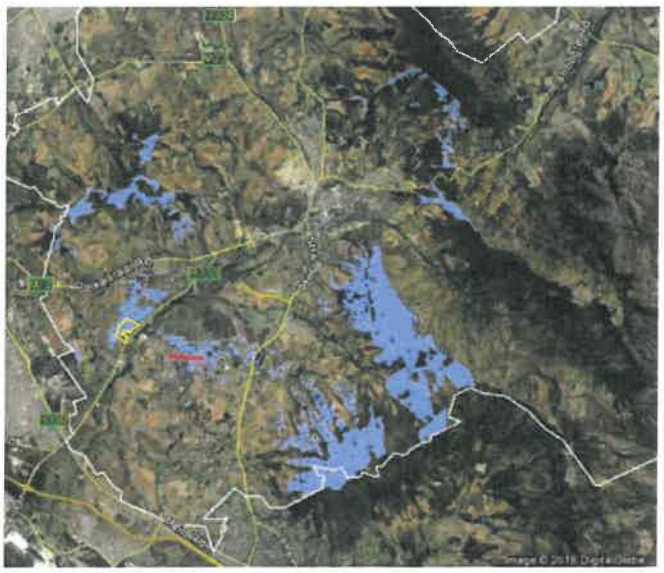
- High exposure: Dominant or clearly noticeable, visible from a large area.
- Moderate exposure: Recognizable to the viewer, visible from the intermediate area only.
- Low exposure: Not particularly noticeable to the viewer, continuing the existing visual character or patterns, visible from a small area around the project site.



Viewshed from Annandale Road, with the site in yellow.



Viewshed from the R44, with the site in yellow.



Viewshed from Annandale Road, with the site in yellow.



Viewshed from the R310/Baden Powell, with the site in yellow.



Viewshed from Annandale Road, entering Helderberg, with the site in yellow.



Viewshed from Blaauklippen Road, with the site in yellow.

Figure 16: Viridian Landscaping undertook extensive viershed analysis of the Eerste River Valley from the various scenic routes identified. The Lynedoch Node and its upper hillcrests forms part of the viewshed of all of the above, idenitified views. (Source: https://www.stellenboschheritage.co.za/wp-content/uploads/Appendix-4_Visibility-Analysis.pdf).

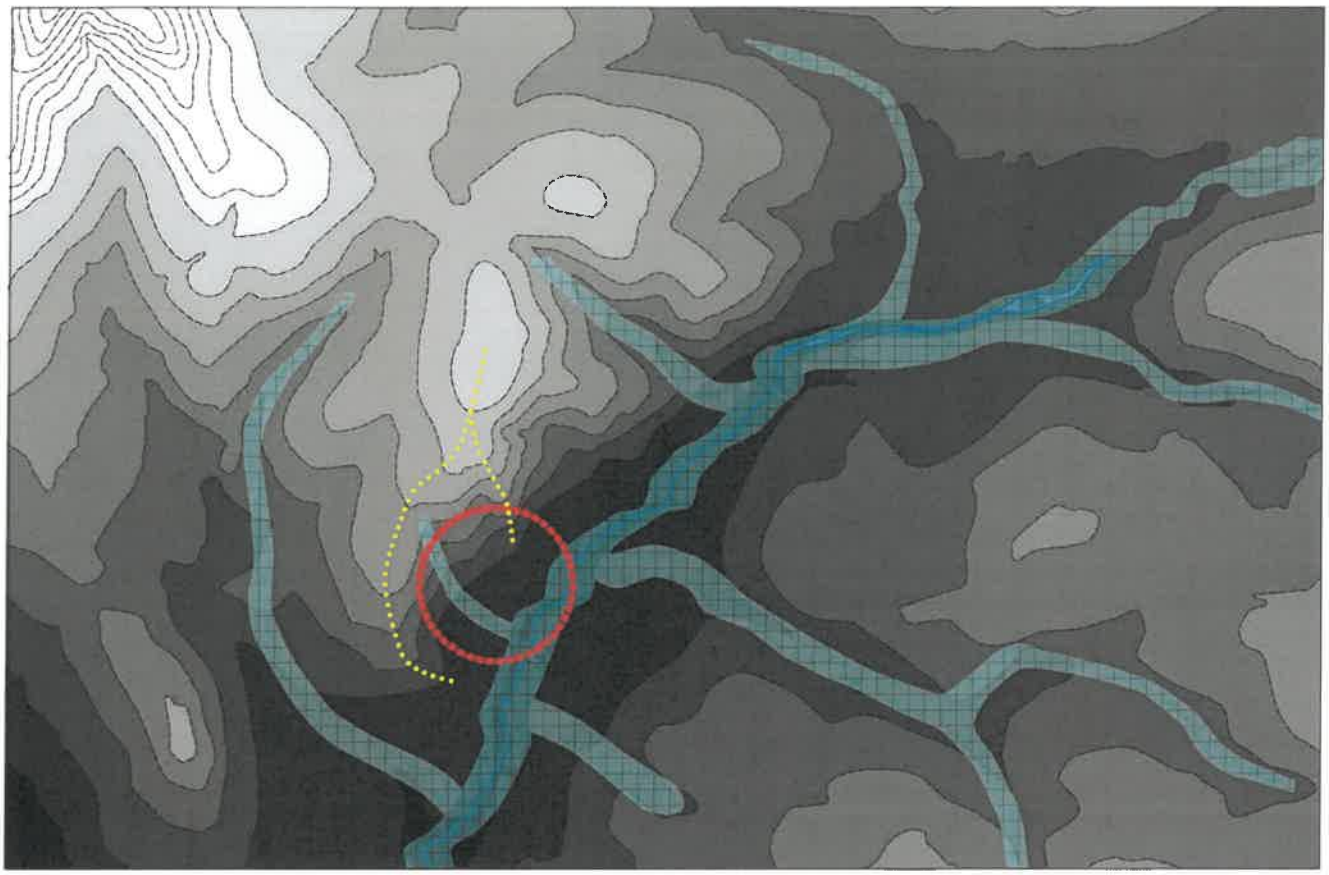


Figure 17: Indication of the topography underpinning the site (in red dashed outline) and with the encircling ridgelines indicated in yellow dots.

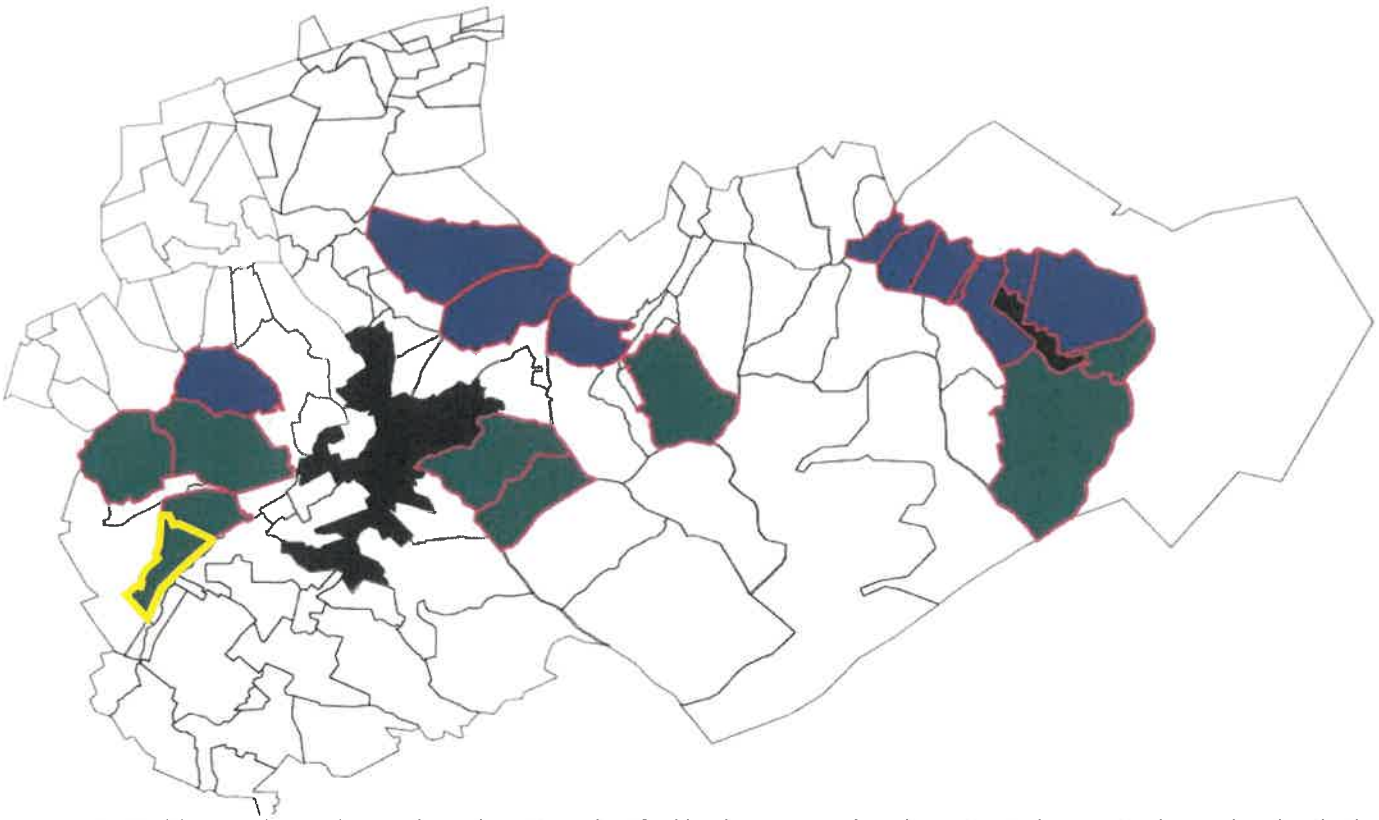


Figure 18: Building on the Viridian analysis, the SMHS identified landscape parcels with exceptional scenic quality, in that they had medium-to-high visbility from scenic routes, with over 70% of scenic routes in the area encompassing views to these areas. The Lynedoch Landscape Unit is outlined in yellow. (Source: SMHS, 2018).

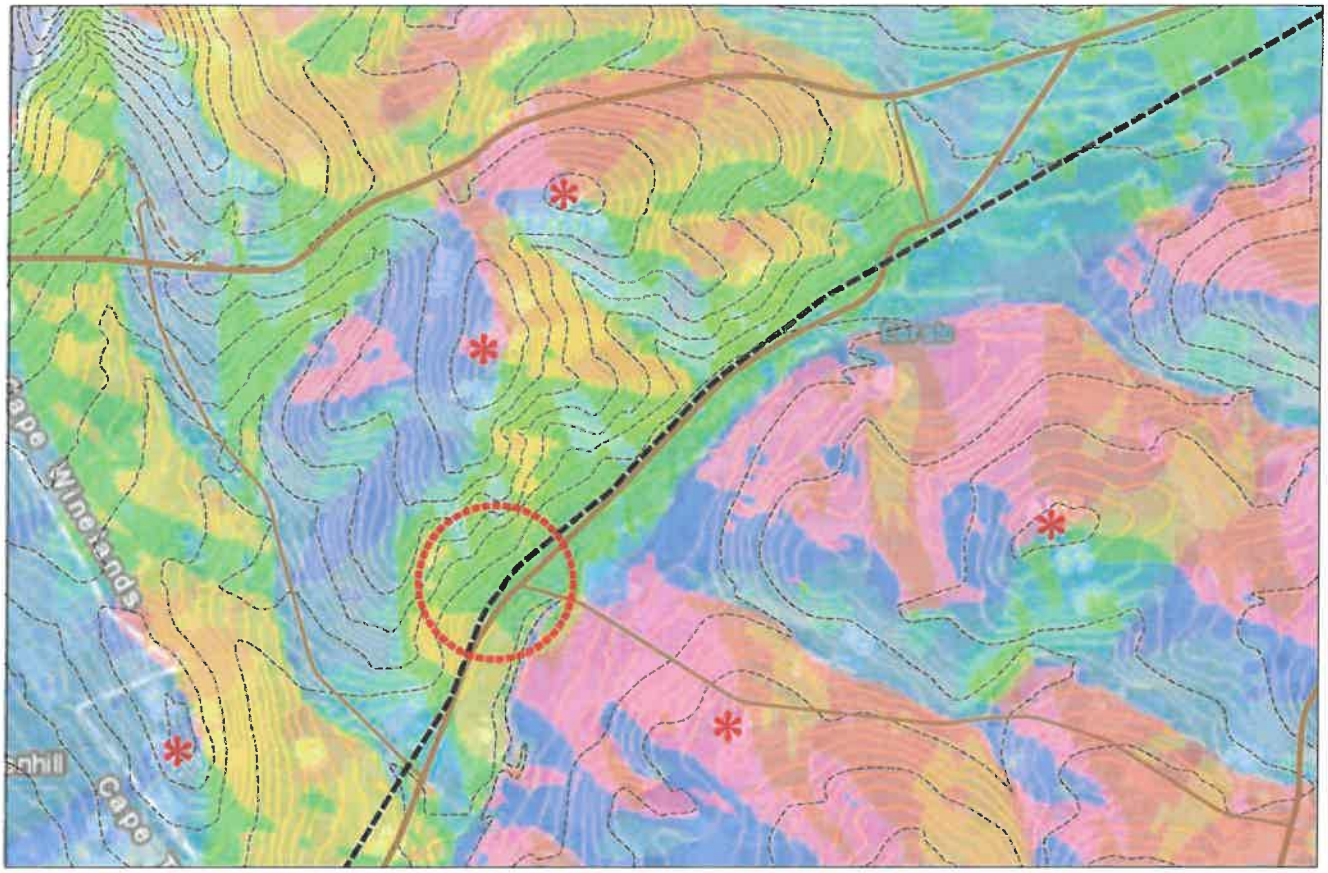


Figure 19: The aspect underpinning the site, which indicates how topography influences the visual sensitivity of the site.
(Source: Cape Farm Mapper).

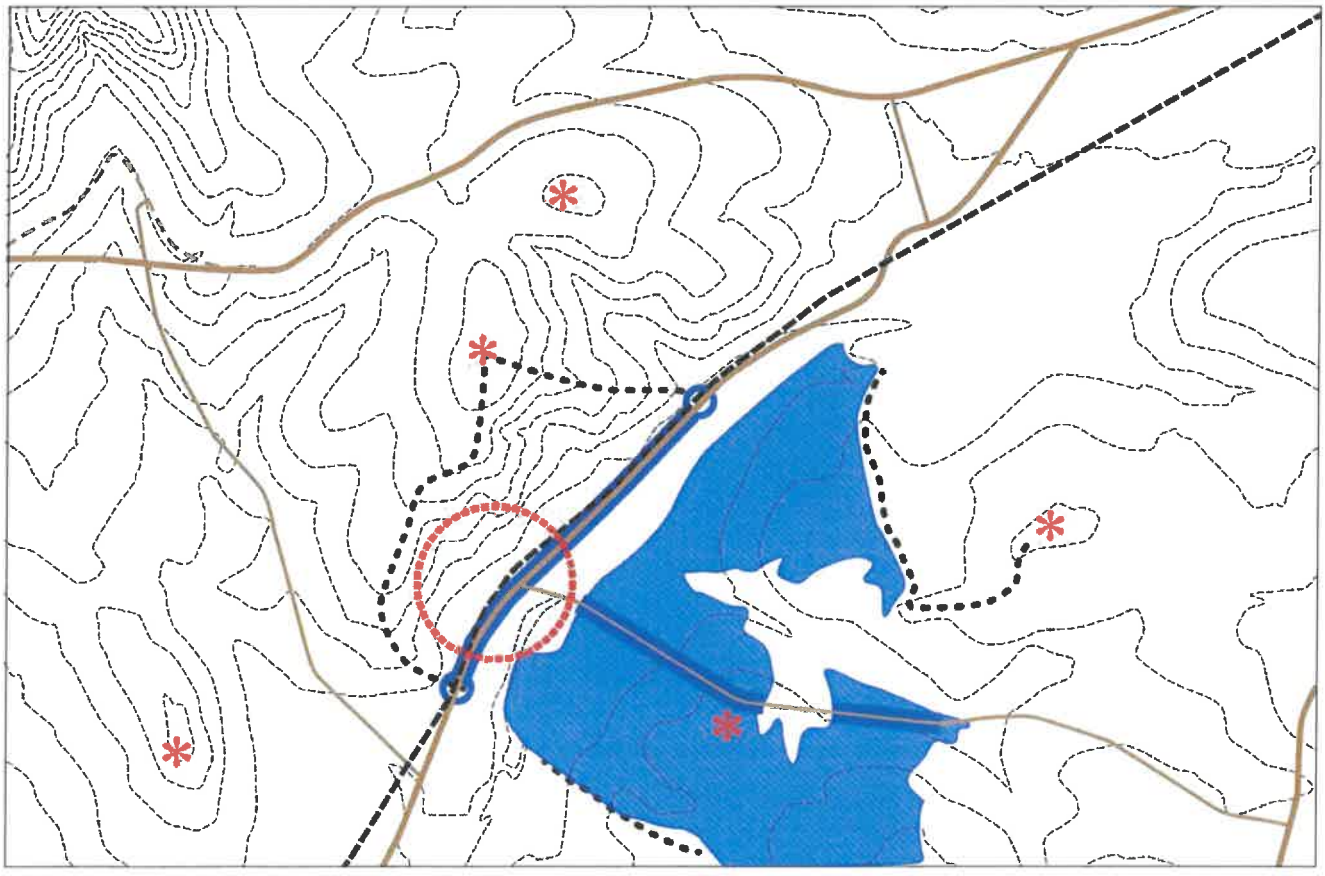


Figure 20: Analysis of the slopes and routes surrounding the site, from which the site is most visible. These are indicated in blue. The dashed lines and red stars indicate ridgelines and peaks.

The subject site has a degree of visual containment at present, due to the surrounding topography (the ridgeline beyond the railway line screens the site to the north, as does the ridgeline to the south - Figure 17) and existing mature tree-planting and rocky outcrops provide further screening. Therefore, the zones of visibility are already somewhat limited in the foreground (see Figure H & I), although the site is visually exposed from the south-east, where it has been identified as a landscape parcel that forms part of the far backdrop to over 70% of the heritage sites identified within the wider Valley (Figure 18). Therefore, extensive urbanisation of this area would negatively impact the agricultural setting of many historic farmsteads and other heritage sites, some of which are of Provincial Heritage Significance. The receiving environment is thus one of "moderate visual exposure".

Visual Sensitivity of the Area and the Viewpoints

The level of visual impact considered acceptable is dependent on where the site is located in the receiving environment and the sensitivity of its location to development. Visual sensitivity can be defined as follows:

- High visual sensitivity: Highly visible and potentially sensitive areas in the landscape (seen from residential areas, natural reserves, scenic routes etc.)
- Moderate sensitivity: Moderately visible areas in the landscape (visible from typical "town" spaces, with a mixed-use and varied environment).
- Low visual sensitivity: Minimally visible areas in the landscape (for instance seen from degraded area or industrial sites)

The site has already been identified as one of high visual sensitivity on the wider scale, being part of the agricultural background to over 70% of the heritage sites identified within the Eerste River Valley.

In addition, this visual sensitivity is "blanket" and equally distributed over the landscape, rather than focussed towards landmarks.

Figure 19 and 20 identify the aspect surrounding the site, and thereby identify the areas (slopes and routes) from which the site is higly visible. These then inform the more detailed view analysis which follows on pages 20 - 28, Figures A - R.

Visual Absorption Capacity (VAC)

The VAC indicates the potential of the landscape to conceal the proposed development, and indicates how much of the project would be visually "absorbed" or "disappear" into the receiving environment. VAC is defined as follows:

- High VAC: Effective screening by topography and vegetation.
- Moderate VAC: Partial screening by topography and vegetation.
- Low VAC: Little screening by topography or vegetation.

The site has high VAC at the larger scale, due to the enclosing topography. It is otherwise highly visually exposed once these framing ridgelines have been passed. This has been identified on a more detailed scale in Figures A to R.

Visual Intrusion/Landscape Integrity

The visual intrusion that could potentially be caused by the proposed project is related to the level of compatibility or congruence of the proposed project with the particular qualities or sense of place of the surrounding areas. Visual intrusion relates to the concept of placing appropriate development typologies within their context to maintain landscape integrity and sense of place and is defined as follows:

- High visual intrusion: Noticeable change or conflicts with the surroundings.
- Moderate visual intrusion: Partially fits into the surroundings, but clearly noticeable.
- Low visual intrusion: Minimal change or blends in well with the surroundings.

The heritage-based design indicators developed for the site will look to ensure visual integrity of the development with its surrounds.

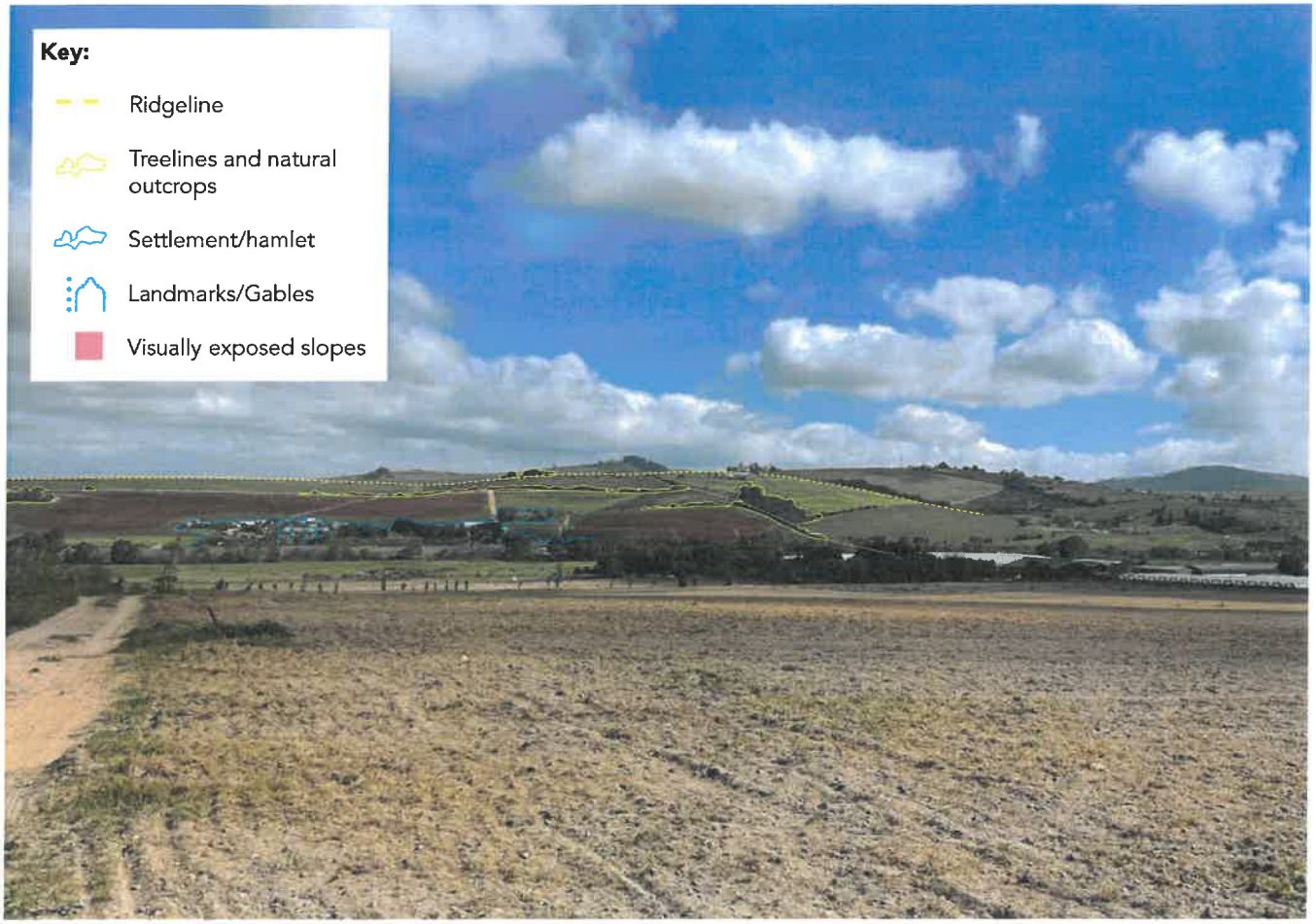


Figure A: View from fields south of Annandale Road, towards Lynedoch. White dotted line indicates approx. property boundary.

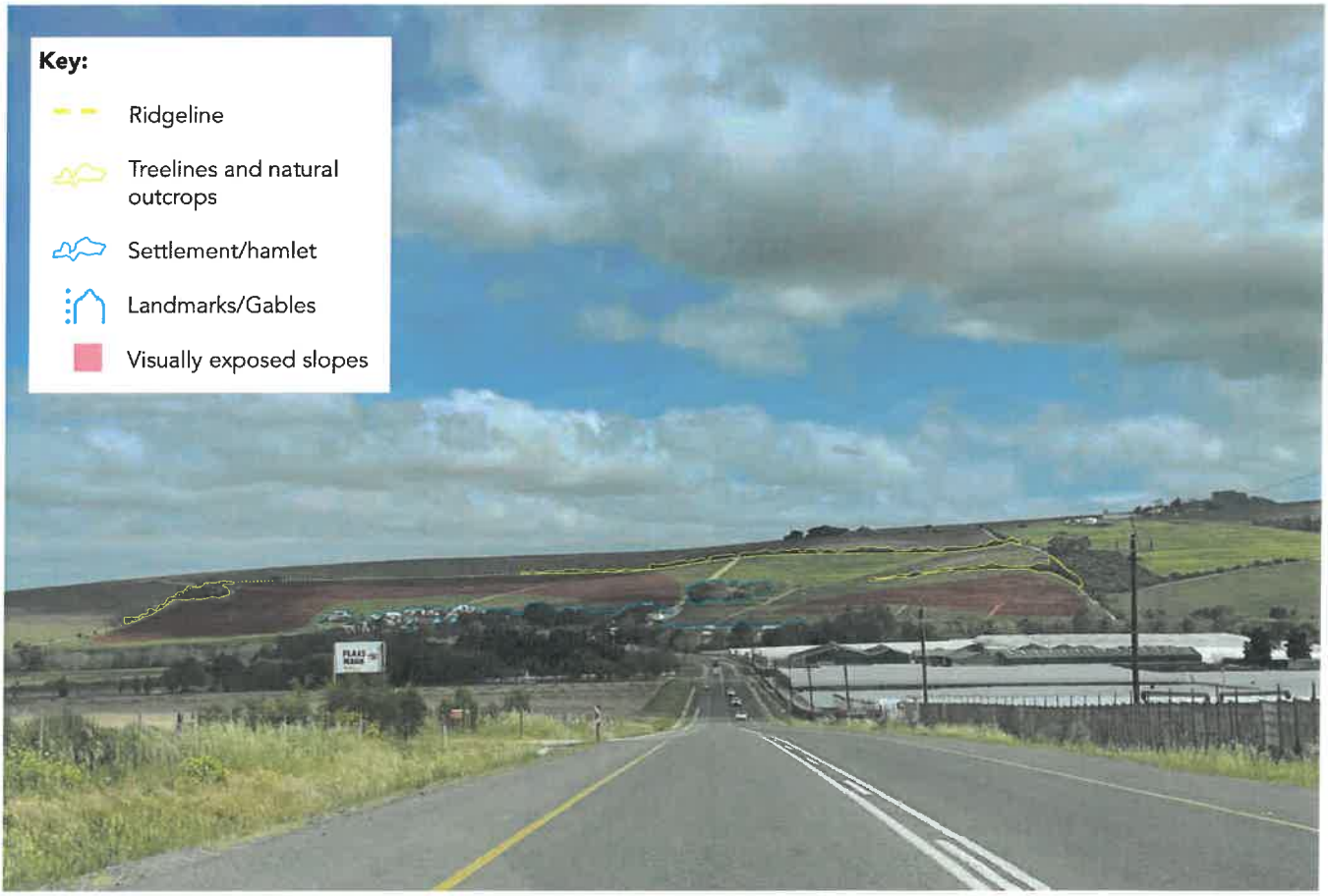


Figure B: View from the Annandale Road, above the strawberry farm, towards Lynedoch. White dotted line indicates approx. property boundary. This view indicates the high visual exposure of the upper slopes and east and west "flanks" at Lynedoch.

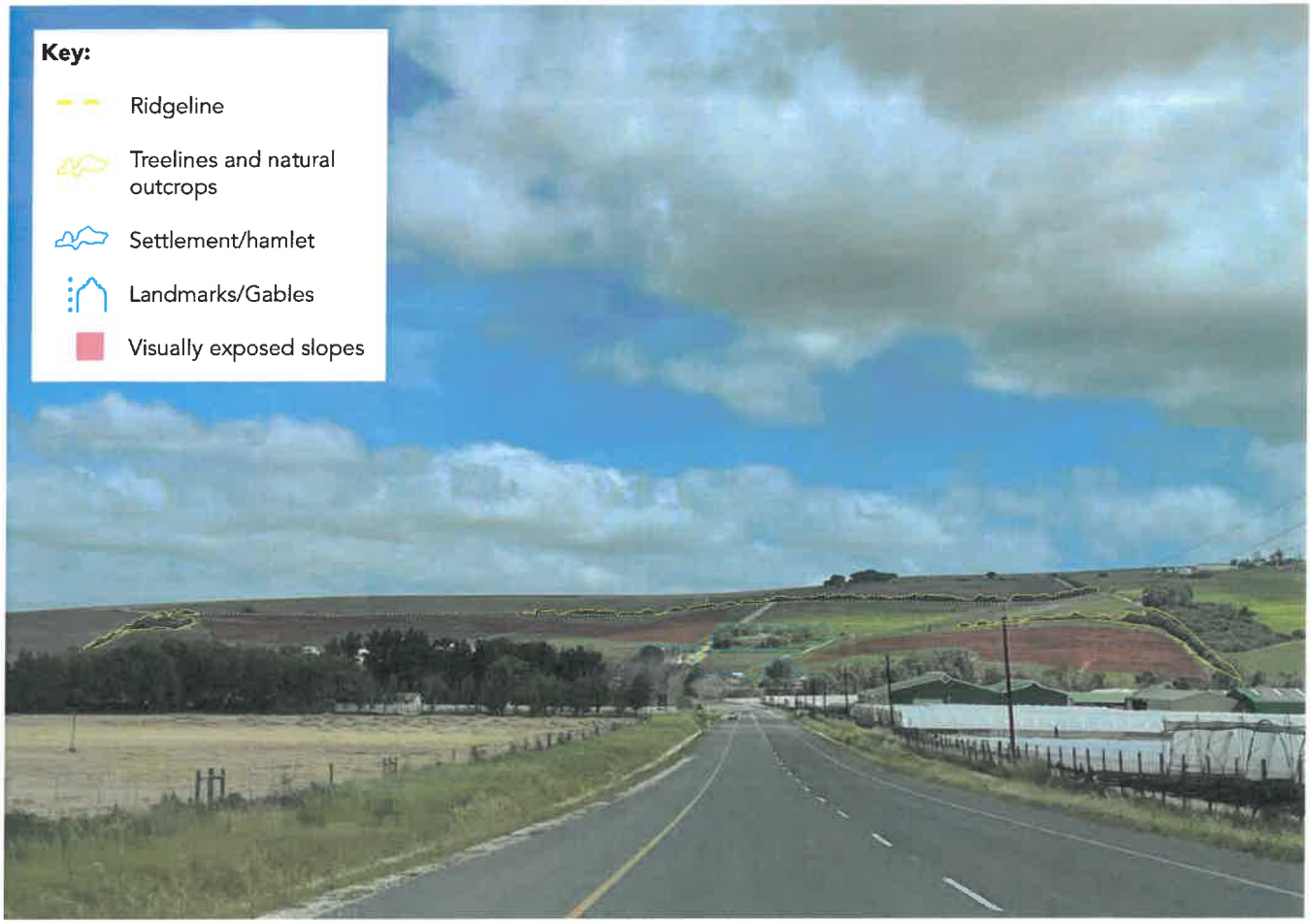


Figure C: View from Annandale Road, towards Lynedoch, at the strawberry farm. White dots indicate approx. cadastral boundary.

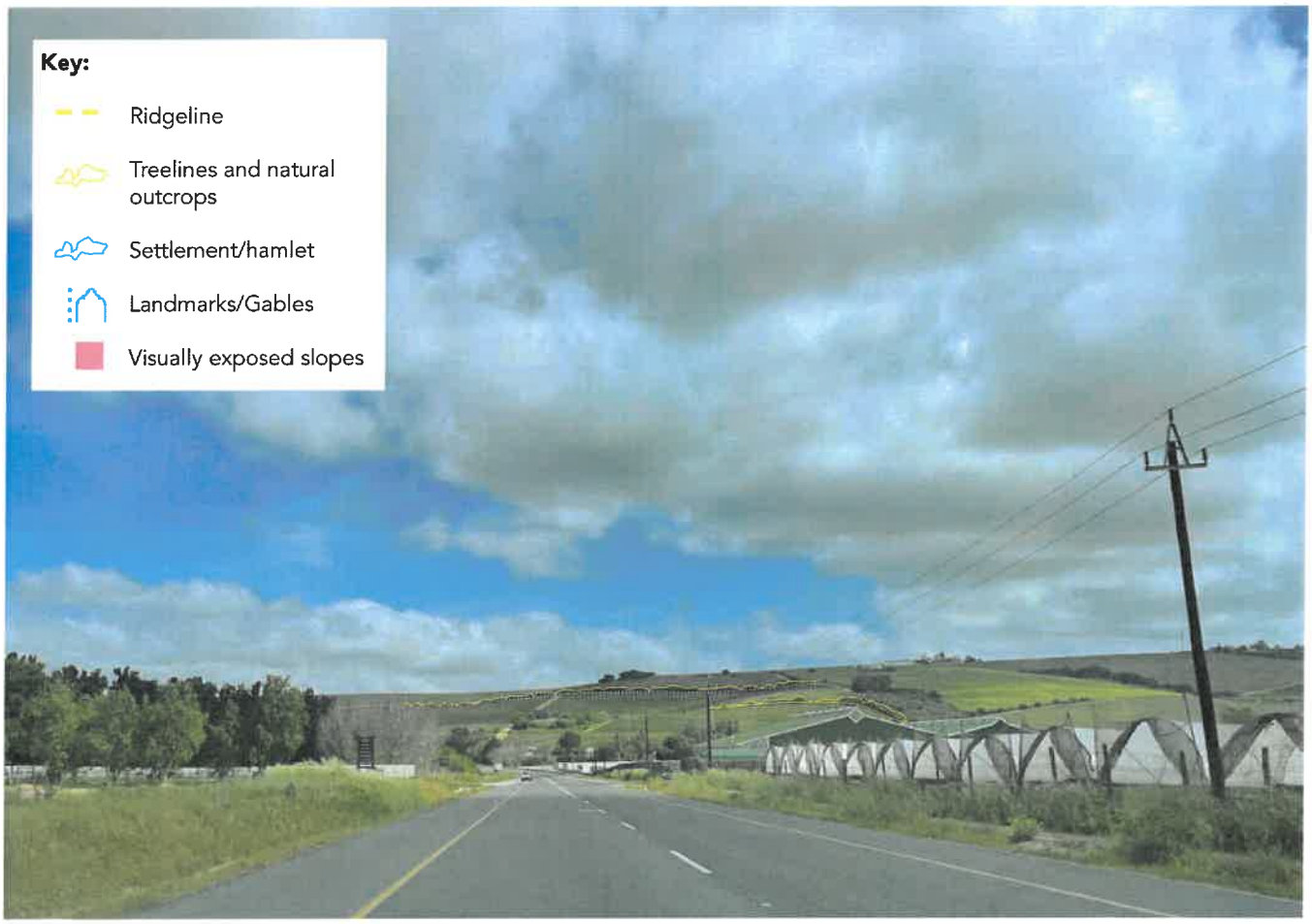


Figure D: View from Annandale Road at the end of the strawberry farm, moving towards the Eerste River.

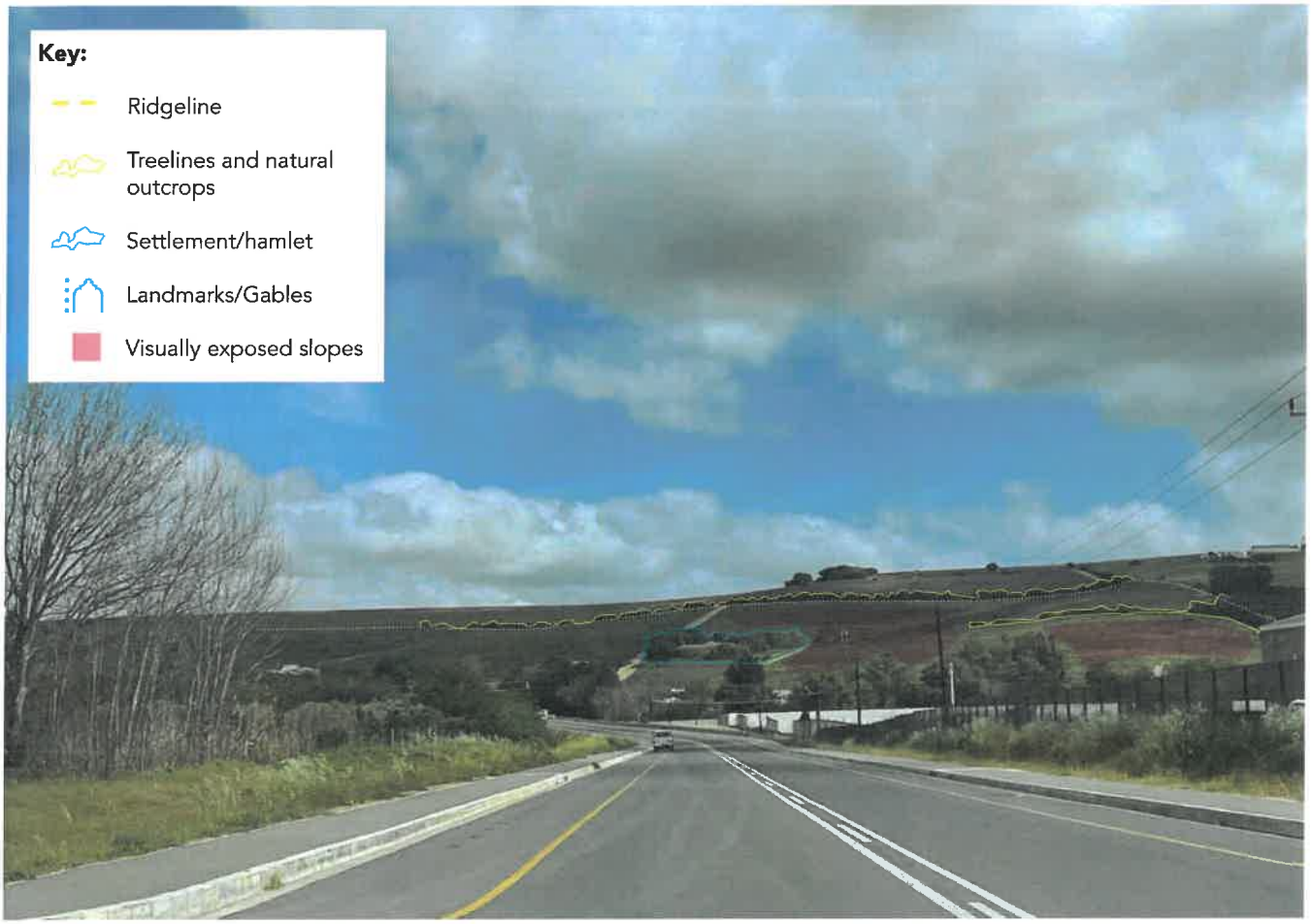


Figure E: View from Annandale Road, towards Lynedoch, just before the bend. White dotted line indicates property boundary.

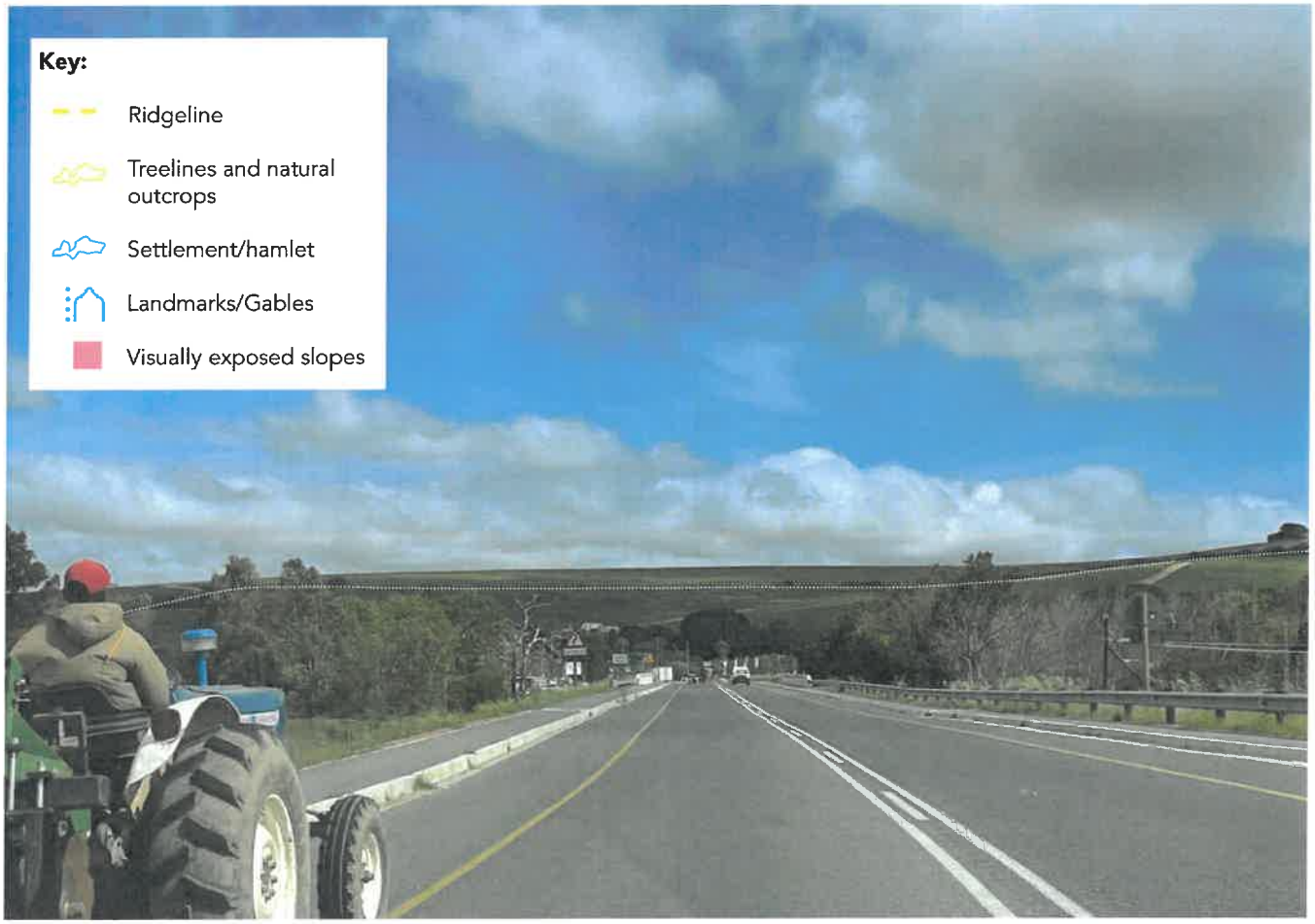


Figure F: View from Annandale Road, just before the bridge. White dotted line indicates approximate property boundary.

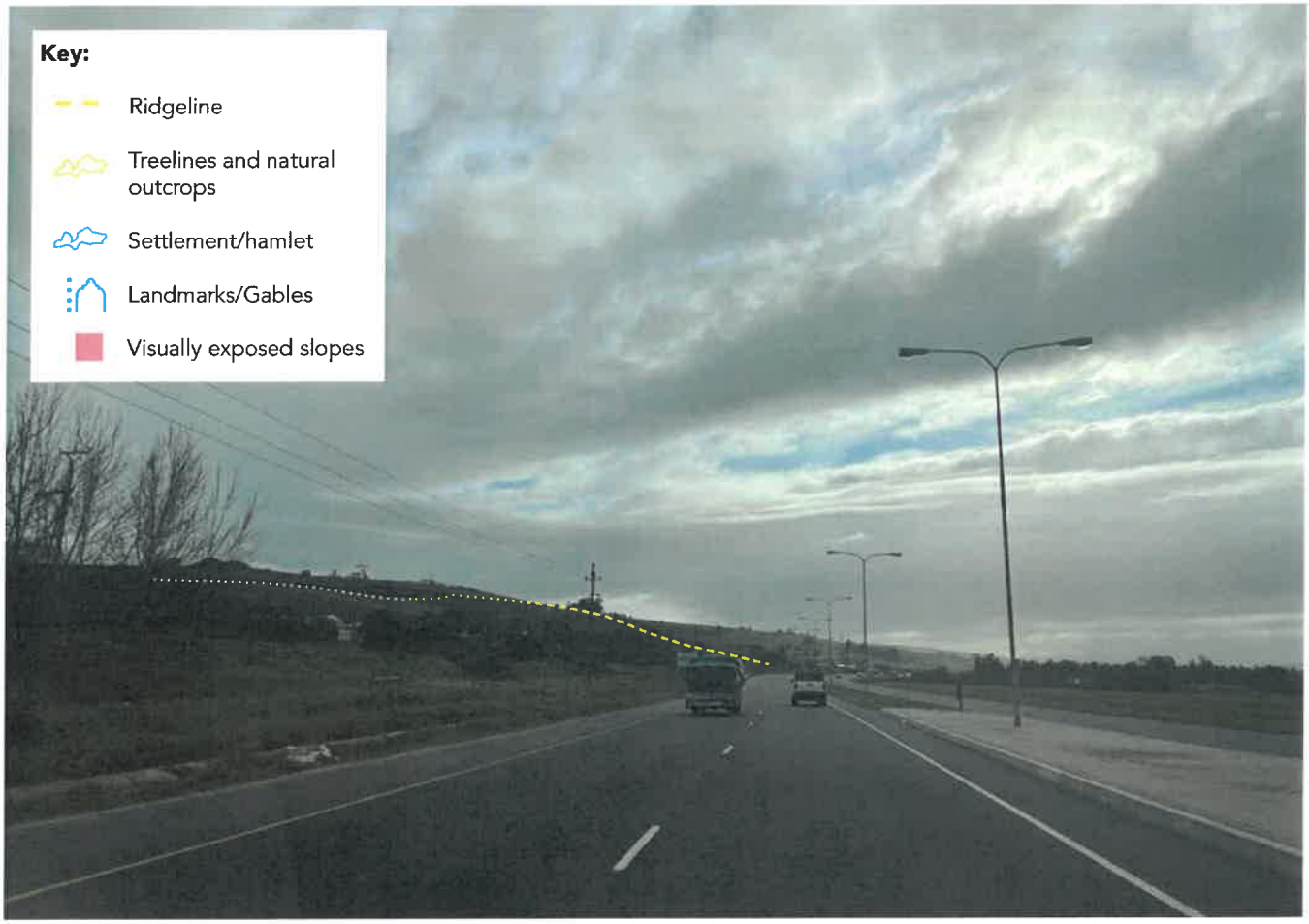


Figure G: View on approach from the R310. White dots indicate approx. cadastral boundary and coincide with the local ridge.

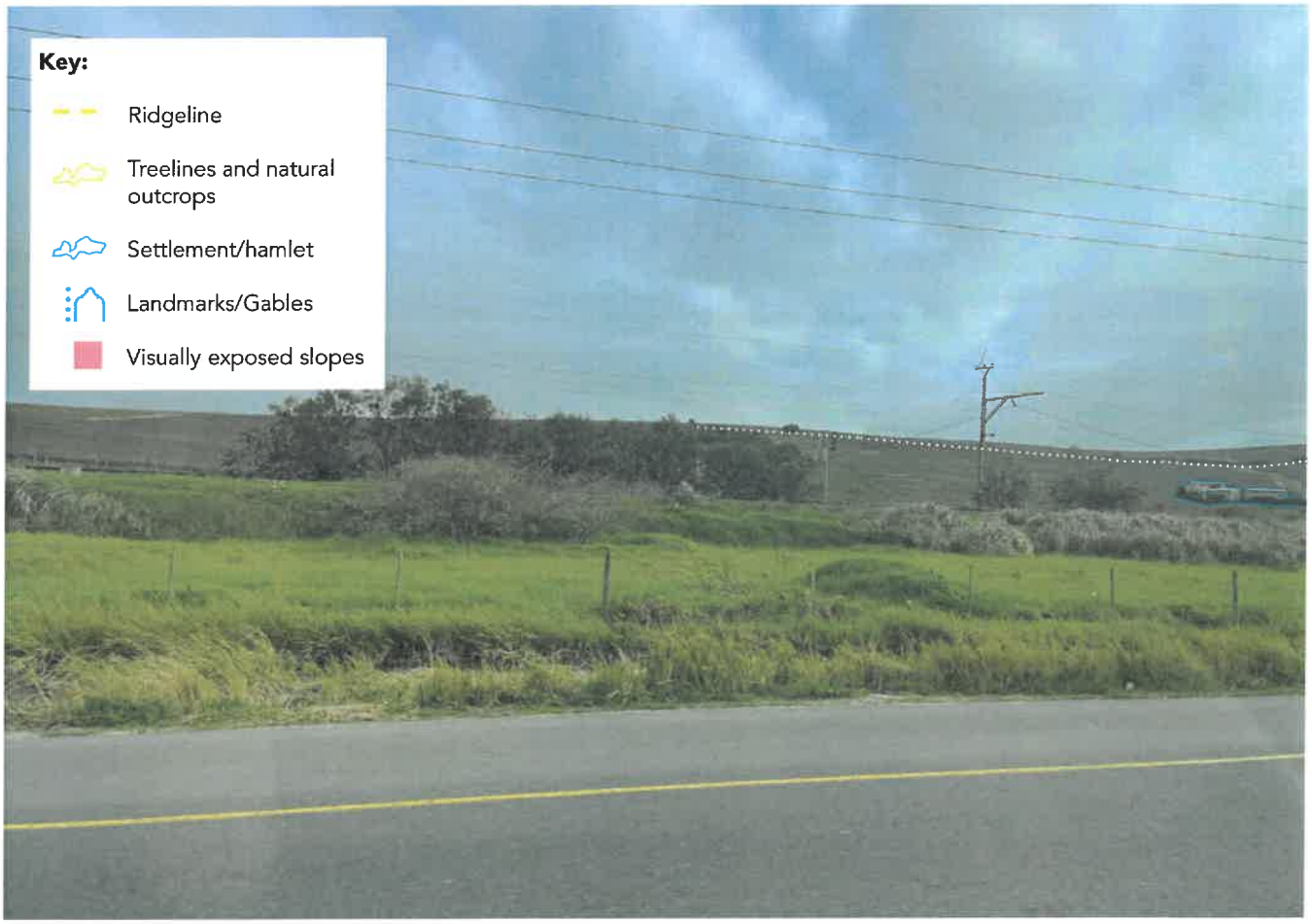


Figure H: View from R310 from the south. The white dotted line indicates approximate property boundary.



Figure I: View from the R310. White dotted line indicates approx. property boundary. The southern slopes are very exposed here.

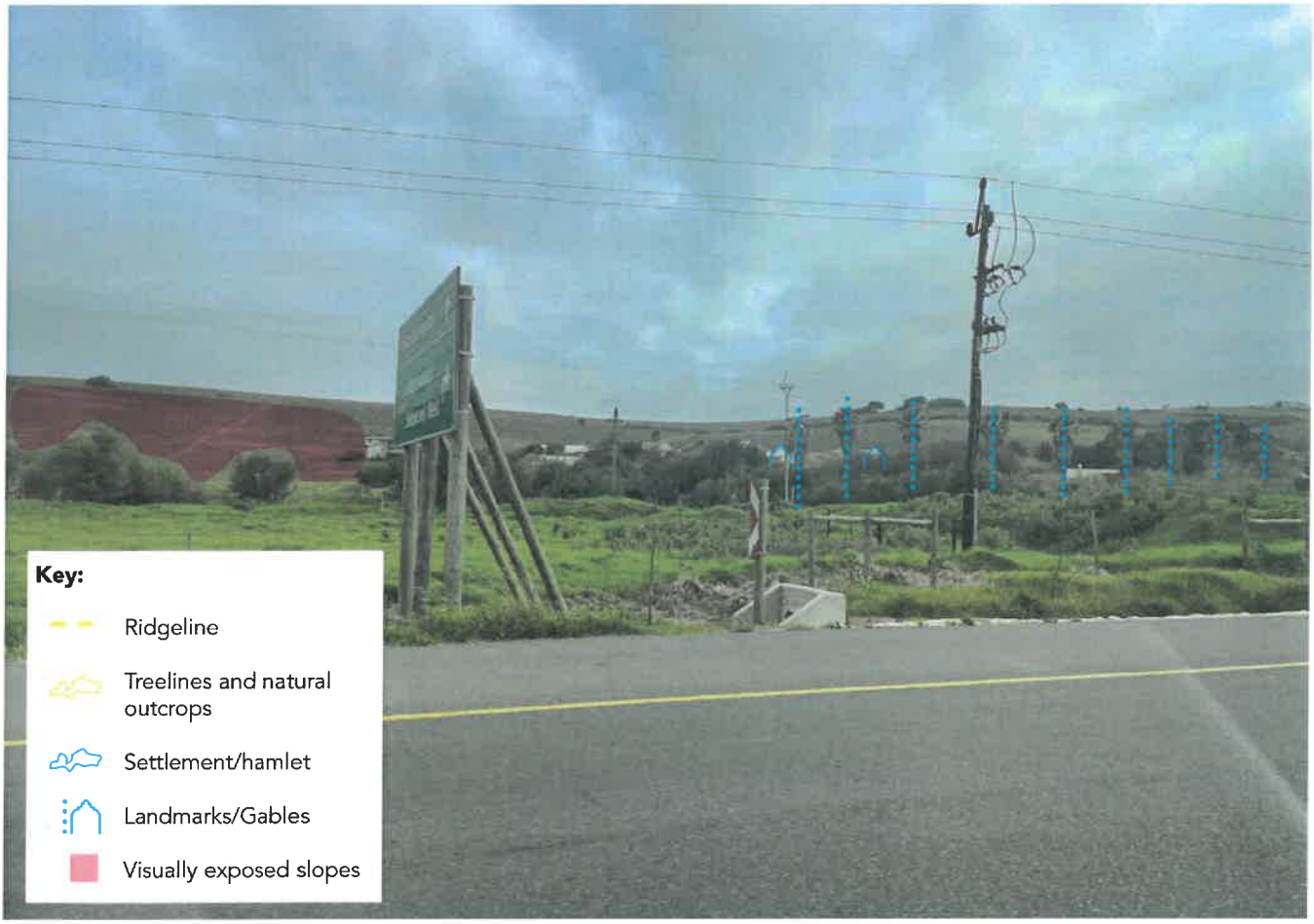


Figure J: View from the R310, just further on. The visual focus shifts to the palm trees and gables of the old hotel.

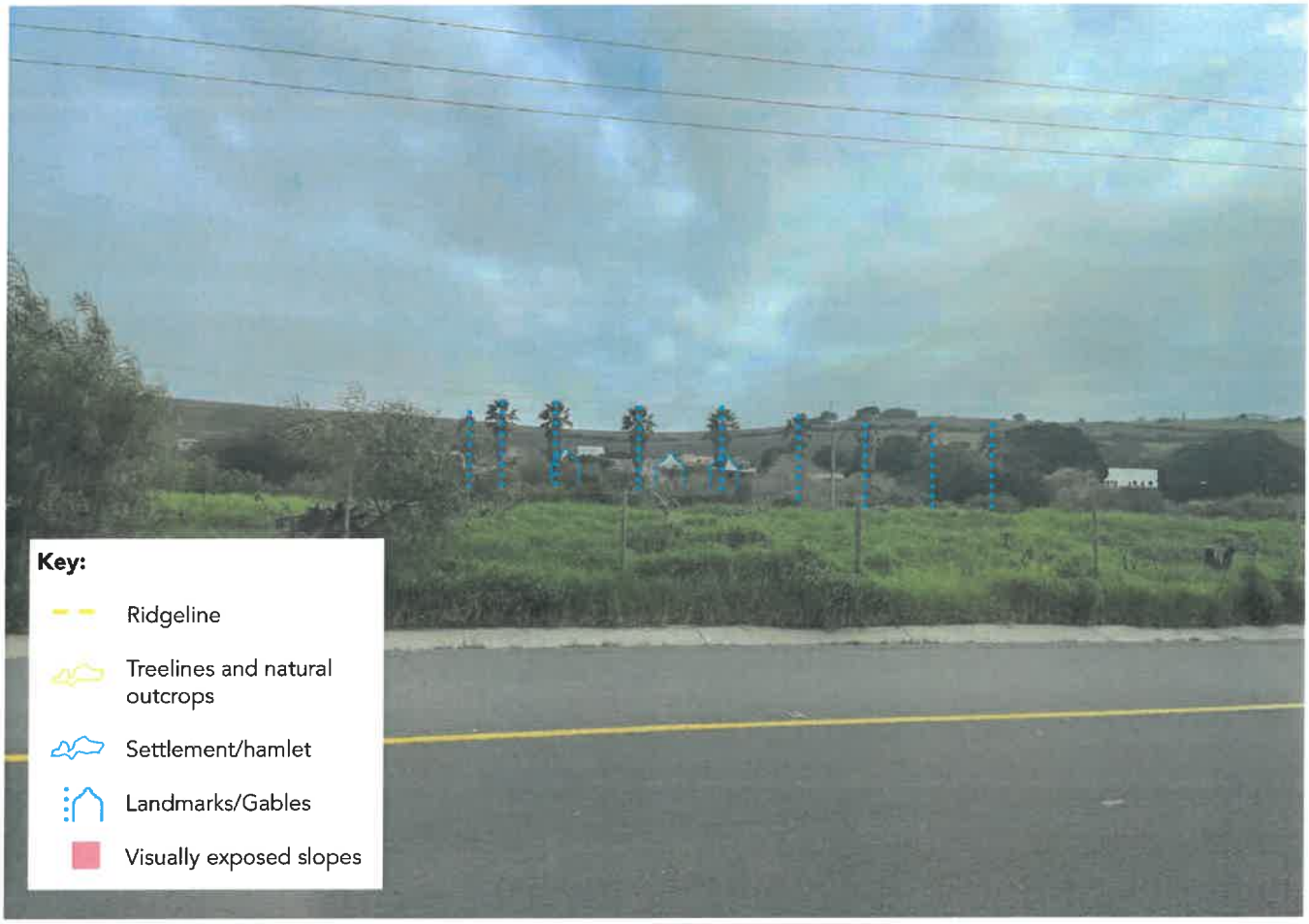


Figure K: View on approach from the R310. Palm trees & the gables dominate the view. The trees screen the slopes beyond.



Figure L: View from R310 at the intersection. The foreground clutter associated with the petrol station dominates views.



Figure M: Figure L: View from R310 at the intersection. The foreground clutter associated with the petrol station dominates views.

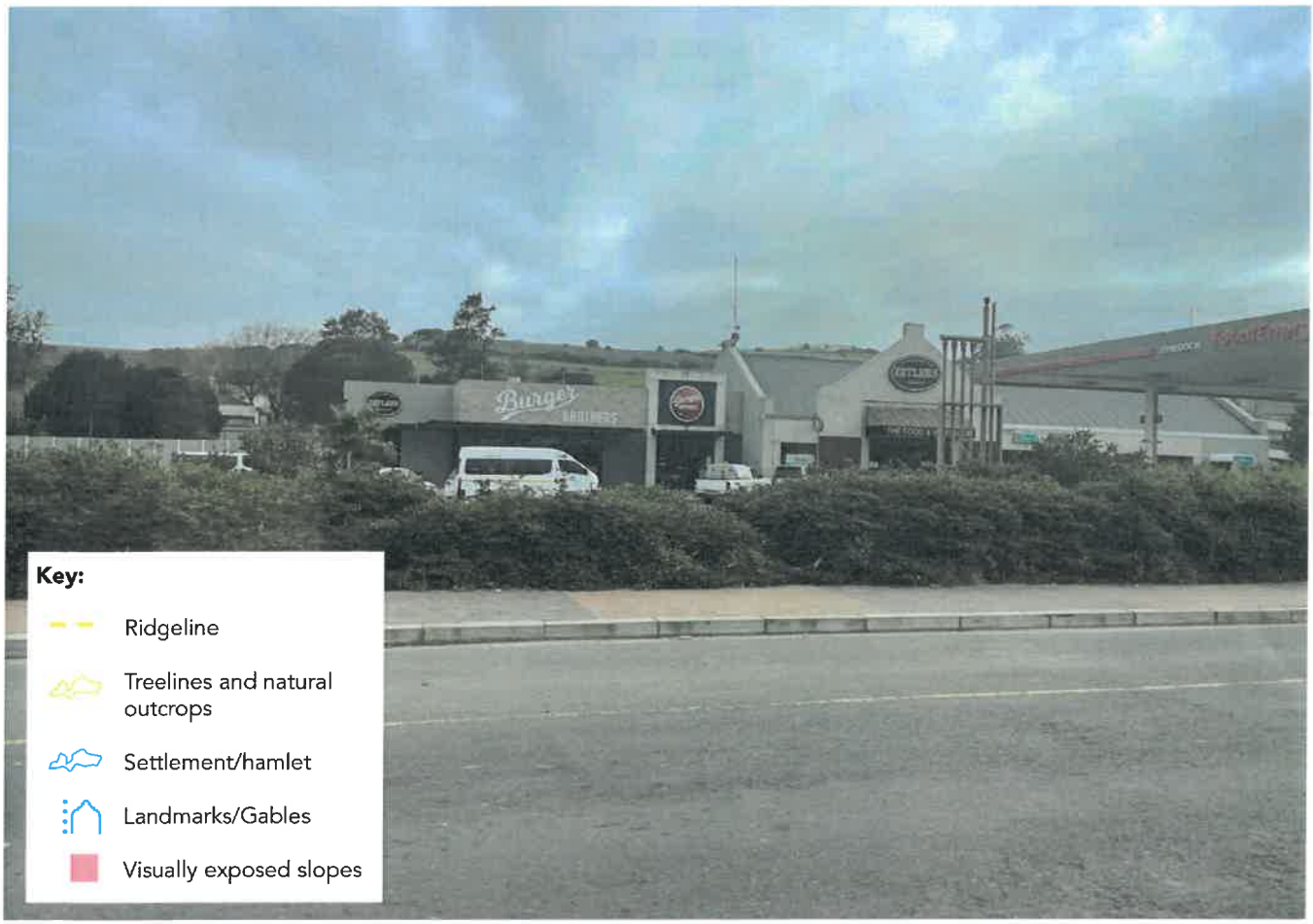


Figure N: Figure L: View from R310 past the intersection. The foreground clutter associated with the petrol station dominates views.

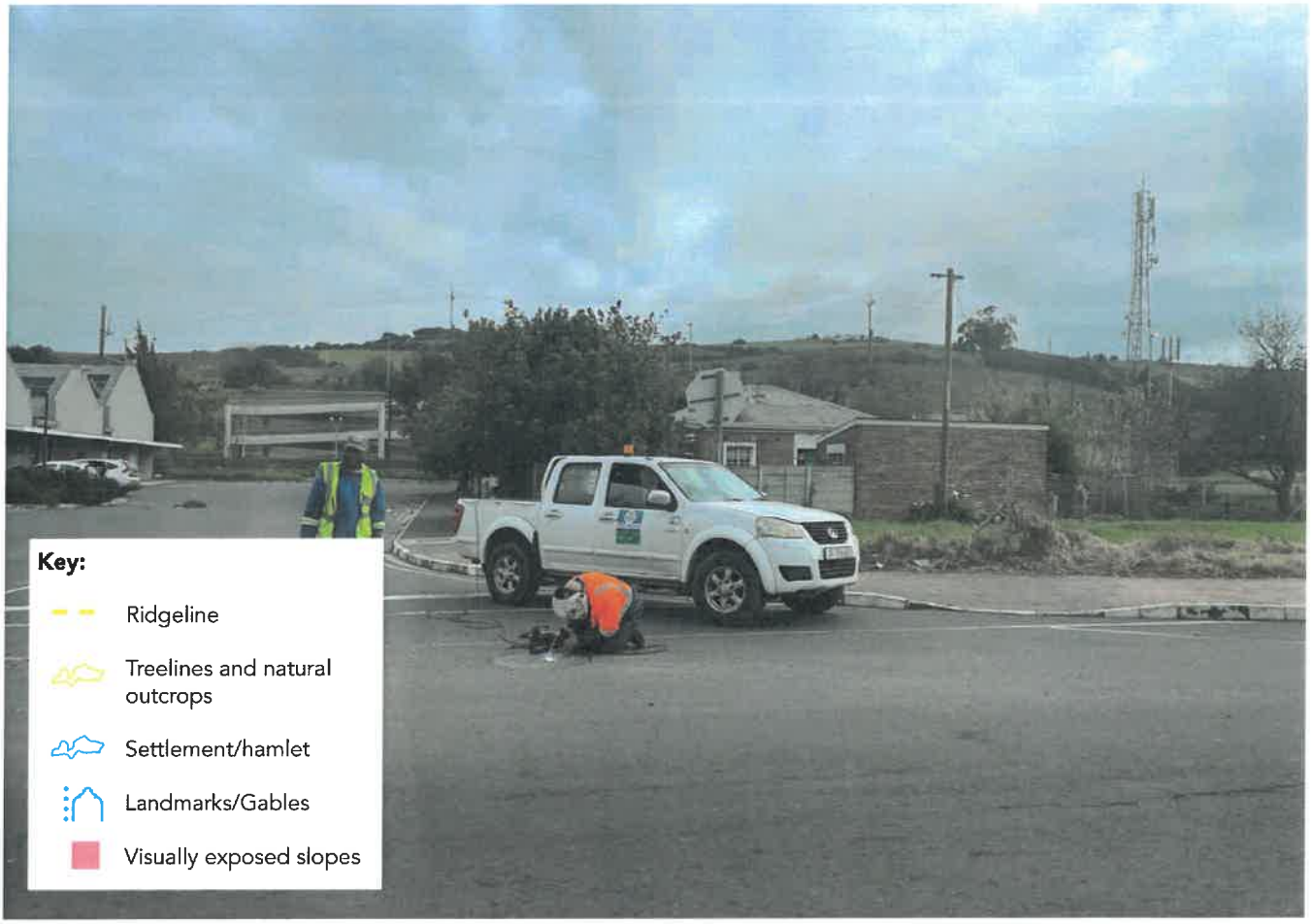


Figure O: View on approach from the R310. The station and associated structures dominate the views.

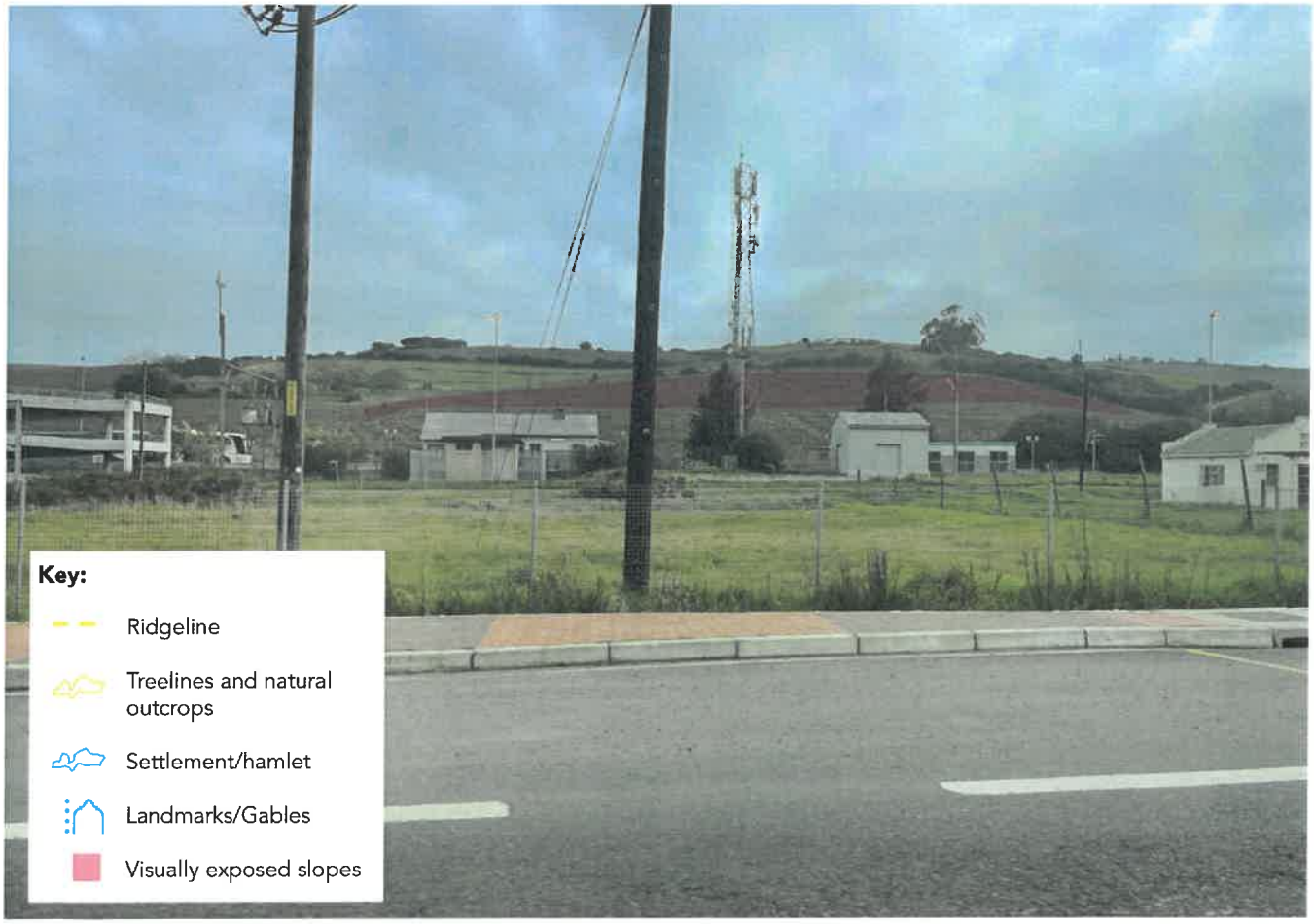


Figure P: View from R310 just beyond the station. The north-eastern slopes of the property again become visually exposed.

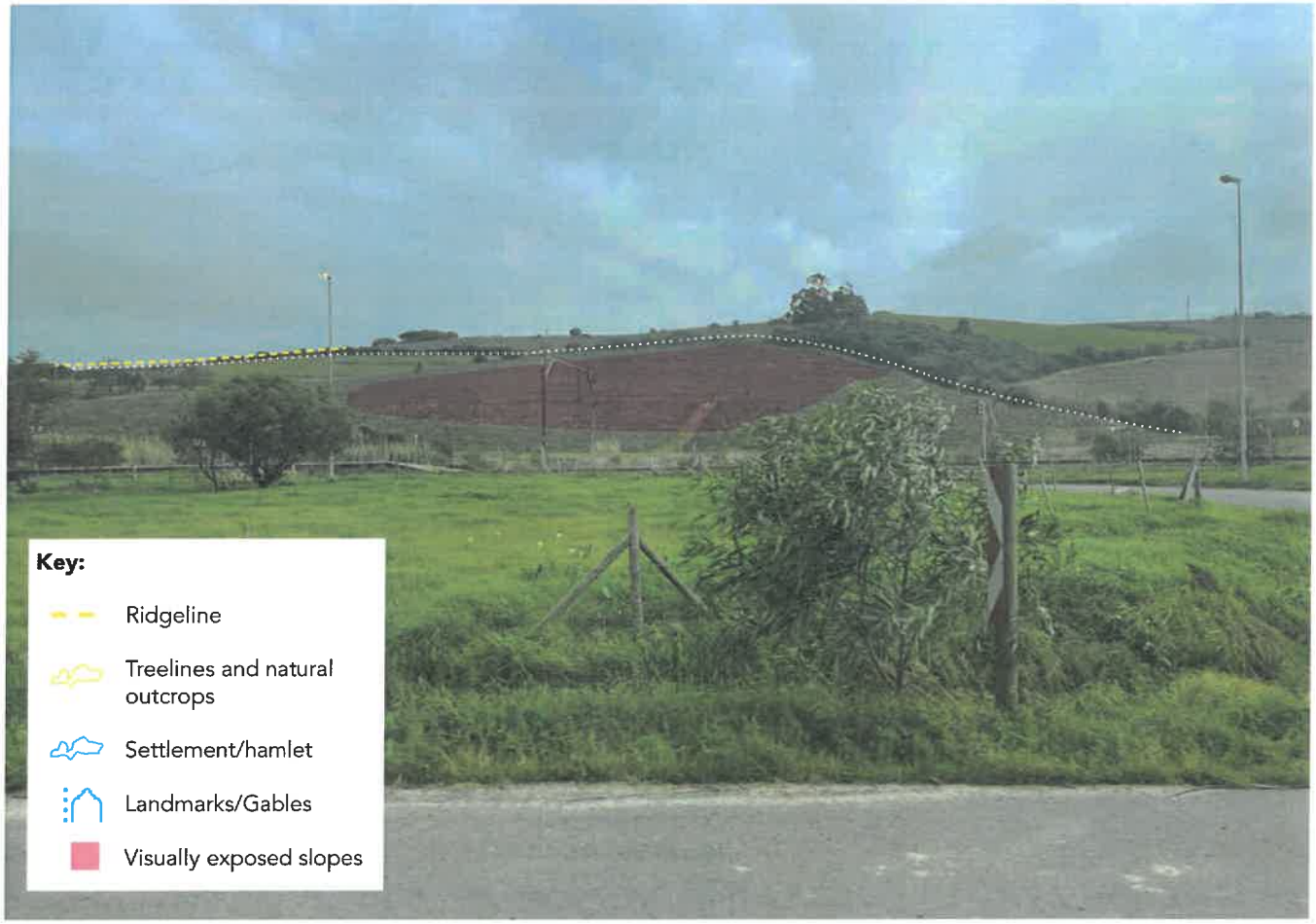


Figure Q: View from the R310 towards Spier. White dotted line indicates property boundary, with becomes the ridge line. The south-eastern slopes are highly visually exposed.



Figure R: View from the R310 travelling south. The sub-valley of Lynedoch is highly screened when moving south along the R310.



Figure 5: View from the internal Lynedoch Road, to the south-east of the site, looking up towards the ridgeline. Lynedoch Eco Village can be seen to the right of image.



Figure 7: View from the entrance to the slightly visually sheltered "sub valley" above the railway station. The slopes to the left are visually exposed. The more modern farmhouse is further along the contour to the right of image.



Figure U: View from the slightly visually sheltered "sub valley" above modern farmhouse, seen to the centre of the image. The gum trees to the far left mark the edge of the site.



Figure V: View from the slightly visually sheltered "sub valley" above modern farmhouse, taken directly above the farmhouse. The gum trees to the far left mark the edge of the site, while the olives to the right mark the upper boundary.



Figure W: View taken direct above the Eco Village. The treed surrounds of the Lynedoch Node are evident and will provide screening directly behind the settlement.



Figure X: View from the terrace above the uppermost barn building (to the right of image). The modern farmhouse is discernible to the left of image, set into a garden of mature trees.



Figure Y: View of the two agricultural barns at the first terrace above the Sustainability Institute. These should be adaptively reused.



Figure Z: View above the lower round dam, looking north towards Stellenbosch and the Lynedoch Station. The slope becomes increasingly visually exposed as one moves away from the existing village.

THE UNDERLYING "TOWNSCAPE" SETTING OF THE SITE AND SETTLEMENT NODE.

Analysis of the Patterns of Settlement-Making in the Cape Winelands

The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands. It encompasses many of the wider aspects of settlement making in the region, including:

- being positioned close to a river course and historic wagon route (as well as a railway line),
- the potential for the creation and extension of a gridded structure for agriculture into settlement,
- the hotel occupying a prominent position within the civic node (historically this role was most often performed by a church),
- and the visual setting of the whole against the surrounding hill slopes (K).

These elements are key to the historic patterns of settlement-making, as seen within the nearby villages of Jamestown and Raithby. A diagrammatic comparison of the illages indicates the various ways that the positioning of the towns relative to the watercourse and allotment gardens, church and main commonage or "village green" establishes a unique sense of place (Figure 21). Common and persistent elements include:

1. The civic "head" of the settlement, which includes a religious structure and an open, green space;
2. A movement spine that establishes the primary connection between the civic "head" and the ordinary houses;
3. Houses directly address the street, and always have associated areas for small-scale agriculture;
4. Houses tend to follow a strong architectural typology, usually of a walled architecture with a double-pitched roof, gable ends and a front stoep, which mediates the threshold between the street and the house.

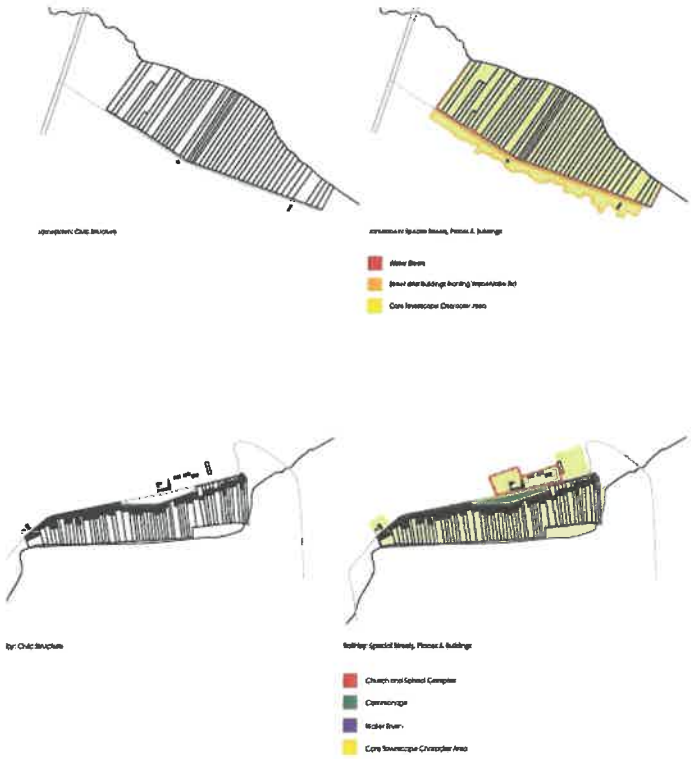


Figure 21: Diagrams showing the civic structure of the nearly villages of Raithby and Jamestown.

The heritage indicators look to promote those urban elements that are seen to be consistent with settlement patterns in the Winelands as a whole.

The Development of a Housing Typology in the Winelands

The winelands have historically had a very strong building typology, created in part, due to the development of a building culture that relied on building traditions brought to the Cape from the VoC colonies in the East, as well as Europe (largely from Germany and Holland) in combination with vernacular traditions and materials such as the matjieshuise built by the Khoekhoen, which were reed-walled, domed buildings on a lattice of timberwork (Malan, 2018: 17).

Natural resources differed from those in Europe and Asia: timber was in short supply at the Cape, and there was little fuel for firing bricks and tiles. Forested areas around the Cape Peninsula were

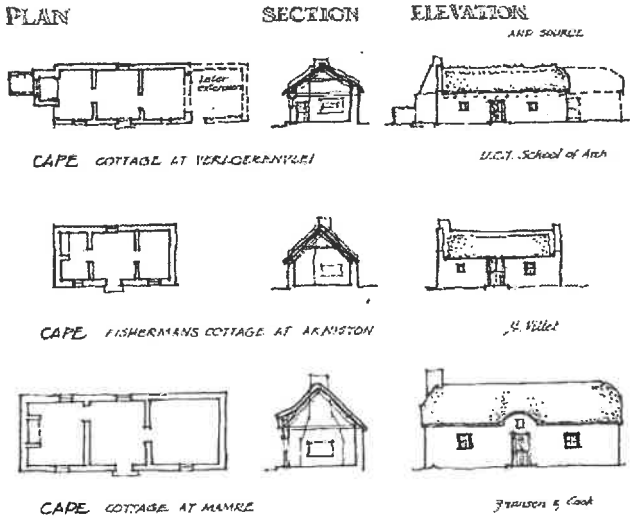


Figure 22: Typical "longhouse" structures, as documented by James Walton (VASSA).

rapidly logged, and the Stellenbosch forests followed suit. It was only those builders with access to Company resources who were able to source good, long timber, hard bricks, etc. (Malan, 2018: 17). When bricks became more easily obtainable, the longhouse became the favoured structure: a narrow rectangular building, often with thatched roof (Malan, 2018: 18).

The hearth and chimney could be attached to a straight end gable. Internal walls, doors and windows were placed where required (Figure 22).

The "longhouse" should be seen as a typology and not an architectural style: it represents a built culture to which people's way of living has adapted, and a highly suburban model of housing would be foreign both culturally and spatially within the context of the site.

It is key to recognise that Lynedoch Eco Village has also introduced a typology. This is an architecture of single dwellings, but using alternative and more sustainable methods of construction, with no structure larger than two stories. There is no repetition in the design: each structure is uniquely designed for its site. Additionally, the Eco Village occupied the former terraced garden area above the old hotel, and so responds to the natural contouring of the site while also forcing densification. The village is densely treed.

It is critical that the architectural concept for the expansion of the Lynedoch hamlet avoid over-scaled private dwellings, gated residential estates, or a suburban model of development – particularly one that involves the repetition of construction of "unit types" across the landscape.

Instead, the existing, unique aspects of the site should be properly understood, and extended across the site (Fig. 23A-J).



Fig 23A: The roads in the village are paved and well-planted.



Fig 23B: Southern elevation of the southern-most barn building



Fig 23C: Northern elevation of the northermost barn building.



Fig 23E: The old hotel, which is a graded heritage site.



Fig 23D: The "farm managers' house".



Fig 23F: The fine interior of the old Gleneagles Hotel.



Fig 23G: The historic stoep, with fine period detailing.

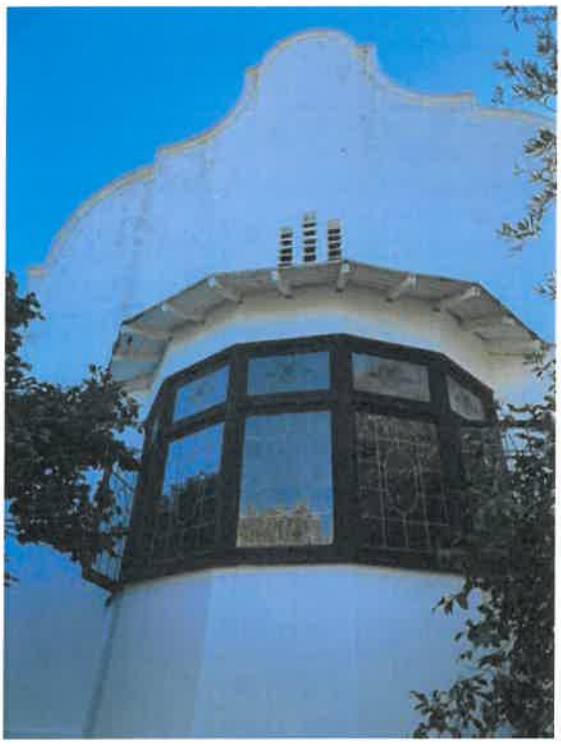


Fig 23H: Detail of a projecting lead-glass bay window.



Fig 23I: Detail along the edge of the stoep.



Fig 23J: The westernmost barn building is more rudimentary than the other two, but characteristic of "layered" agricultural structures.

Existing character-giving elements of the environment surrounding the site.

Figure 20 identifies those areas from which the site is highly visible. These have been documented along their routes (R310 and the Annandale Road) and the visual exposure of the various components of the site have been mapped (Fig. A-R).

CULTURAL LANDSCAPE PATTERNS

The landscape and settlement patterns of the site and its surrounds are physical devices or spatial arrangements which enrich the built environment and ensure the appropriate relationship of component parts to each other. They suggest how the environment may be used and encompass patterns are inherited from the past.

The benefit to identifying and working within these patterns today is to enhance, in a contemporary idiom, the richness and quality of experience suggested by the inherited patterns.

Although the environment of the site has been established to be of a "patchwork" character, it is generally understood that some urban development could occur at this node.

The following positive settlement attributes of the site have been identified:

GATEWAY

The site plays a gateway role when moving towards Stellenbosch. It is one of a set of unfolding "layers" along the R310, being one of the first points where a change in topography (the hill system) can be perceived. This hill system also serves to screen the site, "tucking" it between two localised ridgelines.

The intersection of the R310 with the Annandale Road further reinforces this as a gateway point along a sequential route into Stellenbosch.

LANDMARKS

This gateway role of the site is strongly supported by the location of the old hotel, which with its three gables and tall palm trees, creates a local landmark for the site. This landmark nature has been somewhat diluted by the construction of a more modern building directly in front of, albeit below, the old hotel building.

VISTAS AND VIEWPOINTS

Because the site is located at a traffic intersection – a point of pause along the route into Stellenbosch – the open space that it provides allows for the experience of "vistas", moments within the cultural landscape which clearly directs your view into the surrounding countryside. These views are predominantly towards the Helderberg peaks to the east, and are more perceptible when travelling south than north.

LANDSCAPE PATTERNS

The rolling hill topography of the site is quite "open" and convex. Two distinct sub-valleys cut through the wider fan-shaped valley and have natural vegetation. In addition, a line of indigenous olives runs along most of the upper edge of the property, as well as along the northern edge, where a rocky outcrop provides a denser "clump" of trees.

A secondary line of olives cuts about a third of the way down the slope, marking the upper edge of a localised ridge that is visually exposed, particularly from the east.

To the south, another outcrop and line of olives along the ridge screens the sub-valley when approaching along the R310.

Other than these limited areas, the major screening elements comprise foreground planting both along the railway line and around the Sustainability Institute and farm buildings. Some trees are very mature and have a high and dense canopy that screens the site, particularly when viewed from the R310.

ROUTES

There are limited "desire line" routes bisecting the site, and in many ways the site's lack of connection to the surrounds detracts from the experience of the space. There is a footpath leading from the Sustainability Institute over the hill that is used by school pupils as well as dog walkers.

TERRACING

There is some subtle terracing that has occurred on the site over time, largely following the contours of the hillside. The banks that have been created help to screen structures below, which appear to be "tucked into" the landscape.

THE SITE CHARACTER

From a landscape perspective, the site has been identified as being part of a fine-grained, ordered and patchwork agricultural landscape that is very "open".

In addition, the SMHS identifies the Eco Village as a "good example of integration of mixed income and use. The hamlet is considered a positive contemporary example of development that challenges the tendencies towards gated villages and other residential schemes that reinforce exclusion and separation", often justified on the basis of security.

From a townscape perspective, Lynedoch is very much centred on the old hotel as a landmark, with the palm trees as "framing elements". The well-treed and terraced hotel garden has been subdivided to create the village plots, and so these follow the contours and are largely "tucked into" a manure, treed canopy. The entire hamlet is set against the hilly slopes, which "fan" slightly to enclose the village. The railway station and associated commercial node is very much fragmented from the village itself.

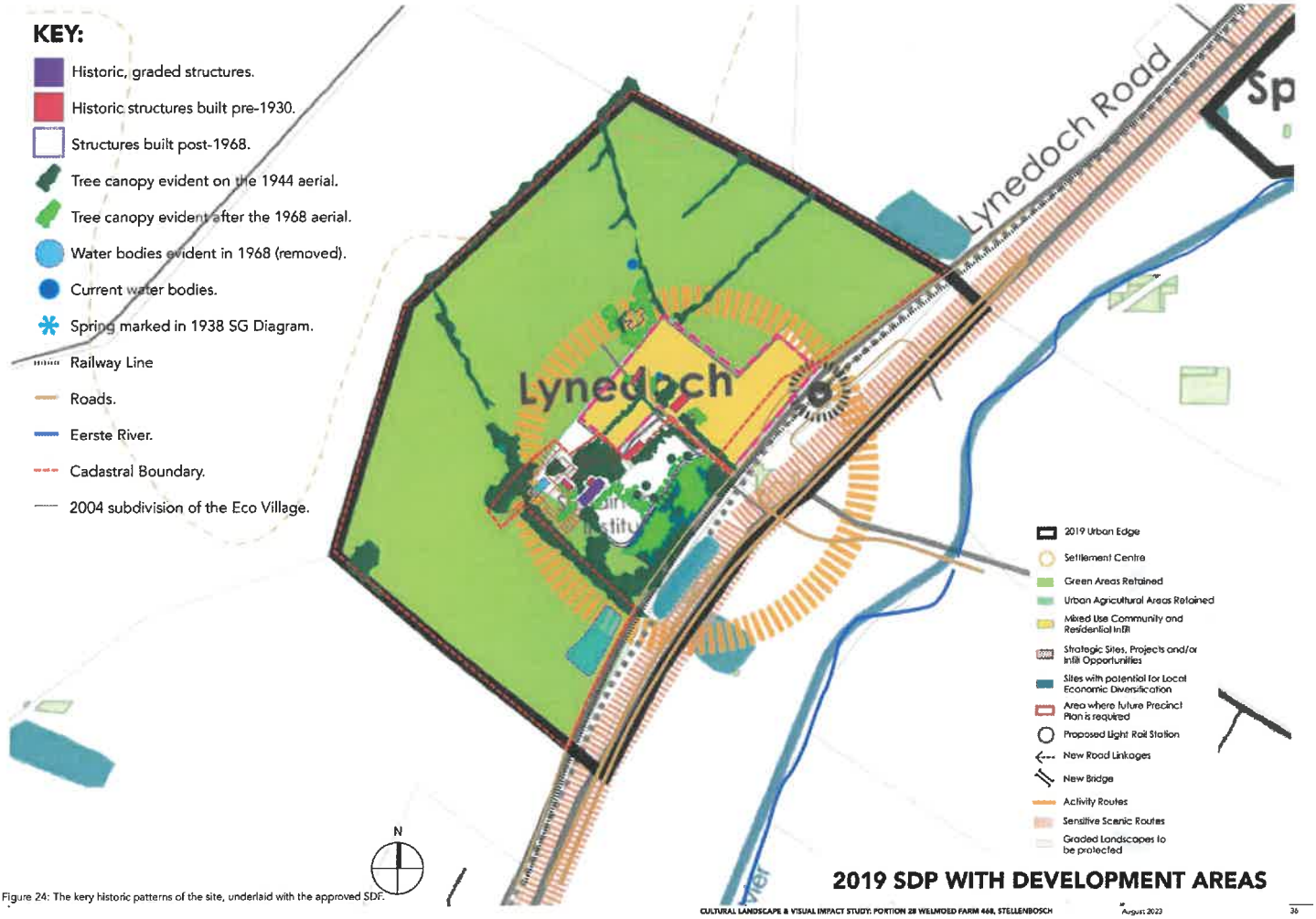


Figure 24: The kery historic patterns of the site, underlaid with the approved SDF.

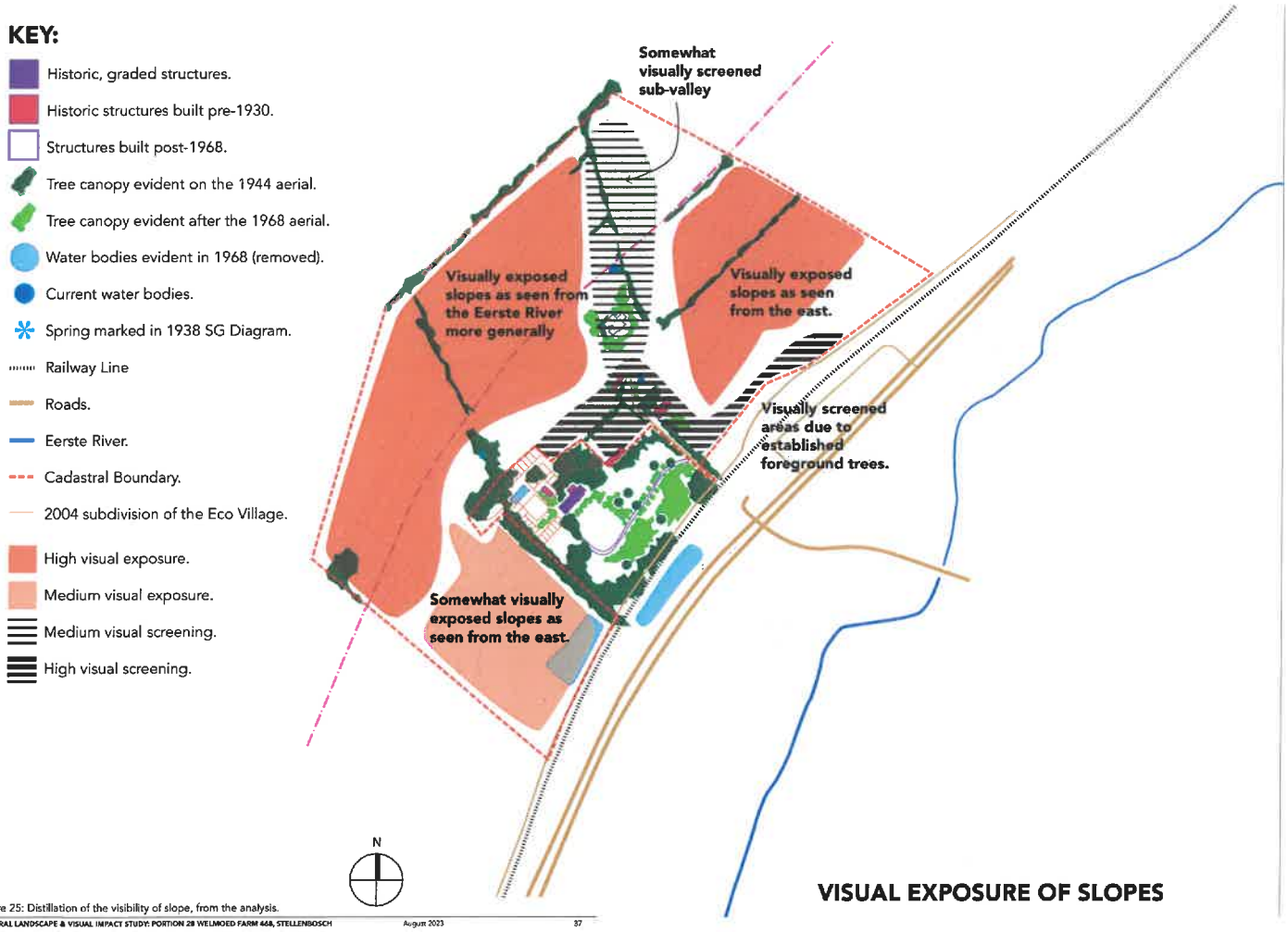


Figure 25: Distillation of the visibility of slope, from the analysis.

CONSIDERATION OF A "NO DEVELOPMENT" OPTION

The subject site is located within the approved urban edge for the area. The Spatial Development Framework also encourages the establishment of further development at Lynedoch as a development comprising the "further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate" (2019: 94 – see Figure 24). A fairly compact footprint for further expansion of this node is indicated.

Therefore, the application for further development of the land parcel in question can be supported in principle. However, this does not mean that development rights should be automatically granted.

The site is of heritage significance and sensitivity. In particular, it is located along the R310 Scenic Route and has over 70% visibility and forms part of a wider landscape of exceptional scenic qualities. The visual impact of proposed developments must be carefully considered (SHMS, 2018), and the slopes making up the site have varying degrees of visual exposure (Figure 25).

HERITAGE INDICTORS AND GUIDELINES FOR THE SITE.

The Cultural Landscape Study and associated Visual Study of the site have revealed a context and site of medium heritage significance but with very high scenic qualities, particularly in providing an agricultural backdrop to other heritage sites within the vicinity.

It follows that, to preserve heritage significance (especially tangible heritage significance associated with physical elements) these fundamental elements must be identified, protected, and enhanced in the course of the future development and densification of the site.

Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node (Figure 26).

1. The landmark nature of the old hotel complex must be enhanced and responded to as a prominent civic node within the wider context.
2. The historic farm barn structures and small "managers house" should be retained and adaptively re-used, ideally for educational purposes.
3. All existing areas of Fynbos and/or natural vegetation must be retained and reinforced on the site.
4. The spring course identified on the c1938 SG Diagram should be explored on site. In addition, the dam along the roadway to the south-east appears in the 1968 aerial photograph, and this area retains a wetland character that should be preserved as an asset of the site.
5. The mature trees on and around the site are higher-order landmark elements within this environment. They help to structure the space and provide some visual screening. Some trees are mature, older than 60 years, and should be retained. A plan for the staggering or replacement of mature planting must be put in place. Existing treelines should be reinforced and extended to screen the development.
6. Additional planning should be introduced on the site to provide additional visual screening and absorption within the foreground environment. The windbreaks in the wider context set up a landscape structure that can be extended into the site. These also create a potential for the extension of a structure for settlement onto the site, that responds to existing landscape elements and patterns.
7. In particular, the southern slopes are visually exposed from the east, but gently sloping and able to be easily connected to the existing village. Planting as visual screening must be used extensively here.
8. The railway station is an important potential civic asset and should be acknowledged as a higher-order element in the proposed development of the site.
9. Street Grid: The street grid should follow the contour and reinterpret the existing pattern of vineyards as much as possible. Although curvilinear streets are generally foreign to the Winelands, they have been used at Lynedoch and are key to the character of that place, where settlement is secondary to the natural, contoured landscape. The street grid should be as efficient and minimal as possible, with only the main routes being paved.
10. New buildings must follow the contour, as the existing buildings within the Lynedoch node currently do.
11. Verges/Pavements: It is preferred that verges and pavements are grassed, hard-packed soil or brick paving, and planted with trees. Brickwork and laterite surfacing should be preferred to tarmac throughout.
12. Boundary Treatments: High and solid walls are not permitted, as well as pre-cast concrete fencing, exposed blockwork, and facebrick walling. Historic boundary elements such as fences and hedges must be preserved and extended as far as possible.
13. Stoeps: Street-facing stoeps are a common feature of the buildings in the area, often with planted gardens in front. New residential development should include these elements.
14. Heights: New buildings must respond to and interpret the character-giving aspects of the site. In this environment, new buildings should predominantly be no more than double storey.
15. Materials, Colour and Architectural Detail: Building materials should be compatible with traditional materials in terms of scale, colour and texture.

Historical architectural features that copy an earlier style (or introduce a foreign style) should be avoided. Rather, the underpinning principle should be that new buildings must be sympathetic to the architectural character of the area but should also be of their own time. New buildings should be of a walled architectural type. New structures should be painted a muted colour and be rectilinear in form. Corrugated roofs should be darker colours.

16. Scenic Route Restrictions within 500m of the roadway: The foreground views within the scenic route corridor is considered the most significant, and therefore all scenic routes should have a 500m buffer on either side of the road where specific development guidelines apply. The principle is that nothing will be permitted that detracts from the existing scenic value of the Landscape Unit that is being traversed by the Scenic Route. Based on the significance of the Scenic Route (its grade) and the significant character of the surrounding landscape, the following guidelines should be considered.

Foreground guidelines:

a. Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.

b. New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road-related interventions affecting its sense of fit in the landscape must be avoided.

c. Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as they detract from the rural character of the Winelands.

d. Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas.

e. Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.

f. The natural character of Fynbos vegetation, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with over-scaled entrance structures.

g. Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before they can be considered (from the list of deviated land-use documented for the Stellenbosch winelands, see CMP document):

- Farm stalls/restaurants
- Nurseries/mixed use/garden centres/timber yards
- Greenhouses, agricultural netting, chicken broilers/Strawberry fields
- Subdivisions, gated communities, shopping centres, business parks
- Large scale industrial structures
- Open Air Markets

It follows that the above forms of development should be avoided within the 500m buffer from the scenic route.

Background guidelines:

h. Avoid development on rocky outcrops or ridgelines, because of their high visibility and the visual sensitivity of the skyline.

i. Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines and hillcrests. Retain the integrity of the distinctive and predominantly agricultural landscape character.

j. Avoid the construction of over-scaled private dwellings and other structures in locations of high visual significance, and on visually-exposed promontories, ridges and ridgelines. Preferred locations are sites that have already been settled (at the Lynedoch node), or sites "tucked into" the landscape.

k. Respect traditional settlement patterns. This includes the backdrop of the natural landscape against which settlement is sites, as well as its spatial structure.

l. Promote urban densification within the historic node to protect the rural landscape as the main communal asset.

m. New interventions within settlements must respect the layout, scale, massing, hierarchy, alignments,

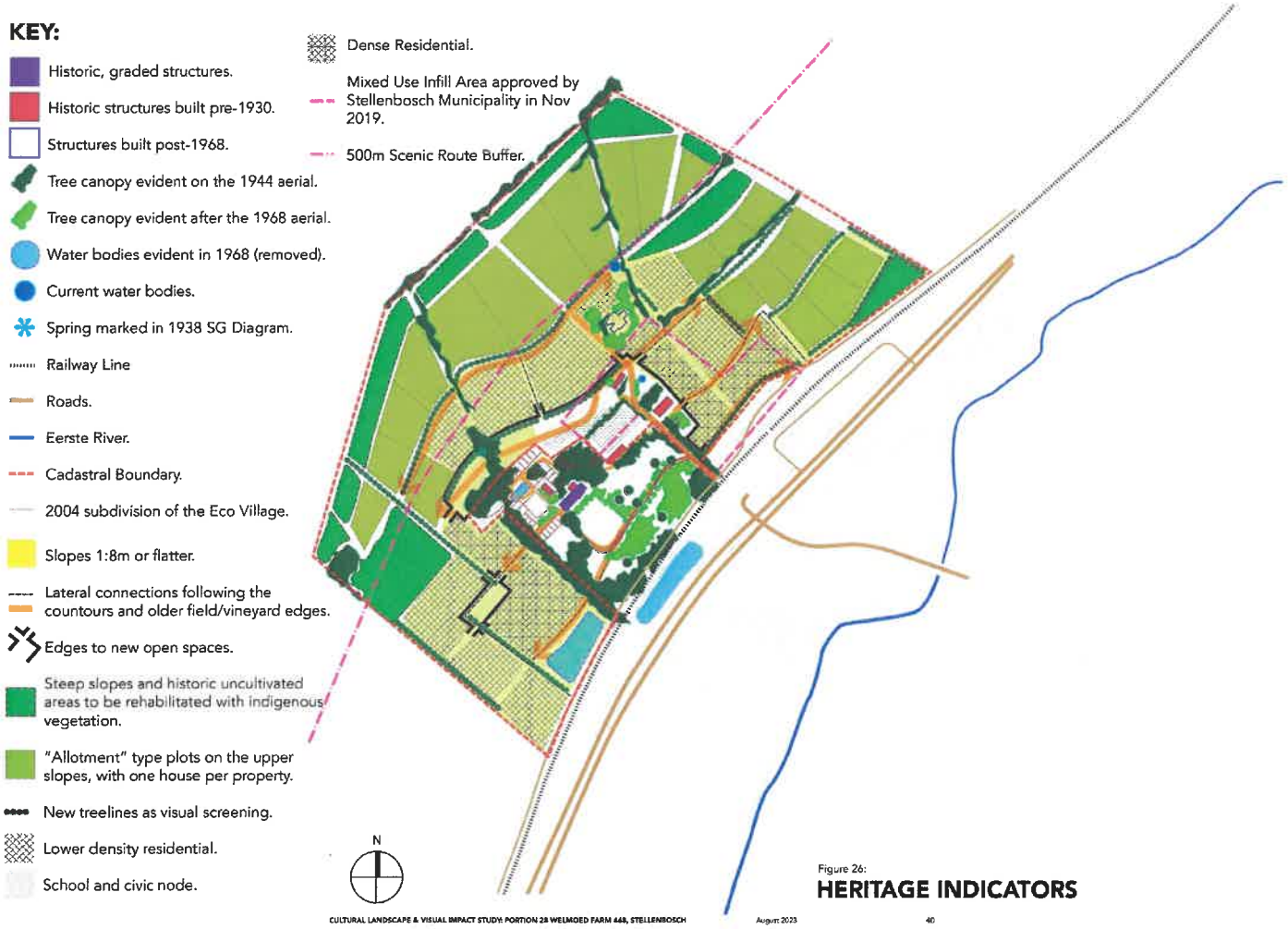


Figure 26:
HERITAGE INDICATORS

access, landscaping and setting of the existing settlement pattern.

n. Prevent the gentrification of rural settlements through "lifestyle rural estates". These uneconomic plots fundamentally erode the agricultural character of the landscape. Rather, maintain larger unified areas of farming to protect larger landscape continuums that protect a unified scenic character.

o. The development of security estates and gated communities must be prevented. Encourage development that follows the pattern of, and builds on the example of, the Lynedoch eco-village. Here, a model for integrated communities with different income levels has been successfully applied and tested.


Inappropriate development: overscaled mansions.


Inappropriate development: gated villages.


Inappropriate development: large houses sited on ridges.

ASSESSMENT OF VISUAL-CULTURAL LANDSCAPE IMPACT ASSESSMENT OF THE PROPOSED DEVELOPMENT.

THE DEVELOPMENT PROPOSAL.

A very conceptual plan has been provided indicating a potential development.

There is currently insufficient information provided to make a proper assessment, but the heritage-based design indicators outlined above should be used to underpin a proposed development layout and design.

ANTICIPATED VISUAL-CULTURAL IMPACTS OF THE PROPOSED DEVELOPMENT.

The site has consistently been included within the urban edge, in both heritage surveys and planning documentation.

The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley.

RECOMMENDATIONS

It is recommended that the heritage-based design indicators be integrated into the design proposal as far as possible, to achieve the "education focused... compact, pedestrian oriented, child friendly community" that was envisioned for this site in the 2019 Stellenbosch Municipality Spatial Development Framework.

Claire Abrahamse

August 2023.

REFERENCES

Primary Sources:

Cape Archives,

Leonard Guelke's 1987 map of "The Southwestern Cape Colony, 1657 - 1750, Freehold Grants", Department of Geography, University of Waterloo.

Topocadastral imagery from the National Geo-Spatial Information Department, Mowbray.

Surveyor General's 1900 Divisional Map of Stellenbosch, National Geo- Spatial Information Department, Mowbray.

Surveyor General's map of The South Western Districts: Sheets 1 & 13, Cape and Malmesbury (1880 - 1900), National Geo-Spatial Information Department, Mowbray.

1938, 1953, 1960, 1983, 2000 and 2016 aerial photography for the area, National Geo-Spatial Information Department, Mowbray.

Cape Farm Mapper.

Secondary Sources:

GAPP Architects and Urban Designers, Transport Futures and Built Environment Partnership. Stellenbosch Municipality Spatial Development Framework. Approved by Council on the 11th November 2011.

Guelke, L.T. "The Early European Settlement of South Africa". Unpublished Doctoral Dissertation, University of Toronto, 1974.

Malan, A. 2018. Stellenbosch Rural Survey and Inventory, Phase 2a Palaeontology and Archaeology Framework.

Oberholzer, B. April 2005. "Provincial Government of the Western Cape: Department of Environmental Affairs and Development Planning. Guideline for Involving Visual and Aesthetic Specialists in EIA Processes". Edition 1, Draft for Comment. https://www.westerncape.gov.za/text/2005/4/deadp_visual_guideline_draft_15april05.pdf.

Richardson, Deidré. 2001. Historic Sites of South Africa. Cape Town: Struik Publishers. pp 138.

Robson, L.G. "The Royal Engineers and Settlement Planning in the Cape Colony 1806 – 1872: Approach, Methodology, and Impact. Submitted in partial fulfilment of the PhD in Town and Regional Planning, University of Pretoria, 2011.

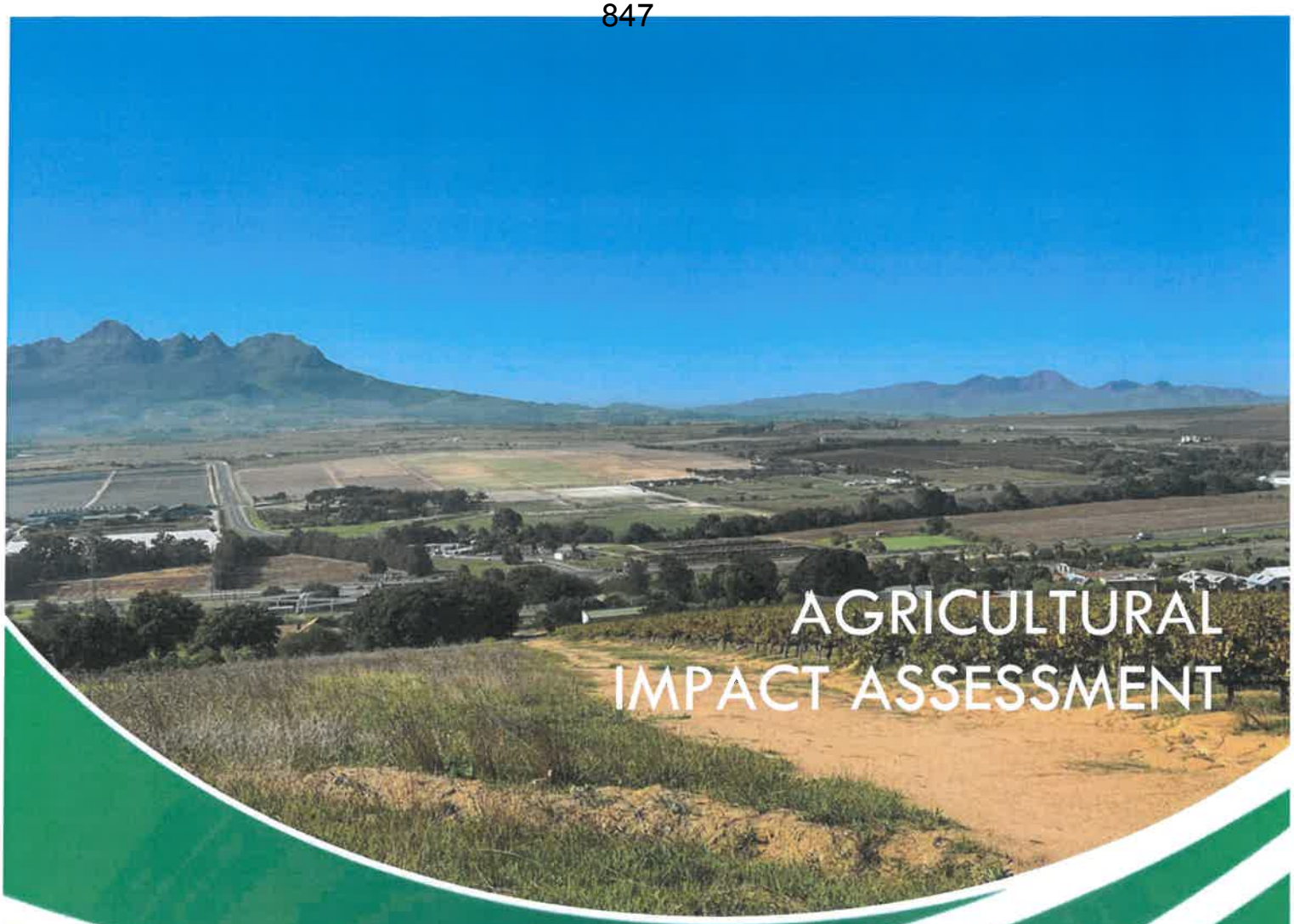
Todeschini, F. and Jansen, L. Cape Winelands Professional Practices in Association. Phase 2a Report: Preliminary Draft Heritage Inventory of Large-Scale Landscape Areas in the Rural Domain of the Stellenbosch Municipality informing Proposed Heritage Areas, REVISED, 26th January 2017.

Todeschini, F. and Jansen, L. Cape Winelands Professional Practices in Association. Phase 3 and 4 Map, Conservation Management Plan. http://stellenboschheritage.co.za/smhs/map/#15/-33.9804/18.7795. Accessed June, July and August 2023.

Van der Bijl, J. "Die Grondeienaars van Stellenbosch: Eienaars van erwe op die Dorp, 1693-ca.1860, en Eienaars van Plase in the Distrik, 1680 - ca. 1860". Unpublished study, 2000.

Vos. H. "Spier Farm: Survey of its Early History". Unpublished report complied for the owners of Spier, June 1998.

ANNEXURE Q: AGRICULTURAL POTENTIAL ASSESSMENT



AGRICULTURAL IMPACT ASSESSMENT

EXTENTION OF THE LYNEDOCH URBAN NODE ON PORTION 28 OF FARM 468 STELLENBOSCH REGIONAL DIVISION

Prepared for:

UNiQON
Developers (Pty) Ltd

FINAL: 5 June 2023

AGRI informatics
NATURAL RESOURCE SPECIALISTS

Report prepared by:

Francois Knight M.Sc.Agric (Soil Science)
Soil Scientist / Land Capability Specialist
for AGRI INFORMATICS DEVELOPMENT TRUST
francois@agriinformatics.co.za
www.agriinformatics.co.za

Experience and Declaration of Independence

This report was compiled by François H Knight, principal consultant at Agri Informatics. Mr. Knight holds a B.Sc.Agric.Hons degree in Soil Science from the Free State University, a post graduate diploma in Terrain Evaluation from Potchefstroom University and a M.Sc.Agric.*cum laude* degree in Soil Science from the University of Stellenbosch. He has more than 35 years' experience in natural agricultural resource assessments, which stems from his work as a senior researcher at the Department of Agriculture and, for the past 21 years, as an independent consultant.

Mr. Knight has no business, financial, personal or other interests in the proposed development, other than fair remuneration for work performed in connection with this study and there are no circumstances that may compromise the objectivity of his work.

Francois Knight M.Sc.Agric. (Soil Science)

5 June 2023
Date

Indemnity
The information contained in this report and the digital data provided, were compiled using the best available information, knowledge, technology and experience. Great effort was made to ensure the highest levels of accuracy possible. However, Agri Informatics Development Trust or any individual or any other company who have contributed towards the compilation of this information cannot be held responsible for any loss or damage incurred as a direct or indirect result of the use thereof. All recommendations were made in good will, but the risks associated with the implementation thereof, resides with the implementor.

Rights and permissions
All rights reserved. The text and data in this document may only be reproduced as long as the source is cited. Reproductions for commercial purposes are prohibited. All intellectual capital presented by the authors remains their property.

Contents

1 Introduction 1
2 Terms of Reference 3
3 The Study Area 3
4 Site Sensitivity Verification 4
4.1 Protocol 4
4.2 Findings 5
5 Agricultural Agro-Ecosystem Assessment 6
5.1 Methodology 6
5.1.1 Desktop Assessment 6
5.1.2 Site Visit 8
5.2 Findings 8
5.2.1 Land Capability 8
5.2.2 Soils and Geology 8
5.3 Climate 12
5.3.1 Köppen-Geiger 12
5.3.2 Climate parameters 13
5.4 Topography and surface hydrology 15
5.5 Irrigation water 16
5.6 Recent agricultural activity 17
6 Agricultural Potential 24
6.1 Irrigated cultivation 24
6.2 Dry land cultivation 24
6.3 Wine grape production with supplementary irrigation 24
6.4 Livestock farming 25
6.5 Resulting agricultural potential 26
7 Impact on Agriculture 26
8 Specialist Statement 27
9 References 27
APPENDIX 28
Land Type memoirs 28
Soil Profile Photos 28
Conceptual Development Plan (26 Apr 2023) 28

1 Introduction

Lynedoch – also known as Lynedoch Eco Village – is a settlement, situated on Baden Powell Drive (R310) at the intersection with Annandale Road, in the Stellenbosch Municipal area. It is home to the Sustainability Institute, which offers tertiary training programmes in partnership with the University of Stellenbosch and other organisations.

The approved Stellenbosch Municipality Spatial Development Framework (MSDF, 2019) includes Portion 28 of Farm 468 in the urban edge of the Lynedoch precinct and proposes "mixed use and residential infill" on a portion thereof, while the remainder is indicated as "green areas retained" (Figure 1). The MSDF also mentions *"Further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate."*

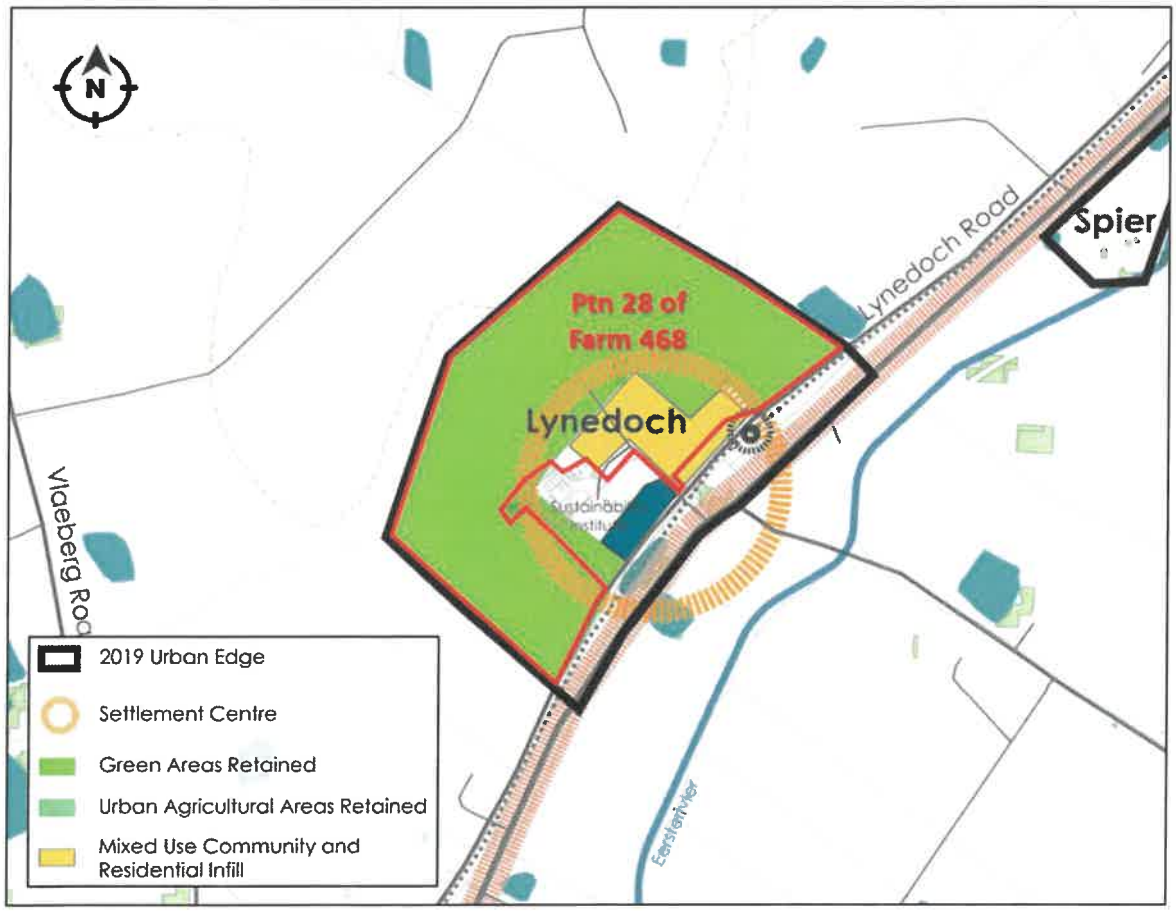


Figure 1: Extract from the Stellenbosch MSDF (2019), with the subject property indicated by the red line.

Uniqon Developers (Pty) Ltd is the proponent for a residential and multi-use development on Portion 28 of Farm 468, currently zoned as *Agriculture*.

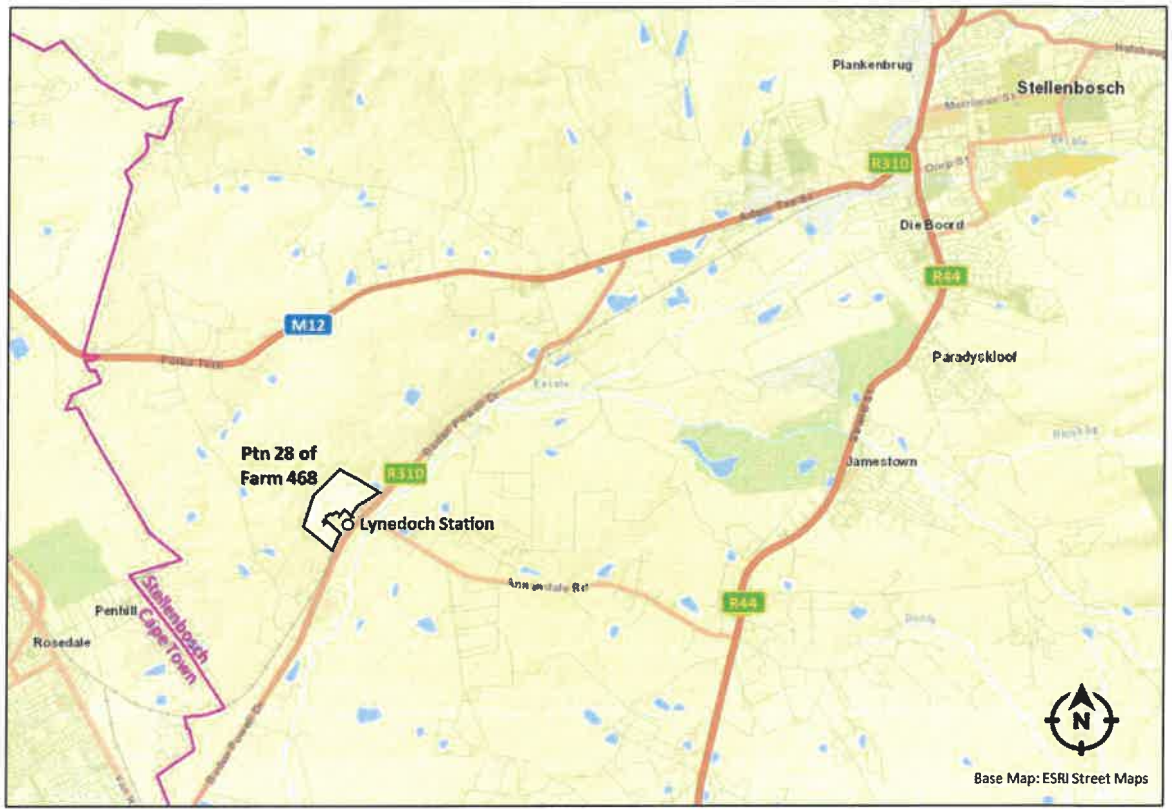


Figure 2: The study area is situated west of the R310, at the intersection with Annandale Road, in the Stellenbosch Municipal area.

An application in terms of the Subdivision of Agricultural Land Act (SALA – Act 70 of 1970) are being prepared for the inclusion of Portion 28 in the area of jurisdiction of Stellenbosch Municipality for urban development purposes. The purpose of this study is to inform the applicant and the statutory authorities about the agricultural potential of the said property and the possible impact of the proposed development on the agricultural resource base, food security and job opportunities of the Western Cape and the RSA.

Further to the SALA application the medium term development plan for the property, will include the transformation of agricultural land and may also trigger several other listed activities under NEMA (National Environmental Management Act EIA Regulations 2014 - as amended). A Scoping and Environmental Impact Assessment will therefore be required to apply for Environmental Authorisation (EA) of such proposed development at a subsequent stage. The NEMA guidelines prescribe a Site Sensitivity Verification, followed by an Agricultural Agro-Ecosystems Specialist Assessment where applicable, as part of the Scoping and EIA procedure.

Therefore, in anticipation of these future possible applications and to assist the deciding and commenting authorities in their evaluation of the applications, a Site Sensitivity Verification and Agricultural Agro-Ecosystems Specialist Assessment was requested by the applicant to inform and support their submission.

2 Terms of Reference

Agri Informatics was requested by Mr. Dupré Lombard of Virdus Works, lead consultant for the authorisation process for the proposed rezoning and development on the identified land, to conduct an Agricultural Agro-Ecosystems Specialist Assessment of Portion 28 of Farm 468, Stellenbosch RD. The assessment had to include:

- Site Sensitivity Verification
- Description of the Agricultural Land Use
- Soil Survey at a reconnaissance scale
- Topographic Assessment
- Climatological Assessment
- Assessment of Water Resources
- Description of the Grazing Capacity
- Agricultural Potential Assessment
- Assessment of the potential Impact of the proposed development
- Presentation of findings in relevant Report format

The findings and conclusions presented in this report are predominantly based on (i) own observations and surveys and (ii) independent third party data and information (e.g. climate data). Where information from the client, land owner or related parties are used, it will be clearly referenced.

3 The Study Area

The study area is situated ±8 km southwest of Stellenbosch in the Western Cape (Figure 2) and consists of a single farm portion, spanning an area of ±45.41 ha. The property detail is listed in Table 1.

Table 1: Cadastral units (properties) affected by the proposed development.

ID	Portion Nr	Farm Nr	Farm Name	District	Area* (ha)	GIS Area (ha)
1	28	468	Welmoed Estate	Stellenbosch RD	45.41	45.41
Total GIS area of cadastral units						**45.41**
* Areas as indicated by the Surveyor General Farm Portion data						

4 Site Sensitivity Verification

4.1 Protocol

This study needs to inform the future environmental authorisation process in terms of the NEMA EIA Regulations of 2014 - as amended, to obtain approval for the proposed development activities on the farm.

The procedure for the study is formally guided by the *Protocol for the Specialist Assessment and minimum report content requirements for Environmental Impacts on Agricultural Resources*, as published in Government Notice No 320 (March 2020). This Protocol makes use of the web-based Environmental Screening Tool of the Department of Forestry, Fisheries and Environment (DFFE), which identifies the general agricultural sensitivity of the study area and then prescribes either (i) an Agricultural Agro-Ecosystem Specialist Assessment (for areas with High or Very High sensitivity) or (ii) an Agricultural Compliance Statement for areas with Medium or Low sensitivity.

The first prescribed step is to conduct a **Site Sensitivity Verification** through the use of:
(a) a desk top analysis, using satellite imagery;
(b) a preliminary on-site inspection; and
(c) any other available and relevant information.
The aim of the site sensitivity verification is to confirm or amend the sensitivity classification of the site as indicated by the Screening Tool and thus determine the protocol for the rest of the study.



Figure 3: Agricultural Sensitivity as indicated by the Screening Tool of DFFE.

4.2 Findings

The Screening Tool of DFFE indicates most parts of the property as Very High or High agricultural sensitivity with only smaller parts as Medium or Low agricultural sensitivity (Figure 3). The areas mapped as Very High and High sensitivity corresponds to areas indicated by the Land Capability map (DAFF, 2016) as Moderate to Moderate-High land capability or areas mapped as irrigated wine grapes or dryland planted pastures (DAFF, Crop Census 2013, 2017/18).



Figure 4: Recent GoogleEarth image indicating vineyards, fallow land and other infrastructure of Portion 28 of Farm 468.

At the time of the site visit (25 April 2023) the only agricultural activity on the property was dryland (rainfed) wine grape blocks with a total area of 28.9 ha, managed under contract by a neighbouring farmer. While two houses on the farm are occupied, the other farm infrastructure (mainly sheds) were unused while two cement dams were empty, without any sign of recent irrigation activity. The farm has some irrigation infrastructure in the form of main lines with water hydrants for moveable sprinkler systems. An assessment of historic aerial imagery confirmed that supplementary irrigation was applied to some vineyards. The extent and irrigation frequency is unkown, but the only source of irrigation water is a borehole

with an unconfirmed supply. No record of water use registration could be obtained. As the supply is expected to be limited, only supplementary irrigation of selected blocks is presumed.



Aerial imagery indicating overhead irrigation of sections of vineyard blocks (LEFT: Nov '21 & RIGHT: Dec '22)

Most of the current vineyards were planted before 2005, as indicated by aerial imagery, while at least one block were planted in 1987. The current production footprint is 2.6 ha smaller than the footprint of circa 2008 as some blocks have been uprooted, but not replanted.

Given the current and historic cultivation of wine grapes and the fact that some supplementary irrigation did take place, the site sensitivity has to be regarded as High and thus an Agricultural Agro-Ecosystems Specialist Assessment is prescribed to inform any future environmental or other authorisation for activities that will transform the land from agriculture to another land use.

5 Agricultural Agro-Ecosystem Assessment

5.1 Methodology

A desktop study was augmented by a site visit and a reconnaissance scale soil survey, to compile an agricultural potential assessment of the farm.

5.1.1 Desktop Assessment

Land Capability

The term "land capability" is often used to refer to the suitability of land for agricultural activities. Various independent but similar Land Capability classification systems have been developed or used internationally to classify land. Most systems put strong emphasis on soil properties, but other factors such as climate and topography can also play a role. In an attempt to provide more detailed input to the Preservation and Development of Agricultural Land Bill (PDALB), the former National Department of Agriculture, Forestry and Fisheries (DAFF), expanded the earlier 8-class Land Capability classification of the RSA, to a 15-class Land Capability Map, based on national datasets on Soil, Climate and Terrain capability. The

dataset was subsequently incorporated in the national web-based Environmental Screening Tool which re-classified and interpreted the Land Capability Map as follows:

Table 2: Land Capability interpretation as used in the Environmental Screening Tool.

Land Capability		Associated Land Use Types
Value	Class	
01	Very low	Natural veld with low grazing capacity; marginal dryland cultivated areas
02	Very low	
03	Low-Very low	
04	Low-Very low	
05	Low	
06	Low-Moderate	Some extensive dryland cultivated areas; natural veld with high grazing capacity
07	Low-Moderate	
08	Moderate	All productive cultivated areas including sugarcane; high value agricultural areas with a priority rating C or D
09	Moderate-High	
10	Moderate-High	
11	High	Irrigation, horticulture/viticulture, shade net; high value agricultural areas with priority rating A or B
12	High-Very high	
13	High-Very high	
14	Very high	
15	Very high	

Soils

Soil information was extracted from the South African Land Type Dataset, as obtained from the Institute for Soil Climate and Water (ISCW) of the Agricultural Research Council (ARC), augmented by *in situ* observations made during the site visit and soil survey.

Climate

Climate information was abstracted from the South African Atlas of Agrohydrology and -Climatology (Schulze & Maharaj, 1997), Agromet data (ARC ISCW) and NASA Power data.

Topography

The topography of the study area was derived and analysed, making use of the elevation survey provided by the client. An elevation model was constructed at a grid size of 5 m. This DEM was used to conduct a slope gradient analysis and assessment of the surface hydrology.

Irrigation Water

The availability of irrigation water was based on the existing lawful water use volumes as described in documentation issued by Department of Water and Sanitation (DWS) or the Wynland Water User's Association.

Agricultural Land Use

Current and earlier farming activities was noted during the site visit and from satellite image analysis to determine the extent and history of cultivation and other agricultural land use activity.

Agricultural Potential

Agricultural potential is firstly the combined result of the quality of the natural resources, soil, climate and water – as discussed above – whilst some degree of sustainability is also incorporated with respect to both environmental and financial sustainability.

Medium or high agricultural potential therefore implies an above average possibility to conduct agricultural activities that will be sustainable and financially viable under normal market conditions.

Site Sensitivity

Agro-ecosystem sensitivity is related to the intensity of current or potential farming activities, which in turn, is related to the *agricultural potential*.

5.1.2 Site Visit

A site visit was conducted on 5 April 2023 and followed by a soil survey on 25 April 2023 to support and augment the findings of the desktop assessment.

5.2 Findings

5.2.1 Land Capability

The Land Capability dataset (Figure 5) indicates land capability classes between 5 (low) to 10 (moderate-high) for the farm, with the lower values on the lower foot slopes or crest areas.

The soil survey and discussions on irrigation water availability in the following paragraphs will further confirm or dispute the capability of the land as suggested by this data.

5.2.2 Soils and Geology

The geology of the study area is shown in Figure 6, below. It consists of mainly coarse grained porphyritic granite of the Kuilsriver-Helderberg Pluton of the Malmesbury Group on the upper slopes and Quaternary Alluvium on the lower slopes.

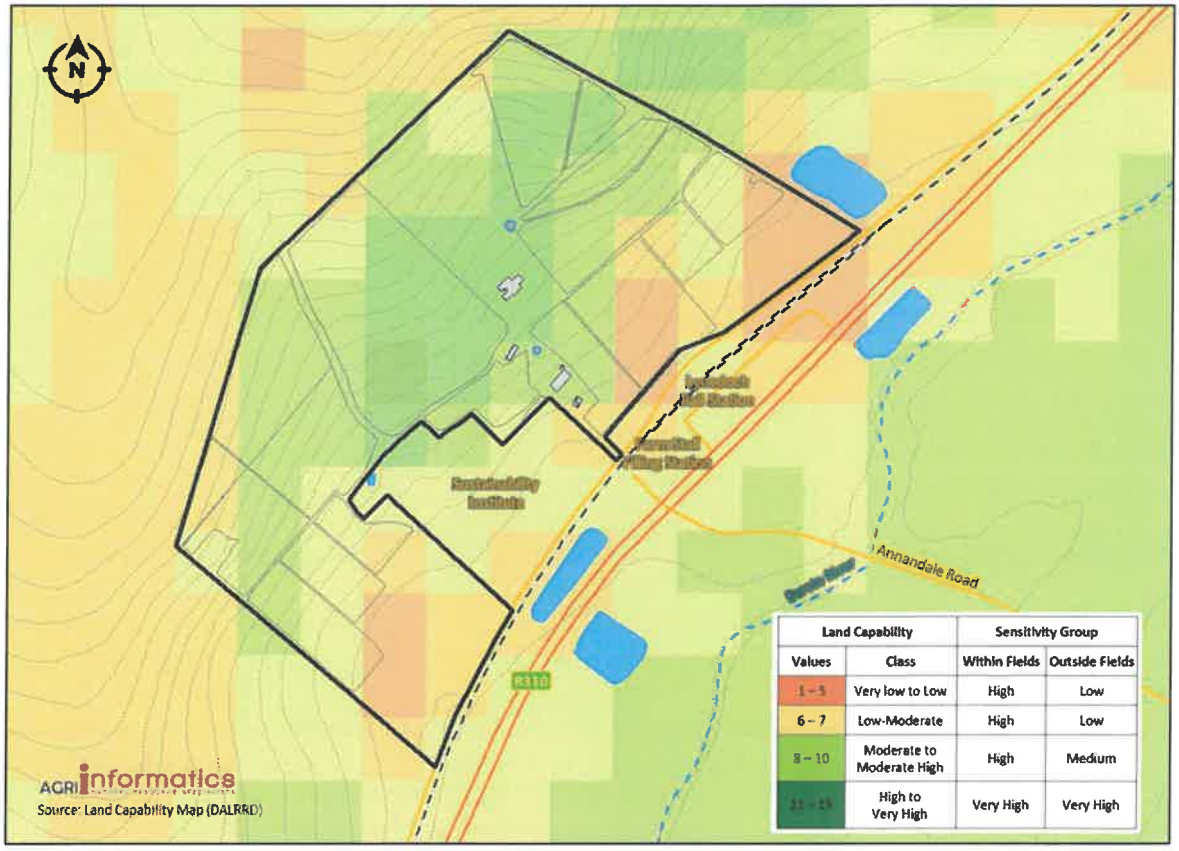


Figure 5: Land capability map of Portion 28 of Farm 468 (DALRRD).

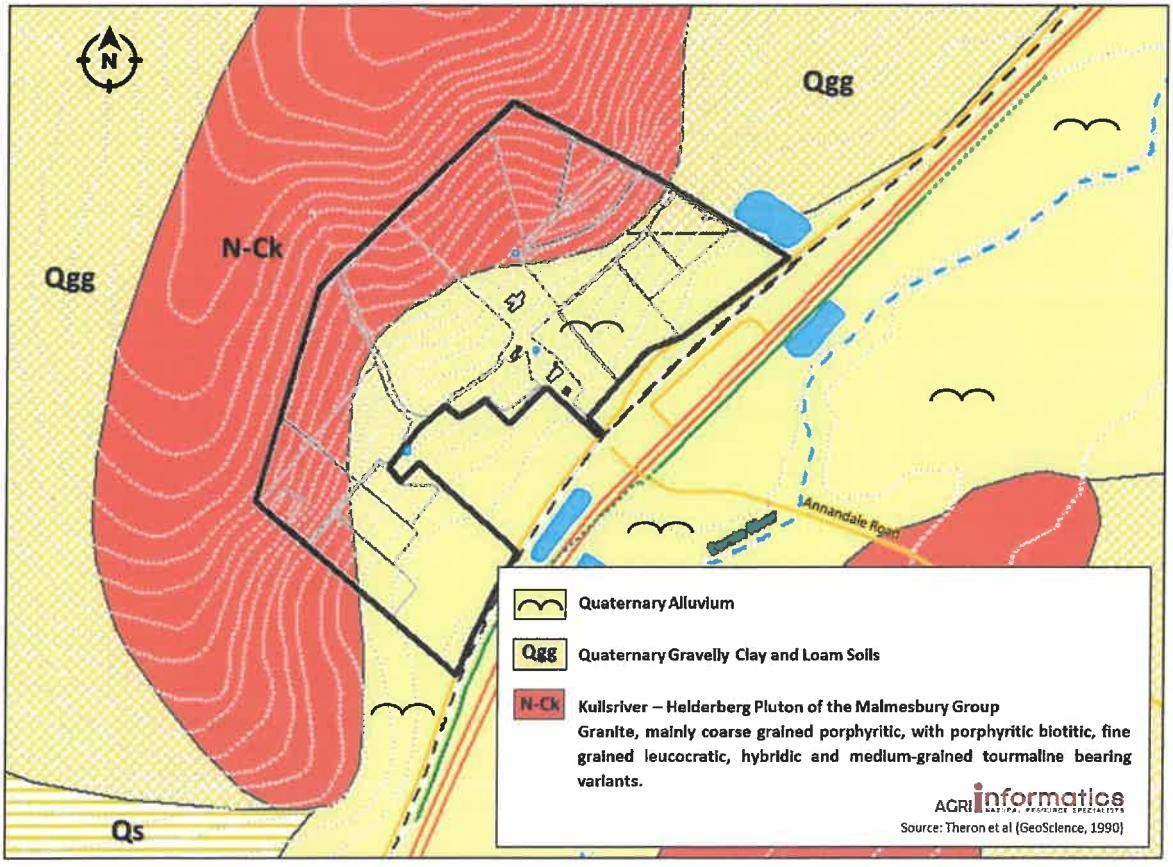


Figure 6: Geology of the study area (Theron et al 1990 - GeoScience).

The Land Type map (Figure 7) indicates correlation between Land Type Ac24 with the granite and Ca27 and Ca28 with the alluvial material. The dominant soil types on the mid slopes of Land Type Ac24 are moderately deep to deep soils of the Hutton and Clovelly soil forms (50%) and shallow rocky soils on 35% of the Land Type. Soils of the Kroonstad, Wasbank and Longlands soil forms are dominant on the foot slopes of Land Types Ca27 and Ca28.

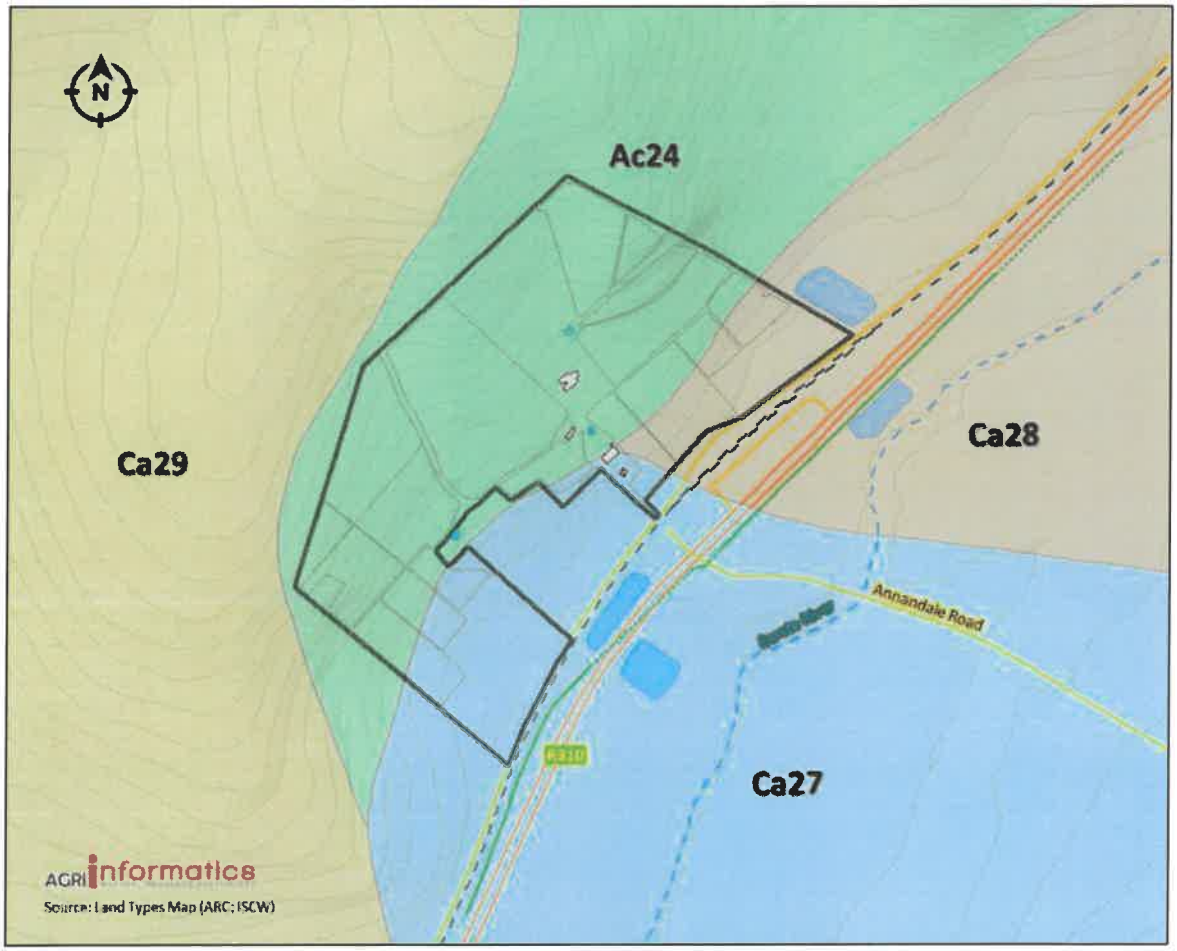


Figure 7: Land Types of the study area (ARC: ISCW).

A reconnaissance scale soil survey was conducted as part of this study. A total of 21 freshly prepared profile pits, excavated by a TLB was classified. The vineyard blocks limited access to some parts of the property, while steep slopes also prevented the distribution of profile pits on an ideal grid spacing. However, the variation in soil properties was mostly along the slope direction and it is believed that the different soil properties were sufficiently observed and captured to compile an adequate presentation of the soil types for the purpose of this study. Figure 8 below indicates the profile pit positions and soil forms as mapped during the survey.

The soil information on depth, clay content, porosity, permeability, water retention capacity and general morphological characteristics were interpreted to derive an indication of the soil potential for the production of crops under dryland (rainfed) or irrigated conditions. The soil potential of the various soil types further differs according to crop types (i.e. annual or perennial crops) and therefore three maps (Figure 9) were compiled to depict the soil

potential for (i) irrigated perennial crops, including wine grapes, (ii) dryland wine grapes and (iii) dryland perennial crops.

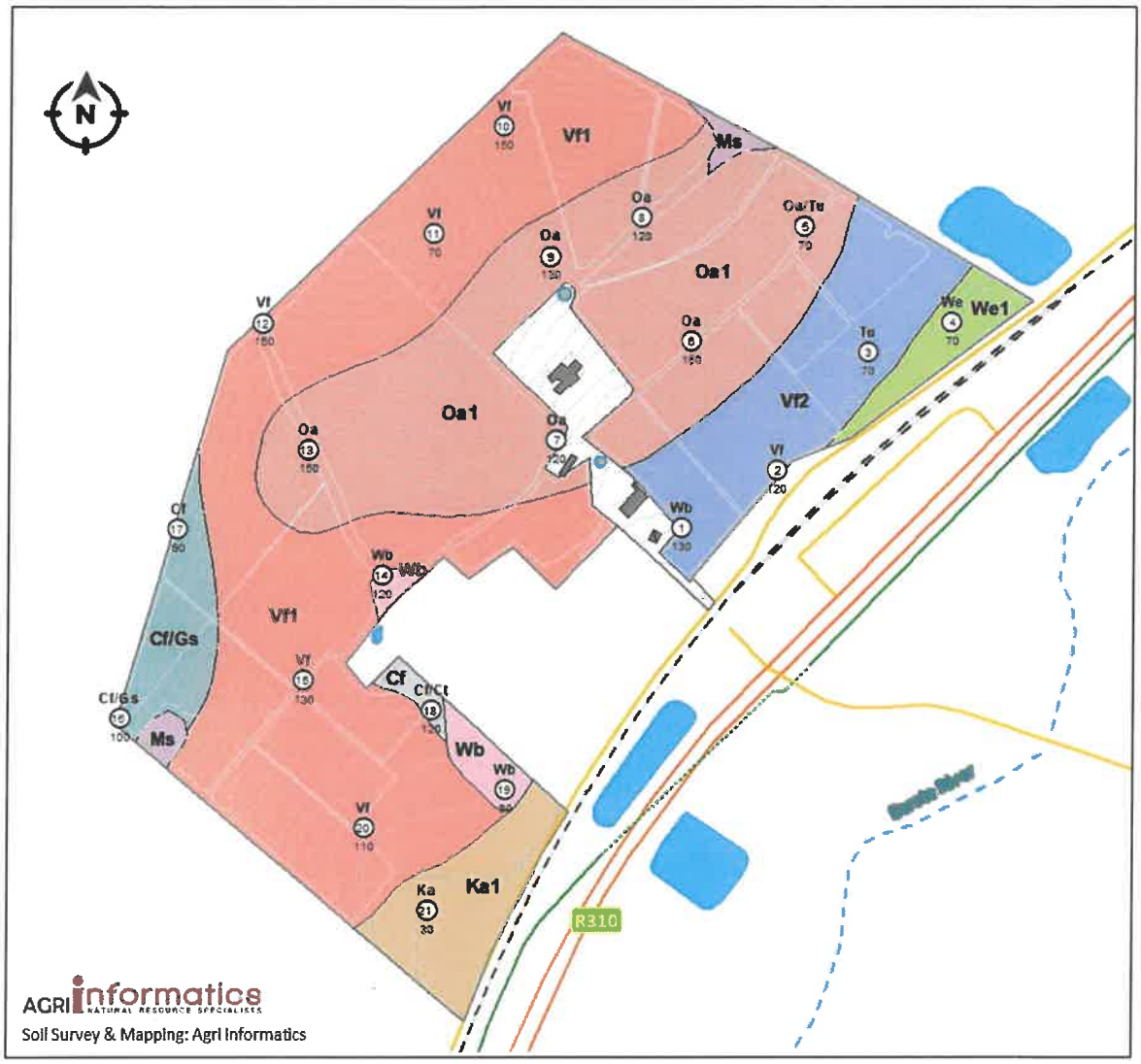


Figure 8: Soil profiles and map units as classified during the soil survey.

A fourth category, namely annual dryland crops (i.e. winter cereals) is not regarded as a viable option, given the steep slopes of the terrain (see paragraph 5.4), while the terrain will also limit the production of annual irrigated crops (e.g. vegetables).

The seasonality of the rainfall - ±80% during the winter months - and high summer evaporation of the study area, has a severe limitation on the production of summer crops (annual or perennial) without full irrigation. The water requirement of wine grapes is lower than most other perennial crops and soils with high water retention capacity are capable of storing sufficient water to sustain wine grape production, but at reduced yield levels.

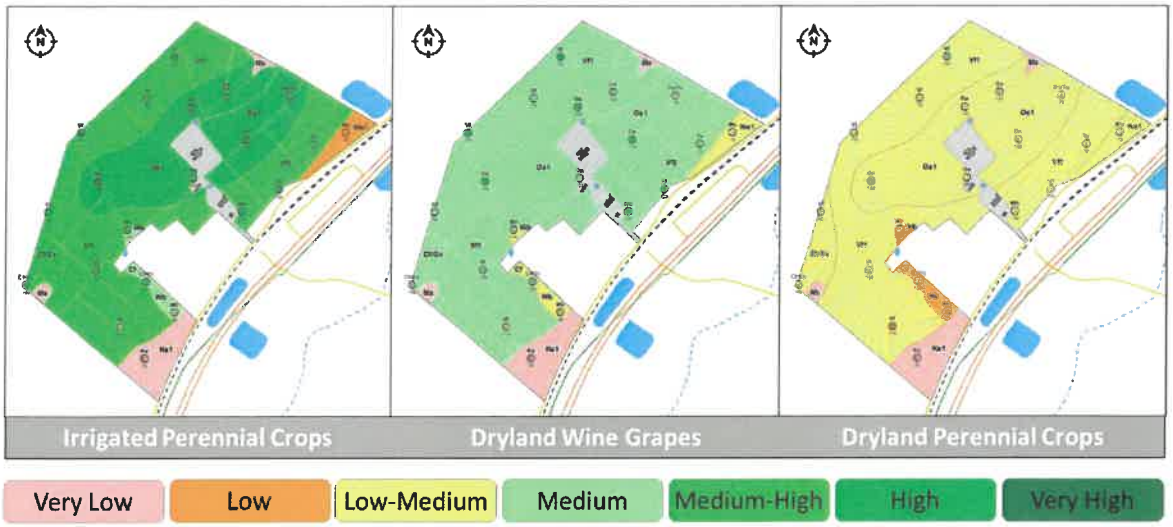


Figure 9: Soil potential for perennial crops and wine grapes under irrigation or dryland (rainfed) conditions.

5.3 Climate

5.3.1 Köppen-Geiger

The study area has a Köppen-Geiger climate classification of Csb – a temperate, dry warm summer Mediterranean climate. The average temperature of the coldest month is above 0°C, all months have an average temperature below 22°C and at least four months have an average temperature above 10°C. This region receives at least three times as much precipitation in the wettest month of winter as in the driest month of summer and the driest summer month receives less than 30 mm of rain.

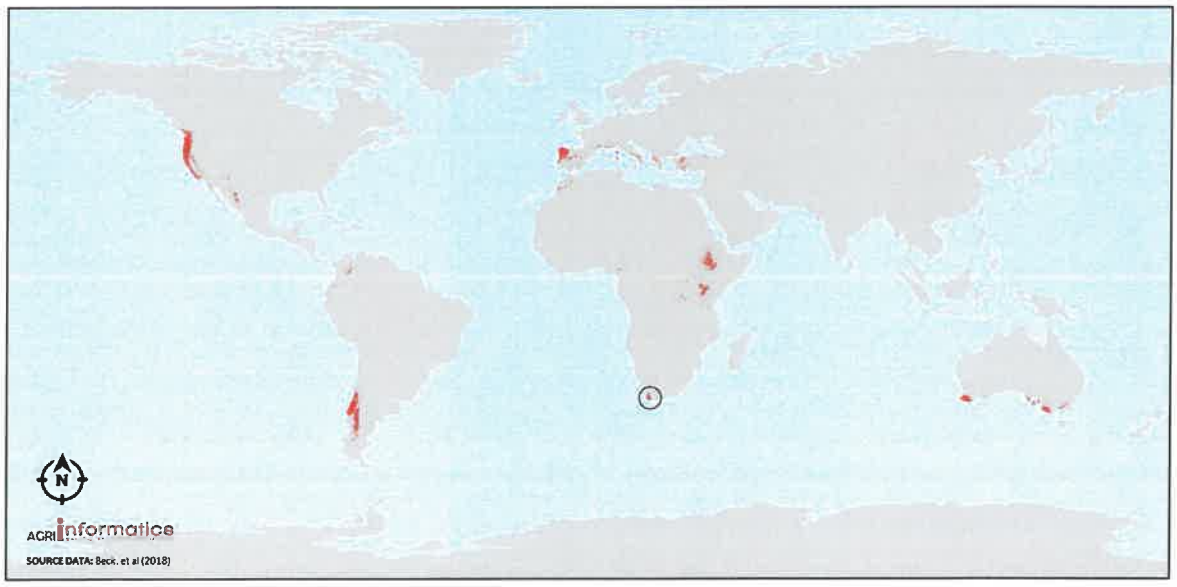


Figure 10: Köppen-Geiger Csb climate zones of the world (Data source: Beck, et al, 2018).

Based on the rainfall and ET_0 values in Table 4, the irrigation requirement of wine grapes amounts to 370 mm per annum, while citrus or stone fruit will require 670 mm/a and 700 mm/a respectively. The irrigation requirement for planted pastures is calculated at >900 mm/a.

5.3.2 Climate parameters

Table 4: Summary of key climate parameters of the study area (2001-2021) (NASA POWER Climatologies).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rel. Humidity %	66	66	68	71	77	80	82	83	81	77	72	67	**74**
Wind Direction °	163	161	161	174	264	293	286	293	223	178	167	170	**176**
Wind Speed Max m/s	12.0	9.7	10.4	13.3	11.8	13.7	11.9	11.9	10.9	11.0	11.2	11.2	**13.7**
Wind Speed Min m/s	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	**0.0**
Wind Speed Ave m/s	4.4	4.1	3.7	3.3	3.1	3.2	3.1	3.3	3.3	3.6	4.0	4.2	**3.6**
Rainfall mm	20	15	25	48	72	134	124	121	62	47	46	20	**733**
Mean Temp. °C	20.9	21.2	20.0	17.9	15.9	13.9	13.1	13.4	14.8	16.7	18.3	20.1	**17.2**
Ave. Max.T °C	23.1	22.4	21.4	19.2	17.7	15.3	14.9	15.0	16.7	18.4	21.0	22.5	**19.0**
Ave. Min.T °C	19.8	19.8	18.3	16.8	14.5	12.8	11.9	12.2	13.3	15.7	16.3	18.6	**15.8**
Highest Max. T. °C	35.6	35.4	34.6	33.9	30.1	26.9	25.0	27.4	29.2	37.1	37.0	36.2	**32.4**
Lowest Min. T. °C	13.0	12.9	12.0	8.9	7.6	6.1	4.8	5.5	6.9	7.8	10.2	11.7	**8.9**
Frost Days / month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
PAR MJ/m²/day	13.5	12.2	9.8	7.1	4.9	4.1	4.6	5.8	7.9	10.5	12.5	13.6	**8.9**
ET_0 mm/month	217	185	166	115	82	68	70	87	107	152	180	210	**1639**

At an elevation of approximately 70 m amsl and <22 km from the False Bay coastlines the climate is maritime, i.e. mean temperature difference between hottest and coldest month is <10°C, at 8.1°C. The average annual rainfall is 773 mm, of which 561 mm (73%) is winter rain between April to September. The warmest months are October to February when maximum temperatures can reach 35.0°C. The coldest month is July with an average minimum temperature of 11.9°C and coldest recorded temperature of 4.8°C. The site is considered to be frost free. The mean annual wind speed is 3.6 m/s (NASA Power, 2022).

Despite the relatively mild minimum winter temperatures the positive chill units, calculated by the Linsey-Noakes model (10°C base temperature) are moderately high at 640 degree-hours (Schulze, 2009).

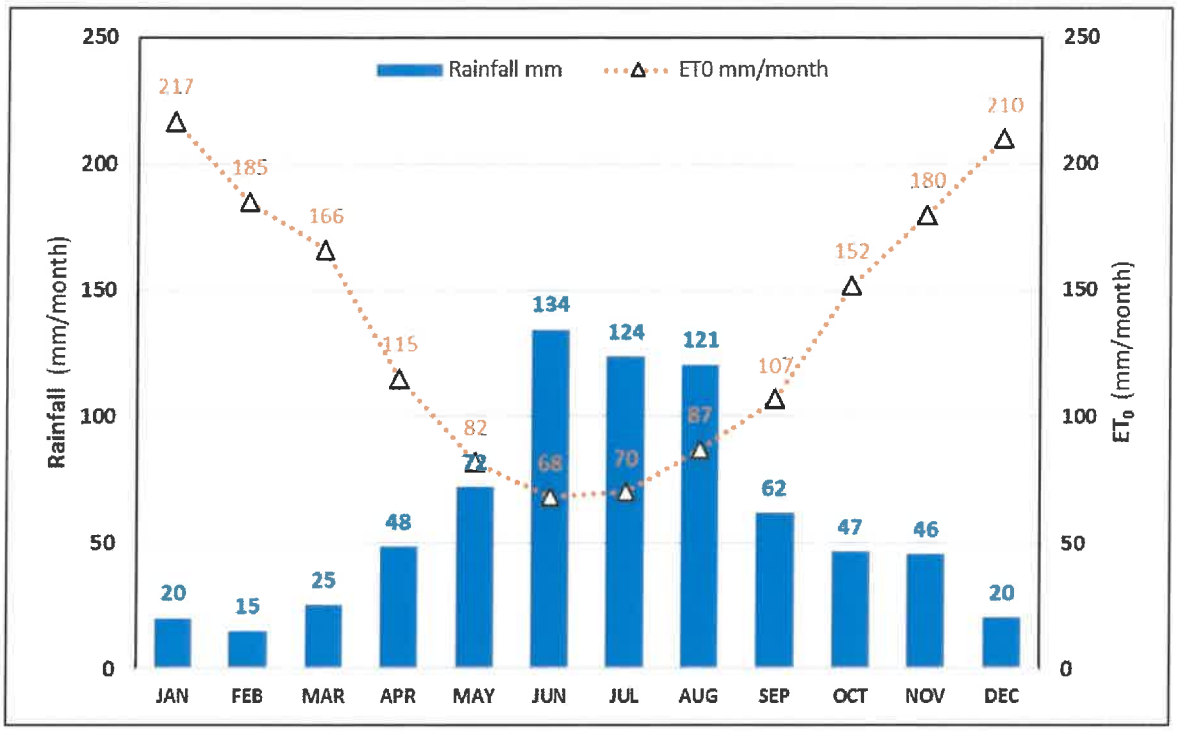


Figure 11: Relationship between monthly rainfall and ET_0.

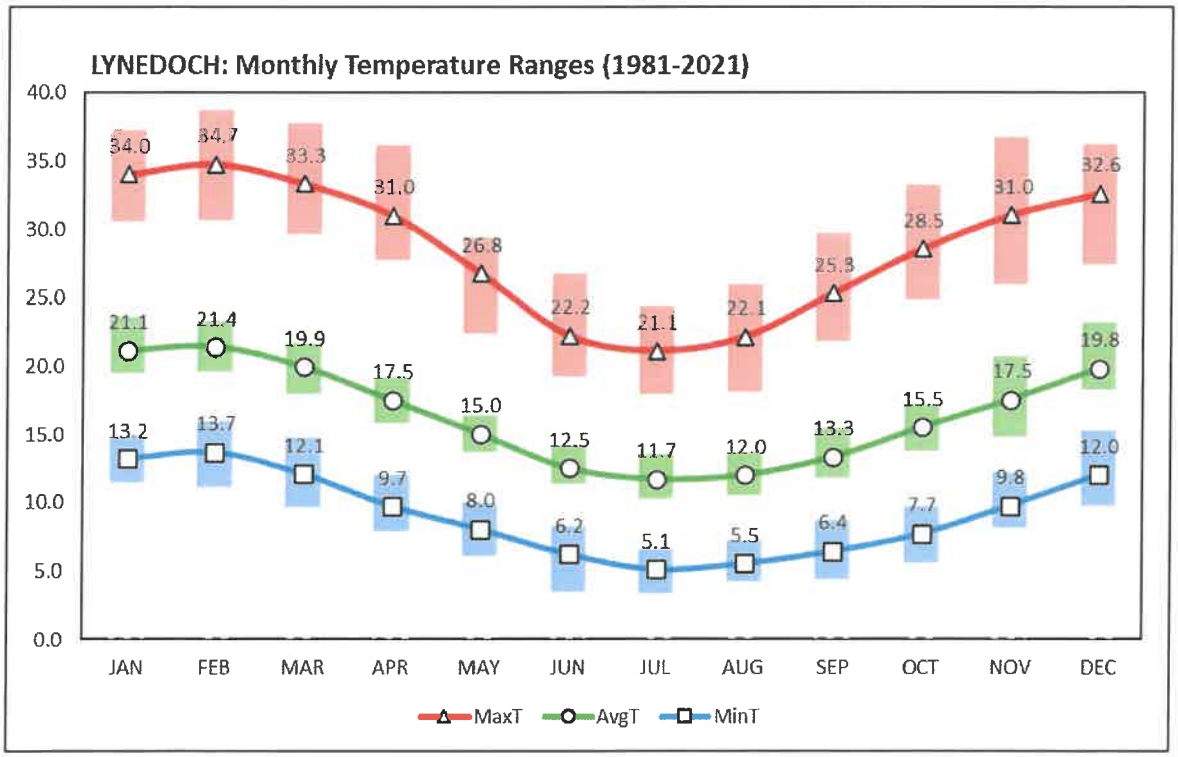


Figure 12: Long term temperature ranges at Lynedoch.

5.4 Topography and surface hydrology

An elevation model of the farm (Figure 13) has been compiled from 0.5 m contour lines, obtained from a detail elevation survey that was commissioned by the developer. The topography of Portion 28 of Farm 468 is characterised by steep slopes in the northwestern half of the farm, transitioning to flat areas along the southeastern boundaries, being the valley floor of the Eerste River. The highest point on the farm is in the northern corner at ±110 m amsl. The lowest point of the farm is at ±26 m amsl in the southern corner of the property. Many embankments and terraces had been constructed during the establishment of the vineyards, especially in the areas where the slope gradients exceed 15%.

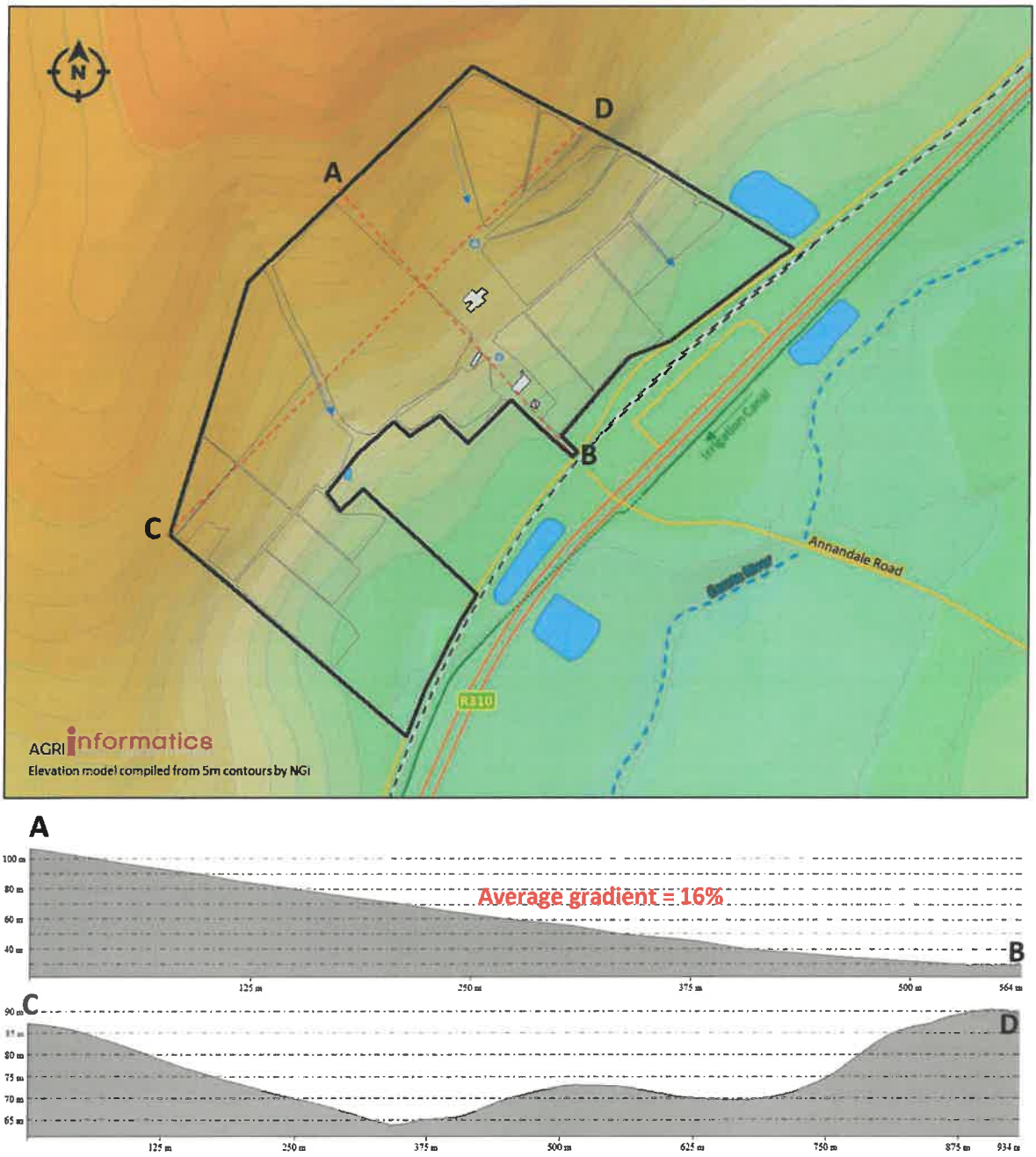


Figure 13: Map of the topography and relief cross-sections along lines A-B and C-D.

A slope gradient map was also compiled from the elevation model, which indicates a large portion of the farm with slope gradients steeper than 15% (Figure 14) and some smaller areas with gradients up to 30%. Surface drainage on the steeper slopes is controlled by vineyards row directions along the contour lines and runoff furrows. Surface water is expected to accumulate on the flat areas, although hydromorphic soils were limited to the lowest area in the south. Despite some very steep slope gradients, soil erosion is limited by terracing, vineyard row directions along the contour lines and the presence of cover crops – mostly volunteer grasses and weeds.

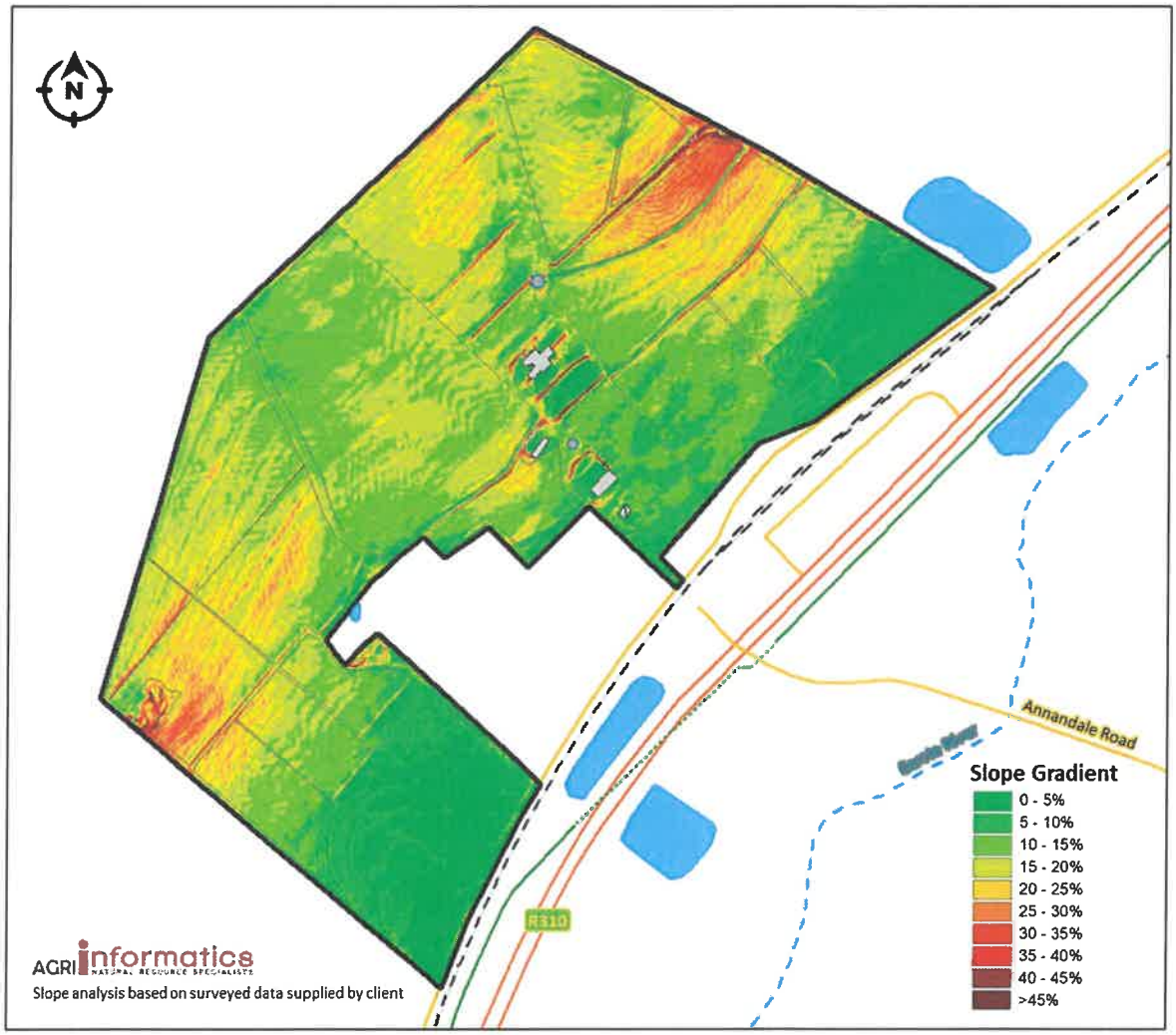


Figure 14: Slope gradient map of the study area.

5.5 Irrigation water

The potential groundwater yield of the study area is indicated as 0.1 – 0.5 liter/sec (<2.0 m^3/h) and of good to moderate quality at 70 – 150 mS/m. Recharge is at 58 mm/a and the depth to groundwater is <10 m below ground level (DWS, 2005).

Despite signs of limited supplementary irrigation that was done in the past, the Wynland Water User's Association has no record of water allocation or registration for Portion 28 of Farm 468.

At the theoretical yield of 2.0 m^3/h, abstracted for 20 hours per day from two boreholes, the groundwater can yield 80 m^3/day. During the period of peak water demand (Dec – Jan) winegrapes in this area will require about 20 mm per week or up to 3 mm/day. This equals 30 m^3/ha/day. The groundwater yield is therefore sufficient to irrigate less than 3 ha. While this calculation is crude and rather speculative, it does provide a clear indication of the very limited contribution that groundwater can make towards the water requirement of any irrigated crop.

5.6 Recent agricultural activity

A landuse map (Figure 15) has been compiled from aerial imagery (Google Earth) and personal ground observations, to indicate the extent of the current and previously cultivated areas. Table 5, provides a summary of the results.

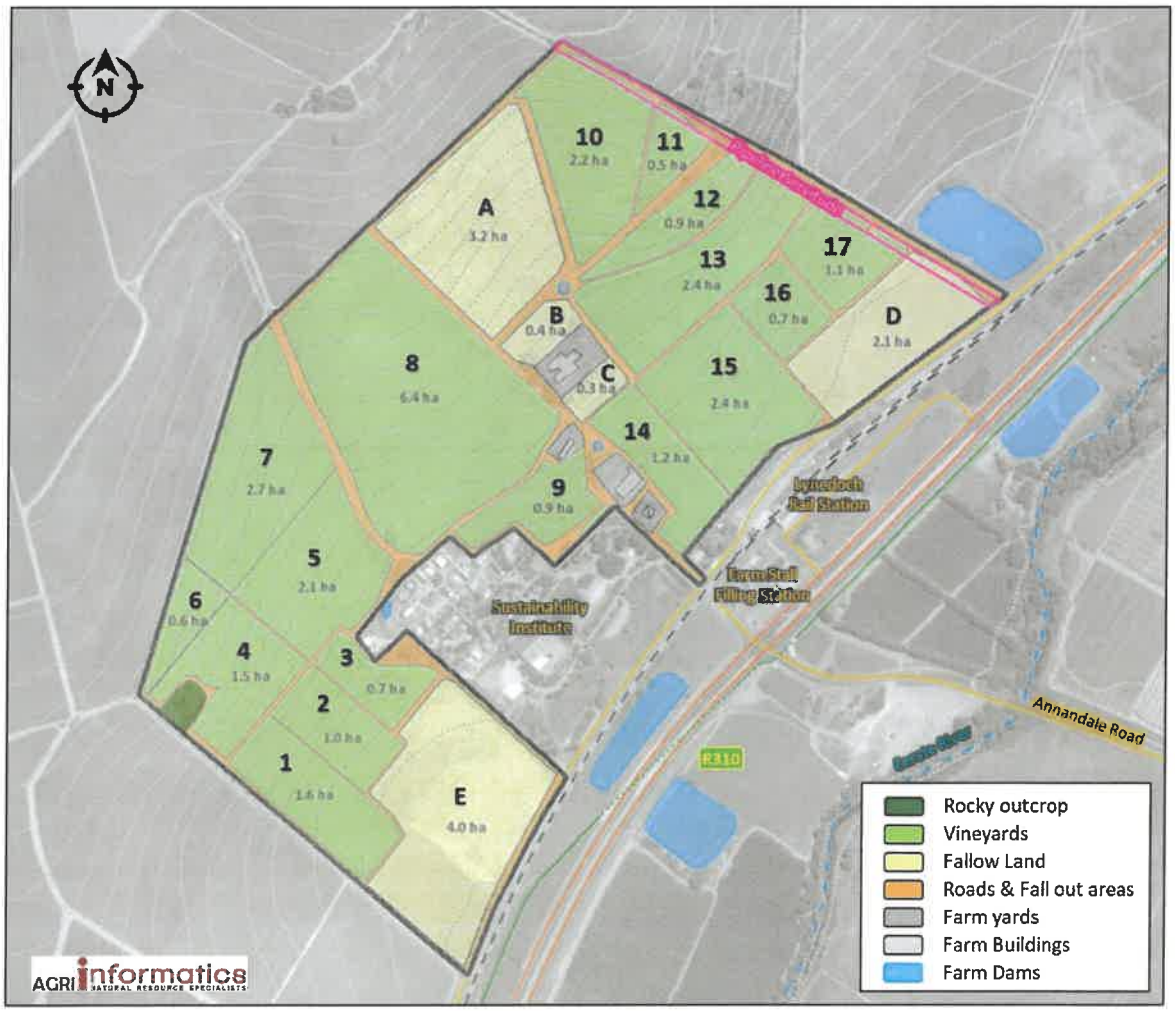


Figure 15: Land use of Portion 28 of Farm 468 - May 2023.

The combined potentially arable land on the property amounts to ±32.5 ha. Most of this area (28.9 ha) are being used for wine grape production at present, although many of the vineyards are at the end of their productive lifespan. Field A (3.2 ha) was used for wine grape production until *circa* 2008, while a small portion (0.4 ha) of Field D was also planted under wine grapes until 2012. However, as the profitability of wine grapes decreased systematically over the past two decades, no replacement of vineyards has been done after uprooting.

Table 5: Areas per land use category.

Land Use	Area (ha)
Vineyards	28.9
Fallow land	9.9
Farmyards	0.8
Fall-out areas & farm roads	5.9
Total	**45.4**

Table 6: Wine grape production statistics form Portion 28 of Farm 468, for the 2022 season.

Block	Area (ha)	Vineyard	Vineyard Area	Year Planted	Age	Cultivar	2022 Yield (tons)*	t/ha
1	1.6	F	3.3	1983	40	Chenin blanc	25.30	7.7
2	1.0							
3	0.7							
4	1.5	M	3.6	1994	29	Merlot	16.62	4.6
5	2.1							
6	0.6	L	3.3	1990	33	Sauvignon blanc	24.26	7.4
7	2.7							
8	6.4	G	6.4	1985	38	Chenin blanc	41.72	6.5
9	0.9	A	0.9	1987	36	Cabernet Sauvignon	6.24	6.9
10	2.2	E	2.2	1992	31	Sauvignon blanc	12.02	5.5
11	0.5							
12	0.9	D	3.3	2003	20	Cabernet Sauvignon	9.86	3.0
13	2.4							
14	1.2	H	1	1987	36	Cabernet Sauvignon	5.34	4.5
15	2.4	C	4	1980	43	Chenin blanc	17.1	4.1
16	0.7							
17	1.1							
TOTAL	**28.9**						**158.46**	**5.5**
** Production data obtained form landowner*								

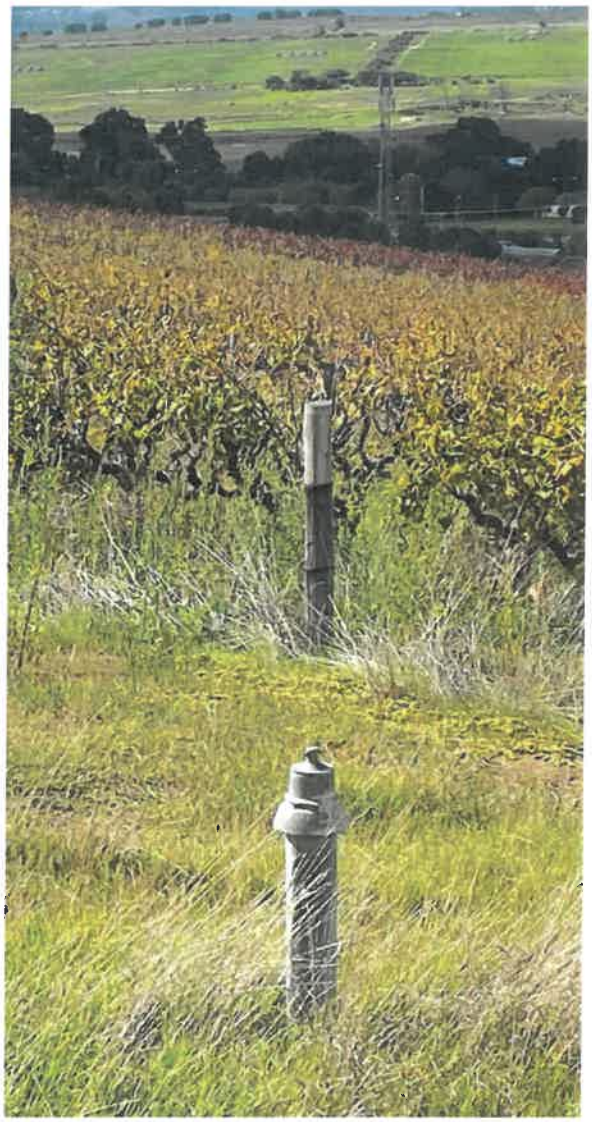
A pipeline servitude of 12 meter wide, spans the property near the northeastern boundary, as indicated in Figure 15.

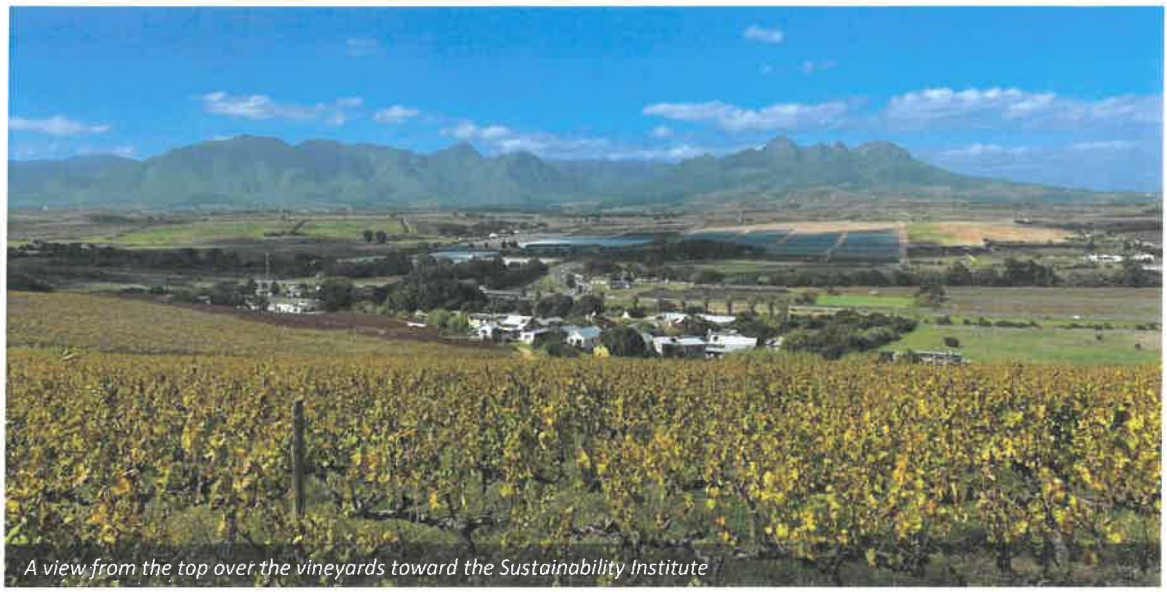
The aerial photographs below provide a visual overview of the land.



Farm dam and irrigation hydrants, used earlier for limited supplementary irrigation of vineyards







A view from the top over the vineyards toward the Sustainability Institute



A view from below, looking due north to the Sustainability Institute



Levelled terrace, to serve as farm working area



36-Year old Cabernet Sauvignon, planted in 1987



29-Year old Merlot, planted in 1994


A bush-vine block that has reached the end of its productive life



Old vineyards, with loss of productive plants



Old vineyards, with loss of productive spurs



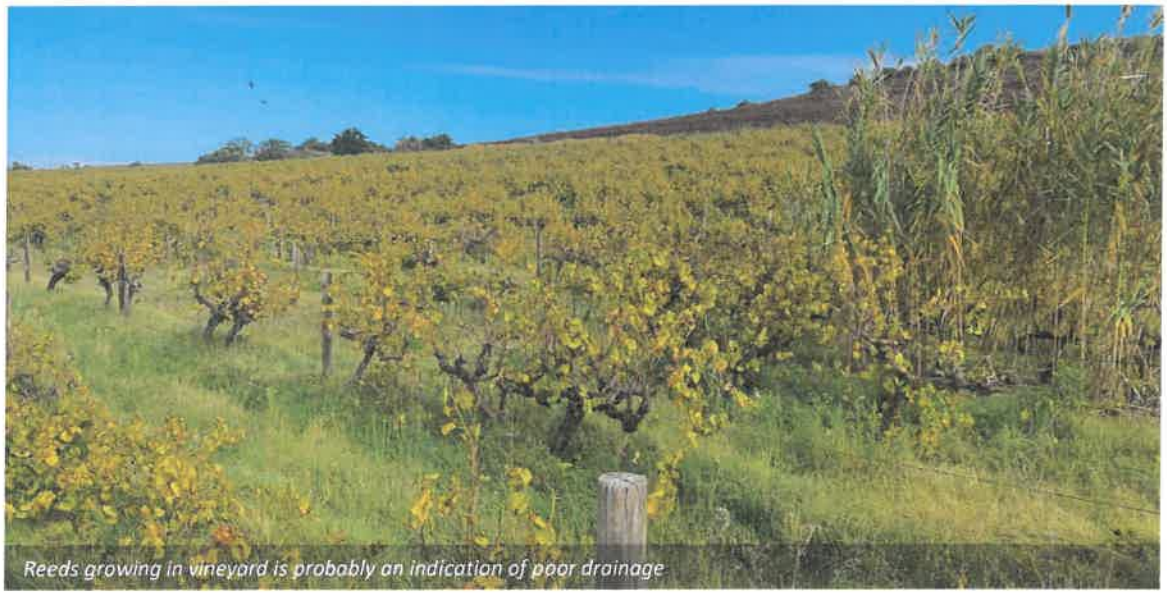
Old bushvines with unproductive areas



Rocky granite outcrop on the southwestern boundary of the property



More bush vines dying off



Reeds growing in vineyard is probably an indication of poor drainage

6 Agricultural Potential

The discussions below analyse each of the main possible agricultural activities against the definition of agricultural potential as stated in paragraph 5.1.1.

The soils of the study area are generally moderately to well drained, of medium to good depth and with good to moderate water retention capacity. Poor permeability and compacted layers can be rectified by deep cultivation while amelioration can address low pH or other soil chemical limitations. With the exclusion of the lower lying, flat areas, the intrinsic soil potential of the farm is therefore medium high to high. However, without adequate irrigation water, the soil water retention capacity is not enough to ensure viable yields of perennial or annual summer crops.

6.1 Irrigated cultivation

While the farm has access to groundwater the supply is minimal and inadequate for the production of perennial crops. At best, the groundwater supply can only sustain the supplementary irrigation of a few hectares of wine grapes. The agricultural potential for irrigated cultivation is therefore regarded as **very low**.

6.2 Dry land cultivation

Dry land or rain fed cultivation refers to the practice of growing a crop without irrigation, thus fully depending on the rainfall to supply in the water requirement of the crop. During the warm summer months, when the water requirement of a summer crop would be at its highest, the rainfall is only ±170 mm, while the reference evapotranspiration (ET_0) is >1100 mm. This volume is not sufficient to grow any summer cash or fodder crop without irrigation. In winter the rainfall amounts to 560 mm and the reference evapotranspiration is ±530 mm. Theoretically this is sufficient for winter cereal production on soils with moderate water retention capacity, but ample external drainage to prevent water logging during periods of high rainfall. With the exception of the small area mapped as soils of the Katspruit soil form, the soils of Portion 28 of Farm 468 are suitable for dryland crop production, but the steep slopes will not only complicate tractor and farm movement, but also increase the risk of soil erosion after soil preparation. The suitably flat areas are small and thus the agricultural potential for dryland cultivation is regarded as not feasible or **very low**.

6.3 Wine grape production with supplementary irrigation

The property has been used for wine grape production for more than three decades. Supplementary irrigation was applied at a very limited scale, as indicated earlier. The

sustainability of this farming practice is seriously eroded by low grape prices, falling yields and rising input costs that reduces profitability – first to the point where vineyard renewal becomes impossible and thereafter to full non-profitability, vineyard by vineyard as they age and yield levels reduce.

This phenomenon is not unique to this property and is reflected in the aging of vineyards in the entire South African industry. In 2006 the portion of vineyard blocks older than 20 years in the SA wine industry was 11%. In 2020 that figure grew to 24%. In 2016, young vineyards (<7 years) constitutes 44% of all plantings, while in 2020 only 24% of plantings were younger than 7 years (Vinpro, 2021). The reduction in vineyard renewal is a result of reduced profitability, driven by rising cost of production and gape prices lagging behind. Today many producers do not have access to the capital required to replace vineyards at R256 000 per hectare in Stellenbosch (Vinpro, 2022).

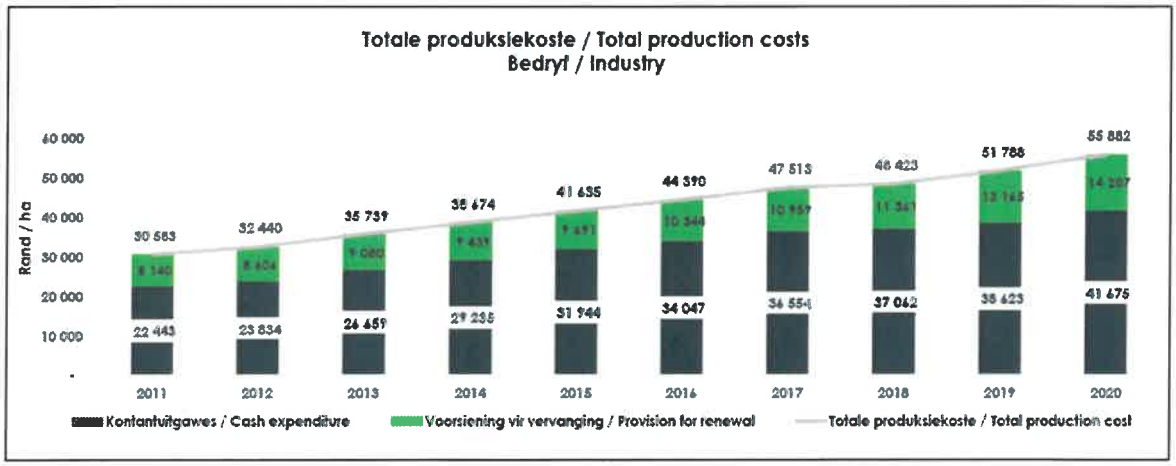


Figure 16: Wine grape production cost trends over the past decade (Vinpro, 2020).

Vinpro's cost guide indicates that the break-even income for Stellenbosch is R98 000/ha. To be sustainable and in a position to replace old vineyards the target income increases to R118 000/ha. The average price for wine grapes in 2022 in Stellenbosch was R7 850/ton. This implies that the target yield to achieve sustainability should be at least 15 t/ha. The average yield for Stellenbosch is below 8 t/ha. The 2022 production from Portion 28 of Farm 468 amounts to 158.5 tons from 28.9 ha, resulting in an average yield of only 5.5 t/ha (Table 6).

The current vineyard production on the farm is therefore a temporary activity that can be sustained only as long as yield levels and income are higher than the cost of the essential production activities and the harvest, without any provision for vineyard replacement.

6.4 Livestock farming

The grazing capacity of non-irrigated planted pastures will be very limited during the late summer when the average rainfall is less than 1 mm/day. The indicated grazing capacity for

the area is 25 ha per large stock unit. Thus less than 2 LSU's can be accommodated on the farm. This is not an economical unit and therefore the agricultural potential for livestock farming is regarded as **very low**.

6.5 Resulting agricultural potential

Factors limiting the agricultural potential of Portion 28 of Farm 468 include (i) limited supply of irrigation water, (ii) low to medium soil potential due to either poor drainage and water logging of the duplex soils or limited soil depth on a portion of the low lying soils, (iii) steep slopes, (iv) size limitation of the property on the establishment of any viable farming activity and (v) the general conversion of the area from agriculture to residential and associated land use activities. The overall agricultural potential of the study area is evaluated as being **low and unviable**, unless an additional source of irrigation water can be secured.

7 Impact on Agriculture

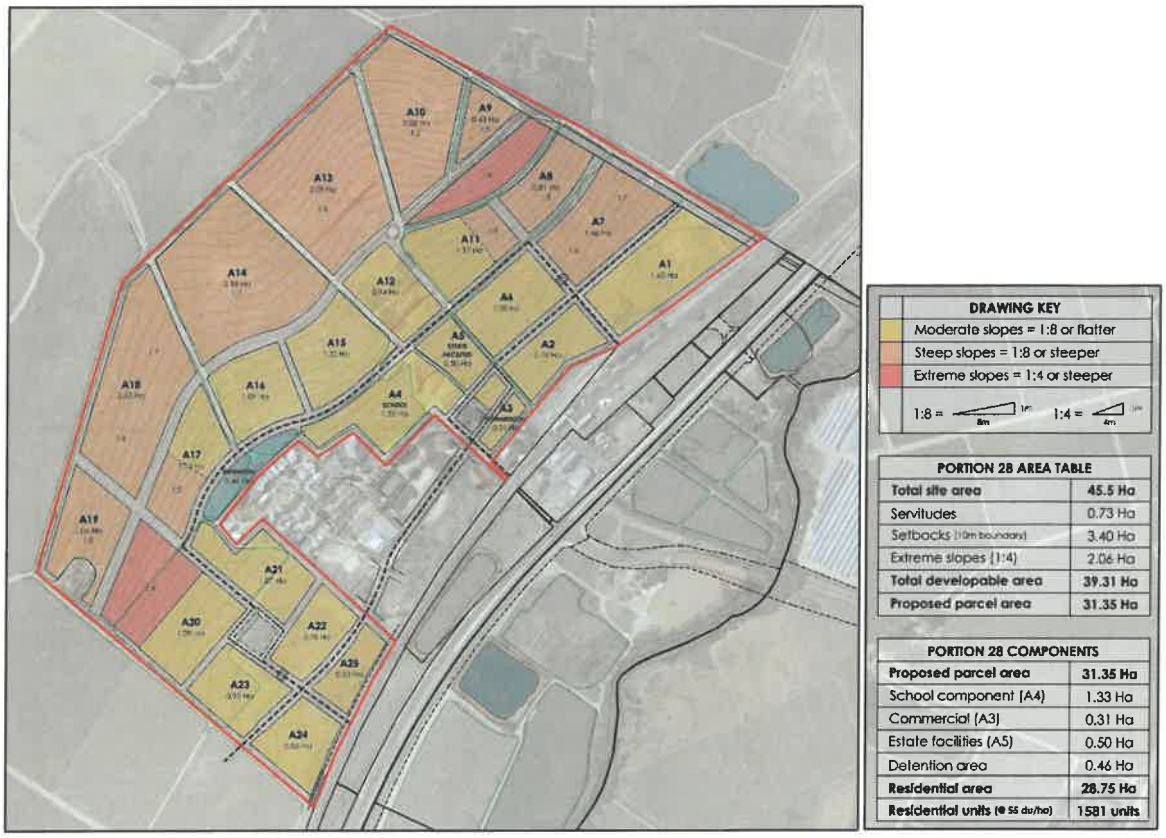


Figure 16: Proposed Site Development Plan of Portion 28 of Farm 468 (Urban Studio).

The current development plan proposes a total of 1 581 residential units, plus a school and some commercial opportunities. The density thus converts to almost 35 units per hectare.

The development will transform ±29 ha net farmland that was used for wine grape production over the past three decades or more. The soil potential varies between low to medium high, with ±35 ha being suitable for irrigated perennial crop production – including road areas). The farm only has access to a very limited supply of groundwater for irrigation. The exact yield is unknown and appears to be unregistered, but is calculated at 80 m^3/day, sufficient for the irrigation of less than 3 ha wine grapes, which is not regarded as a viable farming option. Given the demarcation of the urban edge around this property, the conversion of the land over the medium to long term is regarded as inevitable. A portion of the proposed development appears to be aligned with the Lynedoch precinct development plan of the Municipal Spatial Development Framework of Stellenbosch Municipality.

8 Specialist Statement

Sections of the property have been identified for urban development to complement the Sustainability Institute, in the Stellenbosch Municipal Development Plan.

The proposed development is of semi-high density and will establish almost 35 residential opportunities per hectare. Being a wine grape farm, the land does not directly contribute to food security, but do provide meaningful job opportunities at present and in the near future. It has been demonstrated that the current farming activities are not sustainable, unless an additional source of irrigation water can be secured.

It is believed that a development on this site will contribute to the retention of higher value agricultural resources elsewhere in the Stellenbosch or surrounding municipal areas and is therefore supported.

9 References

Beck, H.E, Zimmermann, N.E, McVicar, T.R, Vergopolan, N, Berg, A and Wood, E.F, 2018. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Scientific Data 5:180214, doi:10.1038/sdata.2018.214

Department of Agriculture, Forestry and Fishing, Sep 2011. Regulations pertaining to the development of renewable energy facilities on agricultural land in terms of Act 70 of 1970 & Act 43 of 1983.

GeoScience, 1990. 1:250 000 scale Geological Map.

Government of the Republic of South Africa. 1970. Sub-division of Agricultural land Act, 70 of 1970. Pretoria: Government Printer.

Government of the Republic of South Africa. 1983. Conservation of Agricultural Resources Act, 43 of 1983. Pretoria: Government Printer.

Land Type Survey Staff, 1972 - 2006. Institute for Soils, Climate and Water of the Agricultural Research Council. Land Type Data.

National Geospatial Information. Digital contour and cadastral data.

Schulze, R.E and Maharaj, M, 1997. South African Atlas of Agrohydrology and -Climatology. Water Research Commission report, no. 96/TT 82.

Soil Classification Working Group, 1991. A Taxonomic System for South Africa. Department of Agriculture.

Van Heerden, J.M, 1991. Die vestiging van weidings in die wintereëngebied: 1. Gewaskeuse. *Elsenburg Journal*, Special Edition, Pasture Research, 12-28.

Vinpro, 2022. Cost guide. Vinpro Agricultural Economic Services, Paarl.

APPENDIX

Land Type memoirs

Soil Profile Photos

Conceptual Development Plan (26 Apr 2023)

LAND TYPE/ *LANDTIPE* : **Ac24**

CLIMATE ZONE/ *KLIMAATSONE* : 2599W
Area/ *Oppervlakte* : 376ha
Estimated area unavailable for agriculture
Beraamde oppervlakte onbeskikbaar vir landbou : 0ha

Occurrence (maps) and areas / *Voorkoms (kaarte) en oppervlaktes:*
3318 Cape Town (376ha)

Inventory by/ *Inventaris deur:*
F Ellis & B Stehr
Modal profiles/ *Module profiele:*
Geen/None

Terrain unit/ *Terreineenheid*	1	3	4	5
% of land type/ *% van landtipe*	20	73	5	2
Area/ *Oppervlakte (ha)*	75.2	274.48	18.8	7.52
Slope/ *Helling (%)*	0 - 4	12 - 25	2 - 4	0 - 3
Slope length/ *Hellingslengte (m)*	300 - 600	400 - 1500	250 - 450	75 - 100
Slope shape/ *Hellingsvorm*	Y	Y	X-Z	X
MB0,MB1 (ha)	72	260	20	7
MB2-MB4 (ha)	4	14	0	0

Total/ *Totaal*		Clay content *Klei-inhoud* %				Texture *Tekstuur*	Depth limiting material *Diepte-beperkende materiaal*
S>12%	260						
S<12%	98						
	18						

Soil series or land classes *Grondseries of landklasse*	Depth *Diepte* (mm)	MB	% ha	% ha	% ha	% ha	ha	%	A	E	B21	Hor	Class *Klas*	
Rock/Rots	300 - 500	0	50 38	35 96			134	35.6	15-35+			A	fiSaLm-SaCl	so;R
Msinga Hu26, Doveton Hu27	800 - 1200	+0	30 23	30 82	15 3		108	28.7	15-25		25-40	B	meSaClLm-SaCl	so
Southwold Cv26, Newport Cv27	800 - 1200	+0	15 11	20 55	40 8		74	19.7	15-25		25-40	B	meSaClLm-SaCl	so
Jozini Oa36, Levubu Oa34	> 1200	0		7 19		55 4	23	6.1	15-25		15-35	B	meSaLm-SaClLm	
Avalon Av26, Newcastle Av25	600 - 800	0		3 8	30 6		14	3.7	15-25		15-35	B	mc/coSaLm-SaClLm	sp
Paddock We31, Davel We32	200 - 400	0			15 3	45 3	6	1.6	10-30		10-30	B	coSaLm-SaClLm	sp

Terrain type/ *Terreintipe* : C3
Terrain form sketch/ *Terreinvormskets*



For an explanation of this table consult LAND TYPE INVENTORY (table of contents)
Ter verduideliking van hierdie tabel kyk LANDTIPE-INVENTARIS (inhoudsopgawe)

Geology : Mainly granite and deposits of weathering products of granite of the Kuils River-Helderberg Pluton, Cape Granite Suite.

Geologie: Hoofsaaklik graniet en afsettingsprodukte van verweerde graniet van die Pluton Kuilsrivier-Helderberg, Granietsuite Kaap.

LAND TYPE/ *LANDTIPE* : Ca27

CLIMATE ZONE/ *KLIMAATSONE* : 2603W

Area/ *Oppervlakte* : 3280ha

Estimated area unavailable for agriculture
Beraamde oppervlakte onbeskikbaar vir landbou : 30ha

Occurrence (maps) and areas / *Voorkoms (kaarte) en oppervlaktes:*
3318 Cape Town (3280ha)

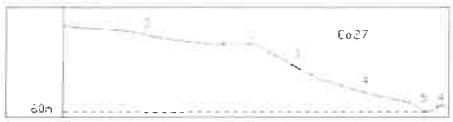
Inventory by/ *Inventaris deur:*
F Ellis, A B Oosthuizen & B Stehr

Modal profiles/ *Modale profiele:*
P520

Terrain unit/ *Terreineenheid*			1		3		4		5		Total/ *Totaal*		Clay content *Klei-inhoud*				Texture *Tekstuur*		Depth limiting material *Diepte-beperkende materiaal*
% of land type/ *% van landtipe*			5		45		40		10										
Area/ *Oppervlakte (ha)*			164		1476		1312		328										
Slope/ *Helling (%)*			0 - 4		3 - 8		1 - 4		0 - 2										
Slope length/ *Hellingslengte (m)*			1000 - 150		600 - 2000		1500 - 250		150 - 300				%						
Slope shape/ *Hellingsvorm*			Z		Y-Z		Z-X		X-Z										
MB0,MB1 (ha)			130		1330		1245		329		S>12%	0							
											S<12%	3033							
MB2-MB4 (ha)			33		148		66		0			247							
Soil series or land classes	Depth	MB											A	E	B21	Hor	Class		
Grondseries of landklasse	*Diepte* (mm)		%	ha	%	ha	%	ha	%	ha	ha	%					*Klas*		
Hamman Wa30, Katarra Kd22	300 - 600	0			15	221	20	262			483	14.7	3-6	3-6		E	coSa		hp;gc
Katarra Kd22, Slangkop Kd15	400 - 800	0	10	16	15	221	10	131			368	11.2	3-10	3-10	>35	E	coSa-SaLm		gc
Sebakwe Cv22, Rossdale Av22																			
Chester Hu22	1000 - 1200	+0	5	8	10	148	10	131			287	8.8	0-6		0-6	B	LmcoSa		so;sp
Newcastle Av25, Avalon Av26	700 - 1000	0			10	148	10	131			279	8.5	10-25		10-25	B	meSaLm-SaClLm		sp
Klipfontein Ms11	200 - 400	3	20	33	10	148	5	66			247	7.5	10-20			A	meSaLm		hp
Tayside Lo30, Vaalsand Lo31	800 - 1000	0			5	74	10	131	10	33	238	7.2	3-10	3-10		E	coSa-SaLm		sp
Southwold Cv26, Gutu Cv25																			
Suurbraak Pn26	600 - 800	+0	15	25	5	74	10	131			230	7	10-25		10-25	B	meSaLm-SaClLm		so;gc
Avontuur Es22, Vredenbock Es15																			
Grasslands Es14, Rosemead Es16	500 - 800	1	5	8	5	74	10	131			213	6.5	6-25	6-25	>35	E	me/coSa-SaClLm		pr
Kusi We20, Devon We22	200 - 400	0					10	131	20	66	197	6	5-10		5-20	B	meSa-SaLm		sp
Glenrosa Gs15, Robmore Gs18	300 - 500	0	20	33	10	148					181	5.5	10-25			A	coSaLm-SaClLm		so;R
Trevaniaa Gs17, Msinga Hu26	400 - 700	0	10	16	10	148					164	5	15-35		15-35	A	meSaLm-SaClLm		so;R
Hermanus Pn22, Chatsworth Pn25	800 - 1200	0			5	74	5	66			140	4.3	6-15		6-15	B	coSa-SaLm		gc
Paddock We31, Davel We32	200 - 400	0							35	115	115	3.5	10-25		10-35	B	coSaLm-SaClLm		sp
Dundee Du10, Jozini Oa36	900 - 1200	+0							20	66	66	2	10-20		15-35	A	fi/meSaLm		so
Silwana Ss22, Mannhar Bv25																			
Kusasa Cf31, Williamson Gs16	300 - 800	0	5	8					15	49	57	1.7	0-6	6-15	10-25	A	LmcoSa-SaLm		pr;sp;so
Bontberg Hu25	800 - 1200	+0	10	16							16	0.5	5-15		6-15	B	coSa-SaLm		so;R

Terrain type/ *Terreintipe :* A3

Terrain form sketch/ *Terreinvormskets*



For an explanation of this table consult LAND TYPE INVENTORY (table of contents)
Ter verduideliking van hierdie tabel kyk LANDTIPE-INVENTARIS (inhoudsopgawe)

Geology : Mainly granite and deposits of the weathering products of granite of the Kuils River-Helderberg Pluton, Cape Granite Suite: occasional ferricrete and alluvium.

Geologie: Hoofsaaklik graniet en afsettingsprodukte van verweerde graniet van die Pluton Kuilsrivier-Helderberg, Granietsuite Kaap; plek-plek ferrikreet en alluvium.

LAND TYPE/ *LANDTIPE* : Ca28

CLIMATE ZONE/ *KLIMAATSONE* : 2603W
Area/ *Oppervlakte* : 3645ha
Estimated area unavailable for agriculture
Beraamde oppervlakte onbeskikbaar vir landbou : 50ha

Occurrence (maps) and areas / *Voorkoms (kaarte) en oppervlaktes:*
3318 Cape Town (3645ha)

Inventory by/ *Inventaris deur:*
F Ellis, C W van Huyssteen & B Stehr
Modal profiles/ *Modale profiele:*
Geen/None

Terrain unit/ *Terreineenheid*		1	3	4	4(1)	5	Total/ *Totaal*		Clay content *Klei-inhoud*		Texture *Tekstuur*		Depth limiting material *Diepte-beperkende materiaal*
% of land type/ *% van landtipe*		10	35	35	5	15							
Area/ *Oppervlakte (ha)*		364.5	1275.75	1275.75	182.25	546.75							
Slope/ *Helling (%)*		1 - 4	4 - 8	1 - 3	2 - 4	0 - 2							
Slope length/ *Hellingslengte (m)*		250 - 3000	400 - 800	1000 - 180	300 - 600	200 - 500			%				
Slope shape/ *Hellingsvorm*		Y-Z	Y	Z	X-Z	Z-X							
MB0.MB1 (ha)		145	1086	1237	181	547	S>12%	0					
							S<12%	3196					
MB2-MB4 (ha)		219	192	38	0	0		449					
Soil series or land classes *Grondseries of landklasse*	Depth *Diepte* (mm) MB	% ha	% ha	% ha	% ha	% ha	ha	%	A	E	B21	Hor	Class *Klas*	
Katarra Kd22, Hamman We30	300 - 450 0	5 18	45 574	45 574	20 36	10 55	1257	34.5	0-6	0-6	20-35	E	coSa-LmSa	gc;hp
Tayside Lo30	400 - 800 0		5 64	15 191	40 73	20 109	437	12	0-6	0-6	8-20	E	coSa-LmSa	sp
Glenrosa Gs15, Trevanian Gs17														
Paardeberg Gs12	250 - 350 3	40 146	10 128	3 38			312	8.6	6-20			A	me/coSa-SaLm	so;R
Newcastle Av25, Avalon Av26	500 - 900 0		5 64	15 191	20 36		291	8	10-20		10-30	B	coSaLm-SaClLm	sp
Sehakwe Cv22, Chester Hu22	800 - 1200 +0	5 18	10 128	10 128	8 15		289	7.9	0-6		0-6	B	coSa-LmSa	so;R
Swartland Sw31, Hogsback Sw32	300 - 450 0	5 18	10 128	7 89	4 7		242	6.6	15-30		35-55+	B	ClLm-Cl	vp
Kosi We20, Devon We22														
Langkuil We30	300 - 600 0				5 9	40 219	228	6.2	5-10		6-20	B	me/coSa-SaLm	sp
Dundee Du10, Jozini Oa36	500 - 1200 0					30 164	164	4.5	6-15		10-20	A	fi/meSa-SaLm	so;R
Msinga Hu26	800 - 1200 +0	25 91	5 64				155	4.2	10-20		15-35	B	meSaLm-SaClLm	so;R
Klipfontein Ms11														
Bontberg Hu25	150 - 350 3	20 73	5 64				137	3.8	6-10		6-15	A	me/coSaLm	hp;R
Hermanus Pn22	400 - 800 0		5 64	5 64	3 5		133	3.6	0-6		0-6	B	coSa-LmSa	gc

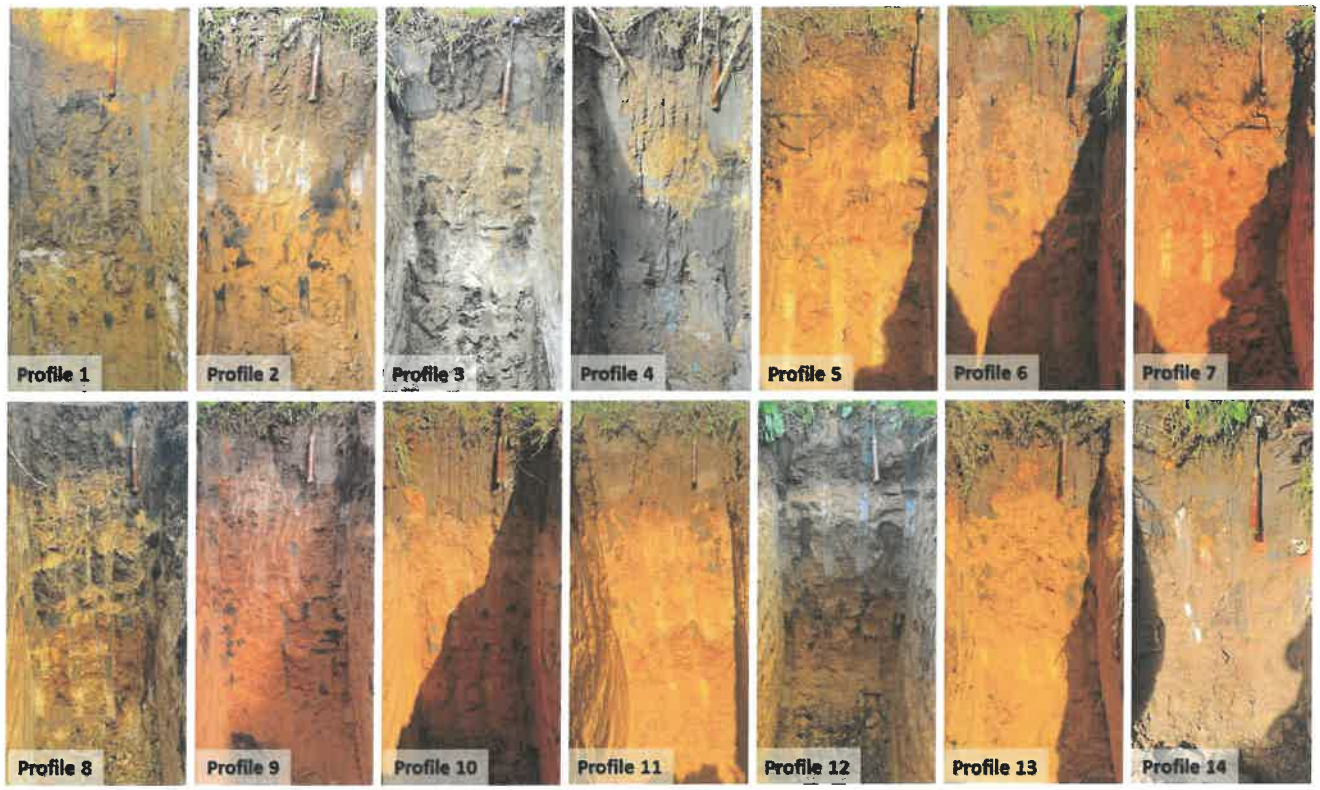
Terrain type/ *Terreintipe :* A3
Terrain form sketch/ *Terreinvormskets*

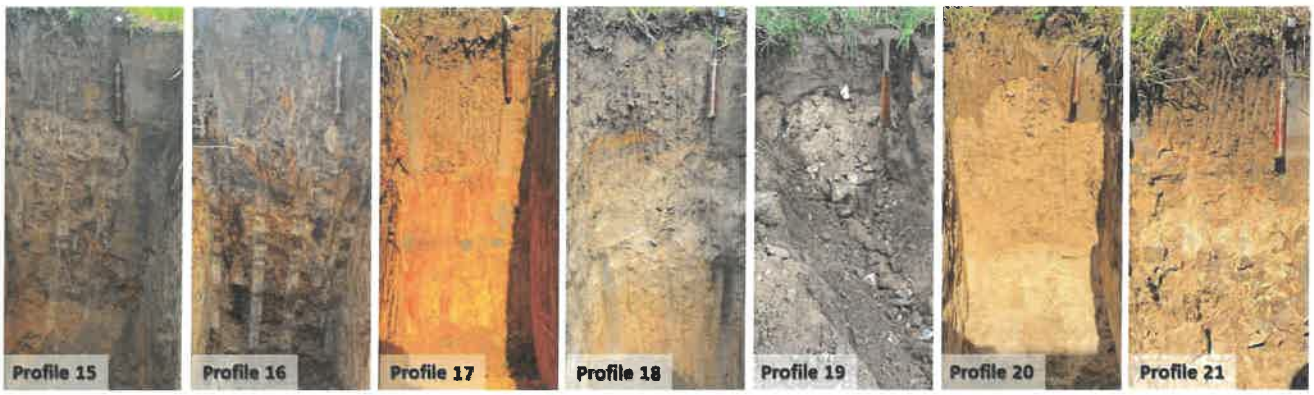


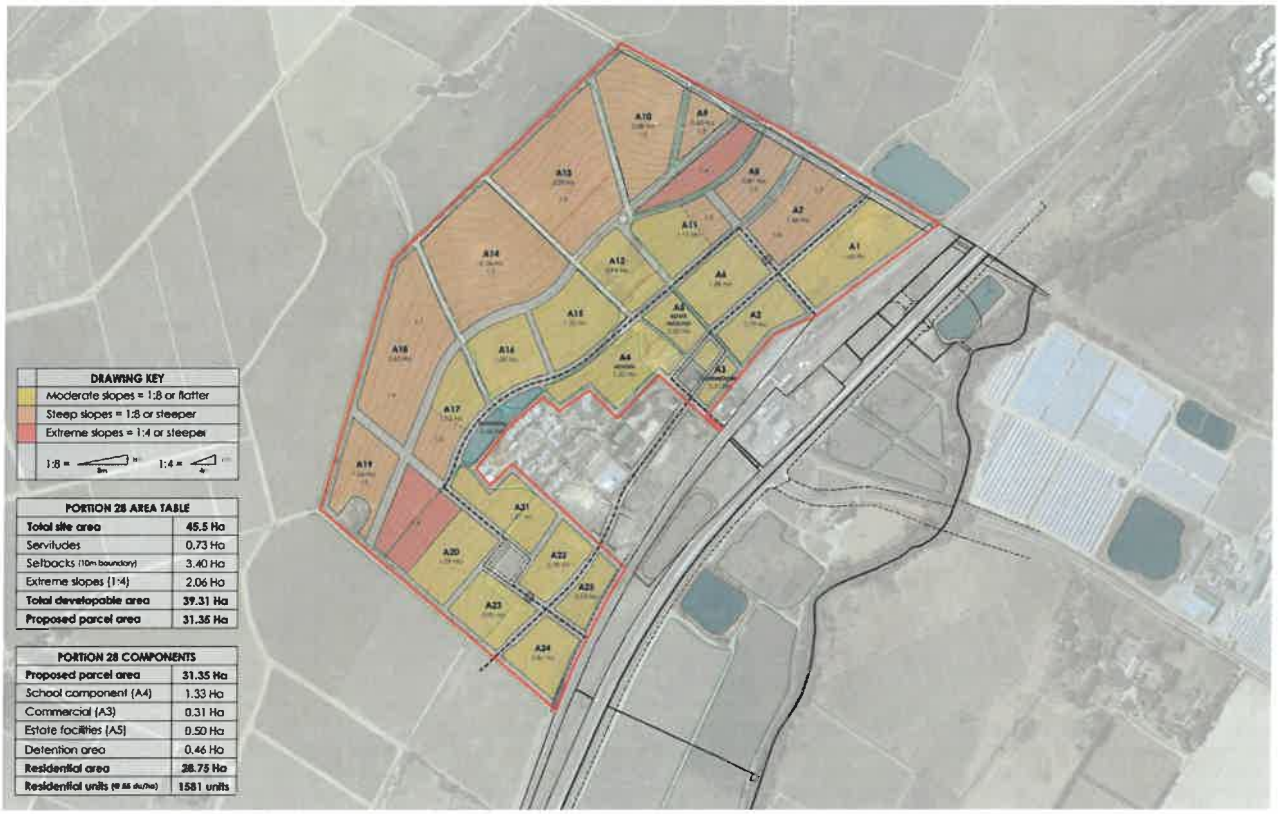
For an explanation of this table consult LAND TYPE INVENTORY (table of contents)
Ter verduideliking van hierdie tabel kyk LANDTIPE-INVENTARIS (inhoudsopgawe)

Geology : Mainly granite and deposits of the weathering products of granite of the Kuils River-Helderberg Pluton, Cape Granite Suite; occasional Quaternary quartz sand of the Springfontyn Formation and alluvium.

Geologie: Hoofsaaklik graniet en afsettingsprodukte van verweerde graniet van die Pluton Kuilsrivier-Helderberg, Granietsuite Kaap; plek-plek Kwaternêre kwartssand van die Springfontyn Formasie en alluvium.


Profile 1
Profile 2
Profile 3
Profile 4
Profile 5
Profile 6
Profile 7
Profile 8
Profile 9
Profile 10
Profile 11
Profile 12
Profile 13
Profile 14


Profile 15
Profile 16
Profile 17
Profile 18
Profile 19
Profile 20
Profile 21


DRAWING KEY
Moderate slopes = 1:8 or flatter
Steep slopes = 1:8 or steeper
Extreme slopes = 1:4 or steeper
1:8 =
1:4 =
PORTION 28 AREA TABLE
Total site area 45.5 Ha
Servitudes 0.73 Ha
Setbacks (10m boundary) 3.40 Ha
Extreme slopes (1:4) 2.06 Ha
Total developable area 39.31 Ha
Proposed parcel area 31.35 Ha
PORTION 28 COMPONENTS
Proposed parcel area 31.35 Ha
School component (A4) 1.33 Ha
Commercial (A3) 0.31 Ha
Estate facilities (A5) 0.50 Ha
Detention area 0.46 Ha
Residential area 28.75 Ha
Residential units (@ 55 du/ha) 1581 units
Development concept: Portion 28
CONCEPT D | 1:5000 (@ A3) | 26.04.2023
WELMOED
URBANSTUDIO
architects & urban designers

ANNEXURE R: PROPERTY OWNERS' ASSOCIATION CONSTITUTION

CONSTITUTION OF THE WELMOED VILLAGE PROPERTY OWNERS' ASSOCIATION

Contents

1. DEFINITIONS 3
2. INTERPRETATION 7
3. COMMENCEMENT DATE 8
4. STATUS 9
5. OBJECTS 10
6. CONTROL OF ASSOCIATION BY DEVELOPER 11
7. MEMBERSHIP: 12
8. DEVELOPER'S RIGHTS 13
9. MEMBERS' RIGHTS AND OBLIGATIONS: 15
10. WASTE MANAGEMENT PLAN, ARCHITECTURAL RULES, AND ESTATE RULES 18
12. LEVIES 26
13. MAINTENANCE AND ADMINISTRATION OF COMMON AREAS, COMMON SERVICES, AND COMMON PROPERTY 30
14. AUTONOMY WITHIN THE DEVELOPMENT 31
15. THE TRUSTEES 31
16. FUNCTIONS, POWERS, AND DUTIES OF TRUSTEES 34
17. PROCEEDINGS AT TRUSTEE MEETINGS 35
18. MANAGING AGENT 38
19. GENERAL MEETINGS OF THE ASSOCIATION 38
20. NOTICE OF MEETINGS 39
21. PROXIES 39
22. QUORUM 40
23. AGENDA AT MEETINGS 40
24. PROCEDURE AT MEETINGS 41
25. VOTING 41
27. MINUTES OF MEETINGS OF THE ASSOCIATION 43
28. FINANCIAL YEAR END 44
29. ACCOUNTS 44
30. DEPOSIT AND INVESTMENT OF FUNDS 45
31. AUDIT 45
32. INDEMNITY 45
33. DEFAMATION PRIVILEGE 46
34. ARBITRATION 47
35. DOMICILIUM 48
36. AMENDMENT 50
37. RISK 50

Annexures

Annexure "A" Estate Rules

Annexure "B" Estate Site Plan

1. DEFINITIONS

In this Constitution and unless inconsistent with the context the following words and expressions shall have the meanings hereby assigned to them:

1.1 **"Dispose"** means to dispose of any portion of land created by subdivision of the Development and includes the disposal of a Unit, whether by way of sale, exchange, donation, deed, intestate succession, will, cession, assignment, court order, insolvency, or liquidation, irrespective of whether such disposal is subject to a suspensive or resolutive condition and "disposal" shall have a corresponding meaning.

1.2 **"Association"** means Welmoed Village Property Owners Association which is bound by the provisions of this Constitution duly constituted in terms of Section 29 of the SMPBL.

1.3 **"Architectural Rules"** means, in respect of any particular Erf, the Architectural Rules drawn up by the Developer for and applicable to the Sectional Title Scheme established in terms of that Erf and incorporated in the management rules applicable to each Body Corporate;

1.4 **"Auditors"** means the auditors of the Association from time to time;

1.5 **"Body Corporate"** means a Body Corporate established for a Sectional Title Scheme in terms of the provisions of the Sectional Titles Act;

1.6 **"Building"** every building constructed or to be constructed that comprises a Sectional Title Scheme;

1.7 **"Chairman"** means the Chairman for the time being of the Trustees;

1.8 **"Common Areas"** mean –

1.8.1 all Erven and Units that are transferred by the Developer to the Association to be held and maintained by the Association for the benefit of the Members, such as security offices, main power supply room, chiller/air conditioning rooms, IT rooms, refuse rooms, etc.; and

1.8.2 all common property, including Private Open Space as per clause 1.31, but, excluding the following common property which is the responsibility of the Bodies Corporate - tiled foyers, lobbies, lift foyers and passageways

within the security areas, external facades, roofs and terraces and further excluding common property which is delineated as exclusive use areas on the sectional plan in respect of an Erf;

1.9 **"Common Property"** means such portion of an Erf and such parts of a Building that will be designated as common property on the Sectional Plan in question pursuant to the provisions of the Sectional Titles Act;

1.10 **"Common Services"** means all bulk services including services in respect of the provision of water, sewerage, electricity, drainage, telecommunications, refuse removal, fire-fighting, security, fibre connectivity, transport and all such other utilities and amenities serving the Common Areas, Units and Erven;

1.11 **"Constitution"** means the constitution of the Association embodied in this document with the annexures hereto, amended as it may be in terms hereof from time to time;

1.12 **"Deed of Sale"** an agreement of sale and purchase in terms of which any party has purchased an erf in the development or a Unit in a Sectional Title Scheme;

1.13 **"Developer"** means Uniqon Developers Proprietary Limited, registration number 1997/021737/07, or its successor-in-title;

1.14 **"Development"** means the Remainder of Portion 28 of the Farm Welmoed Estate Number 468; in the Municipality and Division of Stellenbosch, Western Cape Province upon which the Welmoed Village Residential Estate are being developed;

1.15 **"Entity"** means any company, close corporation, other association, or body of whatever nature that has legal personality, and any trust or partnership (only natural persons being excluded);

1.16 **"Erf"** means every erf in the Development created by the subdivision of the whole or any portion of the Development and "Erven" means all the erven in the Development and the Remainder collectively;

1.17 **"Estate"** means the Welmoed Village Residential Estate developed on the Remainder of Portion 28 of the Farm Welmoed Estate Number 468; in the Municipality and Division of Stellenbosch, Western Cape Province, consisting of different phases including erven and sectional title schemes;

1.18 **"Estate Rules"** means the rules established by the Association to provide for

the use and enjoyment of residential dwellings and Units including the common property by and to promote the harmonious co-existence of all Owners and occupiers in the Development, which rules are annexed hereto marked Annexure "A", and which may be amended, substituted, or added to by the Trustees from time to time;

1.19 **"Estate Site Plan"** means the draft plan depicting the Development, which plan is subject to re-layout, renumbering and approval by the Surveyor- General and annexed hereto as Annexure "B";

1.20 **"Fully developed"** means the stage where the development is established and the last erf or unit has been transferred;

1.21 **"Improvements"** means any structure of whatever nature constructed or erected or to be constructed or erected on an Erf or the Remainder;

1.22 **"Local Authority"** means Stellenbosch Municipality or any Local Authority that may succeed it as the Local Authority which has jurisdiction over the Development from time to time;

1.23 **"Managing Agent"** means any person or Entity appointed by the Association as an independent contractor to undertake any of the functions of the Association;

1.24 **"Member"** means every person identified in 7.1 below, and "membership" shall have a corresponding meaning;

1.25 **"Membership Quota"** means, in respect of each Member, the percentage that the total floor area of all residential sections registered in the name of such Member at the time, as recorded in the participation quota schedule/s applying to the Body Corporate/s in question, constitutes of the total floor area, collectively, of all residential sections reflected on the Sectional Plans that have been registered in respect of Buildings in the Development at the time, as recorded in the participation quota schedules relating to the various Bodies Corporate in question, on the basis that whenever there is an increase in the total number of residential sections in the Development pursuant to the establishment of a further Building/Body Corporate, there shall be a resultant decrease in the Membership Quota of every current Member;

1.26 **"Ordinary Member"** means any Member of the Association other than the Developer;

1.27 **"Office"** means the administrative office of the Association;

1.28 **"Owner"** means the registered owner of an erf and/or unit.

1.29 **"POA Levy"** means the Property Owners Association levy raised by the Association and collected directly or by Bodies Corporate from Members on the Association's behalf, and which is to be distinguished from levies raised by the various Bodies Corporate for their own purposes upon their respective members, as more fully set out in clause 12 below;

1.30 **"Prime Rate"** means the publicly quoted basic rate of interest per annum at which ABSA Bank lends monies in South African Rand on unsecured overdraft to first class corporate borrowers in general from time to time, on the basis that such interest is compounded monthly in arrears and calculated on a 365 (three hundred and sixty five) day year factor, irrespective of whether or not the year is a leap year (and which said rate of interest is at times also referred to as the prime commercial overdraft rate of interest), as certified by any officer of ABSA Bank whose appointment and authority it shall not be necessary to prove;

1.31 **"Private Open Space"** means all areas in the Development which are identified as private roads, private open spaces, lakes, waterways and pathways and indicated as such on the Estate Site Plan attached hereto as Annexure "B";

1.32 **"Proxy"** means a person duly appointed by a Member in terms of the provisions of the Constitution to represent him at any meeting or resumption of any meeting which has been postponed;

1.33 **"Remainder"** means the remainder of the Development left over from time to time after the subtraction therefrom of portions thereof that are transferred out or in respect of which certificates of registered title have been issued;

1.34 **"Residential dwelling"** means building, premises, structure or any other place, or any part thereof, used predominantly as a place of residence or abode of any natural person;

1.35 **"SANAS"** means the South African National Accreditation System, the official accreditation body for South Africa, headquartered in Pretoria.

1.36 **"Section"** means the part of a sectional title scheme which an owner owns;

1.37 **"Sectional Plan"** means the sectional plan to be drawn in respect of any Erf and

Building in terms of the provisions of the Sectional Titles Act and approved by the Surveyor General;

1.38 **"Sectional Titles Act"** means the Sectional Titles Act No. 95 of 1986, as amended from time to time;

1.39 **"Sectional Title Scheme"** means any sectional title scheme established in terms of the Sectional Titles Act on any Erf;

1.40 **"SMPBL"** means the Stellenbosch Municipality: By-Law on Municipal Land Use Planning 2023 and includes any superseding legislation;

1.41 "**STSMA**" means the Sectional Titles Schemes Management Act No. 8 of 2011 as amended from time to time, and any regulations made and in force thereunder;

1.42 **"Sub-divided Development"** means each sub-divided erf within in the Estate with a Sectional Title Scheme and/or Township developed on the erf.

1.43 **"Trustees"** means the Board of Trustees for the time being of the Association appointed in terms of this Constitution;

1.44 **"Trustee Members"** means the members of the Board of the Trustees from time to time;

1.45 **"Unit"** means a section (as defined in the Sectional Titles Act No. 95/1986) in any Sectional Title Scheme on any Erf together with such section's undivided share in the common property of such Sectional Title Scheme;

1.46 **"Waste Management Plan"** means the plan prepared in keeping with the Stellenbosch Municipality: By-Law Relating to Integrated Waste Management (2020) and Stellenbosch Municipality Waste Management Guidelines in terms of which all solid waste generated in the Estate will be managed. WMP and Welmoed Village Residential Estate Waste Management Plan have the same meaning.

1.47 **"Year"** means a financial year of the Association.

2. INTERPRETATION

In this Constitution:

2.1 the clause headings are for convenience and shall be disregarded in construing this Constitution.

2.2 unless the context clearly indicates a contrary intention:

2.2.1 the singular shall include the plural and *vice versa*;

2.2.2 a reference to any one gender shall include the other genders; and

2.2.3 a reference to natural persons includes legal persons and *vice versa*.

2.3 Words and expressions defined in any clause herein shall, for the purpose of that clause and in subsequent clauses, unless inconsistent with the context, bear the meaning assigned to such words and expressions in the clause in question.

2.4 When any number of days is prescribed in this Constitution, the same shall be reckoned exclusively of the first and inclusively of the last day unless the last day falls on a Saturday, Sunday or proclaimed public holiday in the Republic of South Africa, in which event the last day shall be the next succeeding day which is not a Saturday, Sunday or public holiday.

2.5 Where figures are referred to in words and in numerals, if there is any conflict between the two, the words shall prevail.

2.6 If any provision of this Constitution is in conflict or inconsistent with any law of the Republic of South Africa, the invalidity of any such provision shall not affect the validity of the remainder of the provisions of this Constitution.

2.7 If any provision in a definition in this Constitution is a substantive provision conferring rights or imposing obligations on any of the Members then, notwithstanding that it is only in the definition clause of this Constitution, effect shall be given to it as if it were a substantive provision in the body of this Constitution.

2.8 The annexures to this Constitution are deemed to be incorporated in and form part of this Constitution.

3. COMMENCEMENT DATE

The Association, as contemplated in terms of section 29 of the SMPBL, comes into existence simultaneously with registration of the first transfer of an erf or a unit from

the Developer to an Owner.

4. STATUS

4.1 The Welmoed Village Property Owners Association is constituted for the purpose of taking assignment of the functions and powers of the Body Corporate/s of the sectional title schemes comprising the Development and to manage the collective interests common to its members.

4.2 Whereas-

4.2.1 in accordance with this Constitution all the members of the respective Bodies Corporate of the Sectional Title Scheme/s shall be members of the Welmoed Village Property Owners Association (the "Association") and the functions and powers of the Bodies Corporate are herein assigned to the Association, subject to clause 4.2.3 hereunder; and

4.2.2 a condition is imposed by the Developer in terms of Section 11(3)(b) of the Act in respect of the Sectional Title Schemes whereby the transfer of a unit without the consent of the Association is prohibited; and

4.2.3 in accordance with regulation 6(4) of the STSMA, the Developer has substituted the whole of the management rules set out in the Regulations to the STSMA with this Constitution and as a result the management rules as set out in the Regulations will not apply to the management of the Estate or the Association except for the rules that cannot be substituted, added to, amended or withdrawn as per regulation 30 of the STSMA as amended ; and

4.3 The Association shall:

4.3.1 have legal personality, and be capable of suing and being sued in its own name; and

4.3.2 not operate for profit for the benefit of the Members.

4.4 No Member in his personal capacity shall have any right, title, or interest to or in the funds or assets of the Association which shall vest in and be controlled by the Trustees.

5. OBJECTS

5.1 The main objects and powers of the Association are:

5.1.1 The exercise of control over:

5.1.1.1 The maintenance of all dwellings, including the external facades and roof thereof, which maintenance is to be carried out by and at the expense of the Owner;

5.1.1.2 The maintenance of all buildings and/or structures erected or to be erected on the Estate and which maintenance is to be carried out by and at the expense of the Association;

5.1.1.3 The maintenance of all Private Open Spaces and Common Property including the landscaping of same, all facilities and amenities located on Private Areas and common property and which maintenance is to be carried out by and at expense of the Association;

5.1.1.4 The maintenance and upkeep of all private combined services (water, sewers, sewerage pump stations, roads, stormwater and electrical services);

And the following ancillary objects:_

5.2 The promotion, advancement and protection of the interests of the Members generally, in all matters affecting the Estate;

5.3 The formulation, enforcement, modification, amendment, additions and deletions of Estate Rules and Regulations;

5.4 To enter into any agreements including service agreements with the Local Authority for the provision of services, inter alia including the provision of water, electricity and sewerage services to the Association and where required to supply such services to the various Bodies Corporate within the Estate;

5.5 to act as a Property Owners Association established in terms of Section 29 of the SMPBL for the Development, and in particular to procure that the matters referred to in last mentioned section are to be adhered to and complied with;

5.6 to take transfer of those portions of the Development that are designated by the owner thereof as common areas that are to be owned by the Association for the benefit of its members;

5.7 to enter into agreements of servitude in its favour over portions of land within

the Estate for the benefit of its members;

5.8 to administer, manage, oversee, maintain, and control the Common Areas;

5.9 to implement, manage, oversee and control all security aspects of the Estate;

5.10 to enter into agreements for the provision of services, *inter alia* including the provision of water, electricity and sewerage services to the Association and where required to supply such services to the various Bodies Corporate within the Estate;

5.11 to administer and enforce the Waste Management Plan, any Architectural Rules which may be introduced, and the Estate Rules;

5.12 to control the registration of transfer of Erven and Units in the Development and ensure compliance within the Estate with all conditions imposed by the Local Authority when approving the Master Plan in respect of the Estate;

5.13 to enter into mandates with estate agencies to sell and rent properties in the Estate, on the condition that the estate agents undergo basic training with regard to the manner in which the Estate operates and its' rules;

5.14 oversee, maintain, and control the Development, ensure in general that high standards are adhered to and to regulate and control the harmonious development of the Estate;

5.15 to delegate the management of the Association to a third party.

5.16 The Association, through Trustees, shall have all the powers that are necessary to accomplish the fulfilment of the aforegoing objects including, but not restricted to, the powers specifically contained in this Constitution.

6. CONTROL OF ASSOCIATION BY DEVELOPER

It is recorded that, having regard to the objects, purpose and aim of the Association set out in clause 5 above, it is considered imperative for the successful execution and implementation of the Development that the Developer should retain effective control of the Association until the whole of the Development has been fully developed. The Developer shall, until such time that the last erf or unit in the Development is sold and transferred, have a veto right with regards to any matter contained in this Constitution and/or the Rules of the Association or with regard to any other matter requiring a vote or decision to be taken in respect of any amendment and/or addition to the Rules or to

the Constitution of the Association.

7. MEMBERSHIP:

7.1 The Members of the Association shall be:

7.1.1 the Developer;

7.1.2 every Owner provided that where an Owner comprises more than one person, such person shall be deemed jointly to be one Member of the Association and shall be jointly and severally liable to comply with their obligations as a Member.

7.2 An Owner of an Erf and/or a Unit shall become a Member of the Association upon registration of transfer of the Erf or Unit into his name.

7.3 When a Member is no longer the registered owner of any Erf or Unit, he shall *ipso facto* cease to be a Member of the Association.

7.4 The rights and obligations of the Members shall rank in accordance with the provisions of this Constitution.

7.5 Anything to the contrary hereinbefore contained or implied notwithstanding, the cessation of his membership shall in no way release a Member from any obligation undertaken by him prior to the cessation of his Membership pursuant to :

7.5.1 any provision of the Constitution of the Association; or

7.5.2 any further or ancillary guarantee, commitment, or obligation which such Member may have undertaken.

7.6 Membership shall be personal to the natural persons or Entities in question and may not be assigned or transferred by them to any other natural person or Entity.

7.7 The Association shall maintain at the Office a register of Members, which shall be open to inspection by Members.

7.8 The Trustees may by regulation provide for the issue of a membership certificate, which certificate shall be in such form as may be prescribed by the Trustees;

7.9 The Trustees may by regulation further prescribe appropriate application documentation including inter alia the following:

7.9.1 an application to register as a Member of the Association;

7.9.2 consent to transfer a Unit or Erf in favour of such a proposed Member from any existing Member, provided always that this paragraph 7.9.2 will not apply in respect of the transfer or alienation by the Developer of an Erf or Unit in favour of a proposed Member.

7.9.3 an undertaking by a proposed Member to comply with all the obligations imposed on Members in terms of the Constitution, which undertaking must be signed by the proposed Member and deposited with the Association prior to the Association issuing a clearance certificate or;

7.9.4 any other permission required to be given by the Trustees.

8. DEVELOPER'S RIGHTS

8.1 The Developer shall, in its absolute discretion, be entitled to apply and submit for the approval of the Local Authority, the layout and/or zoning and/or size and/or boundaries of Erven and/or the extent and position of streets and Common Areas comprising the Development, and/or for any variation of any of the aforegoing, and Members shall be bound thereby and shall have no claims of whatever nature against the Developer arising therefrom. Insofar as the consent of a Member is formally required for any of the aforegoing, the Developer (represented by any one of its authorised representatives) is irrevocably granted a power of attorney to grant any/all such consents on behalf of Members, as may be required.

8.2 In particular it is recorded that the Association does not have the power or capacity in any way to interfere with, object to, restrict or in any way provide an obstacle of any nature to the Developer with the planning, implementation or construction of any part or aspect of the Development or any Improvements thereon.

8.3 Notwithstanding any provisions to the contrary set out elsewhere in this Constitution, there will be no restriction on the Developer to develop, transfer, sell, lease, or alienate the whole or any portion of the Development, nor will the Developer be obliged to obtain any consent or clearance of whatsoever nature

from the Association or its Members in respect of the construction of any improvements on any part of the Development.

8.4 The Developer, or it's successors in title is exempted from payment of levies on any unsold property registered in its favor, which exemption only terminates on the date which all property registered in favor of the Developer are transferred to third parties.

8.5 The Developer shall for as long as it remains a Member of the Association, be entitled to appoint a Managing Agent to administer the Association, at a market related fee in terms of a written appointment agreement. Thereafter the managing agent shall be appointed by the Trustees;

8.6 The Board of Trustees shall consist of not less than 3 (three) nor more than 5 (five) Trustees. Until the Developer has transferred all property in the development scheme registered in its favor to third parties, the Developer shall be entitled to appoint not less than 3 (three) of the Trustees to serve on the Board of Trustees;

8.7 It is recorded that there will be no restriction whatsoever on the ability of the Developer to pass transfer of any Erf or Unit and that accordingly the Developer does not need a clearance certificate from the Association before it will be entitled to dispose of or transfer any Erf or Unit to any person or Entity;

8.8 The Developer shall not be liable to compensate the Association in respect of any claims, losses, expenses, or damages suffered by the Association as a result of any act or omission on the part of the Developer in respect of any civil services installation on the Estate or any license or permit obtained by the Developer in respect of the Estate or any part thereof, except where such claims, losses, expenses, or damages was occasioned by the wilful misconduct or gross negligence of the Developer.

8.9 The Developer shall have the right to register servitudes of right of way and/or servitudes for the conveyance of electricity, water, sewerage, telephone lines, information technology, security systems and any other type of services and/or servitudes of encroachment or servitudes in respect of any common walls or structural support or any other servitudes in respect of any other type of use over any Erf, Unit, Building or Common Property in any Sectional Title Scheme in favour of the Association or in favour of any adjoining Erf or any other part of the Development that in the opinion of the Developer is reasonably necessary for the proper functioning of the Development of the whole or any part of the Development. In particular it is recorded that servitudes of right of way may be

registered in favour of the Association for the benefit of its Members over portions of the common property of any Sectional Title Scheme along routes that will be delineated by the Developer on any Sectional Plan or on other servitude diagrams, and specifically a servitude of vehicular right of way over portions of the common property of a Building. The Association accepts and shall be bound by and consents to registration of such reciprocal servitudes between Bodies Corporate and the Association as are provided for herein. The Association shall have the right to allow all its members to move on foot and with vehicles over portions of the common property of any Sectional Title Scheme along routes as are delineated by the Developer in the Master Plan.

9. MEMBERS' RIGHTS AND OBLIGATIONS:

9.1 Membership of the Association shall be compulsory for every Owner on the Estate and such membership will commence simultaneously with the transfer of an Erf / Unit into the name of the Owner;

9.2 Every Member is obliged to comply with:

9.2.1 the provisions of this Constitution and any regulations passed by the Association in terms hereof;

9.2.2 the provisions of the Waste Management Plan, any Architectural Rules that may be introduced, and the Estate Rules;

9.2.3 any agreement concluded by the Association insofar as such agreement may directly or indirectly impose obligations on a Member in its capacity as a Member;

9.2.4 any directive given by Trustees in enforcing the provisions of this Constitution.

9.3 The rights and obligations of a Member are not transferable, and every Member shall to the best of his ability further the objects and interests of the Association.

9.4 The Members shall be jointly liable for expenditure incurred in connection with the Association as more fully later referred to herein. If a Member consists of more than one person such persons shall be jointly and severally liable in solidum for all obligations of a Member in terms of this Constitution.

9.5 When selling an Erf or Unit the Member will have to apply to the Association to

get accreditation for the estate agent of their choice if the estate agent is not already accredited with the Association.

9.6 An Ordinary Member shall not sell, dispose of, or give transfer of an Erf or Unit unless:

9.6.1 the proposed transferee has irrevocably bound himself to become a Member of the Association and to observe the provisions of the Constitution for the duration of his ownership of the Erf and/or Unit;

9.6.2 the Association acting through the Trustees or the Managing Agent has issued a prior written clearance that all outstanding levies and all amounts of whatever nature owing to the Association by such Member have been paid and that the Member is not in breach of any of the provisions of this Constitution; and

9.6.3 the proposed transferee acknowledges that upon the registration of transfer of the Erf and/or Unit into his name, he shall *ipso facto* become a Member of the Association.

9.6.4 the conditions set out in 9.6.1 to 9.6.4 above are incorporated in the relevant Deed of Sale in terms whereof the transferee acquires the Erf or Unit in question.

9.7 An Ordinary Member shall not without the prior written consent of the Association, who in granting or refusing such consent shall act in its absolute discretion, apply to the Local Authority or any other relevant authority for the subdivision or rezoning of an Erf or Unit owned by the Member, or make application for any consent use or waiver or departure or any other dispensation whatsoever in respect thereof. For the avoidance of doubt, it is recorded that this clause 9.7 does not apply to the Developer who does not need the consent of the Association in respect of the aforesaid or any other applications.

9.8 A Member is required to ensure that the occupant of his Erf or Unit, whether such occupation arises from an agreement of lease or otherwise, complies with all applicable provisions of this Constitution and the Regulations. Without detracting from the aforegoing the Member shall remain bounded by this Constitution notwithstanding such occupation and be jointly and severally liable for the acts and omissions of the occupant and for fulfilling his obligations under this Constitution.

9.9 An Ordinary Member may not resign from the Association.

9.10 Each Member shall, if he / she / it wishes to lease out any Residential dwelling and/or Unit:

9.10.1 Ensure that the estate agent of its choice obtain accreditation from the Association, if he/she/it is not already accredited, and undergo basic training to understand the values, objectives as well as the Rules of the Estate, which training shall form part of the accreditation process administered by the Managing Agents; or

9.10.2 enter into a written lease with the tenant –

9.10.2.1 in which the tenant is required specifically to acknowledge that he has been apprised of the existence and ambit of the Estate Rules,

9.10.2.2 in which the tenant gives an undertaking that he will abide by the Estate Rules,

9.10.2.3 in which the tenant is required to report to the Association and register his full details for security reasons prior to the taking of occupation.

9.10.3 be responsible to ensure that the tenant does thus register himself with the Association prior to taking occupation; and

9.11 The rights and obligations of a Member shall not be transferable and every Member shall –

9.11.1 To the best of his ability further the objects and interests of the Association;

9.11.2 Observe all the Rules and Regulations made by the Association;

9.11.3 Be jointly liable with all the Members for expenditure properly incurred in connection with the Association, insofar as third parties are concerned, provided that nothing contained in this Constitution shall prevent a Member from ceding his rights in terms of this Constitution as security to the mortgagee of that Member's Erf or Sectional Title Unit.

10. WASTE MANAGEMENT PLAN, ARCHITECTURAL RULES, AND ESTATE RULES

10.1 The Waste Management Plan, any Architectural Rules, and the Estate Rules constitute an integral part of this Constitution. It is recorded that the Waste Management Plan, any Architectural Rules, and the Estate Rules, read together with the conduct rules of every Body Corporate, contain the procedures, requirements, and guidelines to be adhered to by every Owner.

10.2 All Improvements shall be of sound construction and shall comply with the provisions of any applicable Architectural Rules that form part of the Rules of the Body Corporate in question.

10.3 No construction or erection of any Improvements or alterations to and no renovation of any Building or Unit that is undertaken by any party other than the Developer may commence prior to the due and proper approval of plans for such Improvements, alterations, or renovation by both the Review Committee and, where required, the Local Authority, in accordance with the following provisions:

10.3.1 the Owner shall submit to the Review Committee for approval a full set of the proposed building plans or alteration plans which indicate both construction and design details;

10.3.2 the Owner shall be liable for payment of the reasonable cost of professional scrutinising and examination of such plans by the Review Committee;

10.3.3 after the approval of such plans by the Review Committee the plans shall be submitted to the Local Authority for approval.

10.4 No plan shall be submitted to the Local Authority unless it bears the endorsement of approval of the Review Committee, clearly dated, certifying that the plan complies with any Architectural Rules.

10.5 When effecting the Improvements or alterations or renovations contemplated in 10.3 the Owner shall at all times comply strictly with any Architectural Rules as well as all conditions and standards imposed by the Local Authority insofar as these may be additional to the provisions of any Architectural Rules. No Member shall be entitled to deviate in any manner whatsoever from any plan approved by the Review Committee and the Local Authority unless the prior written approval of both the Review Committee and the Local Authority for such

proposed deviation has been obtained.

10.6 No Member shall be entitled to challenge or contest any of the provisions of the Waste Management Plan, any Architectural Rules, or the Estate Rules.

10.7 No application for the amendment of the Waste Management Plan shall be made to the Local Authority unless the prior written consent of the Trustees has been obtained thereto.

10.8 No amendment of any Architectural Rules by a Body Corporate shall acquire any force or effect unless the prior written consent of Trustees has been obtained thereto.

10.9 No Body Corporate shall adopt any conduct rules in terms of section 35(1)(b) of the Sectional Titles Act which are in conflict with any of the Estate Rules unless the prior written consent of Trustees has been obtained thereto.

11. SERVICES

11.1 Water

11.1.1 The Association shall supply each Body Corporate, each Unit, and each Erf with water at the cost thereof to the Association over and above the cost of water as in 11.1.6 herein below, which shall include all costs of and incidental to such supply including the cost of installation, maintenance and servicing of pipelines, pumps, metres, equipment, and materials.

11.1.2 The Body Corporate and all Owners of Erven, Residential dwellings or Units shall be liable for and shall pay the Association on demand all charges arising from water supplied to or consumed in or on an Erf, Residential dwelling or the Building comprising a Sectional Title Scheme including the common property.

11.1.3 The liability of a Body Corporate and the Owners in question for such charges shall be in accordance with separate submeters serving the Sectional Title Scheme, Unit, or Erf in question which the Association shall be entitled to install at the cost of such Body Corporate or Owner, as the case may be.

11.1.4 Where water charges are calculated and payable in terms of this clause 11.1, any value added tax levied in respect of the supply of such water

shall be paid by the Body Corporate or Owner in question.

11.1.5 The Association will be entitled to charge interest at the Prime Rate plus 3 (three) percentage points on any charges payable by an Owner or Body Corporate in terms of this clause 11.1 which interest will be calculated from the due date on the balance of the charges owing from time to time until it has been paid in full.

11.1.6 The Association will charge the Body Corporates or Owners for water at a rate equal or less than the approved Local Authority rate for water and in a category of the bulk water meter account for which the Association is paying to the Local Authority. The rate may vary due to water restriction levels as announced by the Local Authority or when amended tariffs are approved by them.

11.1.7 All individual portions in the Estate will be metered and sound regular monthly water balances will be undertaken by the Association.

11.1.8 The Association will comply to all Water Services Bylaw conditions, restrictions when applicable and fines associated with the Bylaw.

11.1.9 The Association will be responsible for the regular payment of the bulk water account to the Local Authority.

11.1.10 If a Body Corporate or an Owner dispute a water meter reading, the meter must be tested at a SANAS registered testbed, after the payment of the testing fee and the new water meter replacement by the Body Corporate or the Owner. If the meter is found to register 2% or more than the actual flow, then the contested account must be adjusted to suit the period in question and retrospectively for a maximum period of one year, if applicable. If the error is less than 2%, all costs are for the complainant's account.

11.1.11 The Association will be responsible for any callout fee reported / requested by a Body Corporate or any Owner within the Estate, which fee will be recovered from the Body Corporate or the owner in keeping with the provisions of this clause 11.1.

11.2 Electricity

11.2.1 Lighting on Common Areas shall be supplied through separate electricity

supply meters and the cost incurred by the Association in respect thereof shall be recovered from Members as part of the POA Levies.

11.2.2 Electricity for consumption by Owners of Units shall be supplied in bulk by Eskom to the Association, and in turn distributed by the Association through prepaid energy meters to individual Owners. Accounts in respect thereof shall be rendered to Owners by the Association as and when required.

11.2.3 Electricity for communal lighting on common property not forming part of Common Areas shall be purchased and paid for by the Body Corporate of the Sectional Title Scheme.

11.2.4 The Association will be entitled to erect, install, and maintain a photo voltaic (PV) system to service the entire Development on any Erf and building, together with a backup battery system designed and scaled to be able to provide the entire Development with backup during power outages and for peak shaving. Such PV panels may be connected to a battery system that is not located on the same Erf.

11.3 Security, Communications and TV

11.3.1 Each Body Corporate or subdivided erven will be responsible for security and will take all steps necessary to provide and maintain adequate security measures for the Development.

11.3.2 It is recorded that the Developer is providing a sophisticated security system for the Estate and each Sub-Divided Development and that the owners of Erven and/or Bodies Corporate of each Sub-Divided Development will be obliged to enter into a security agreement with the Developer's nominated service provider and further be obliged to integrate security systems as per clause 11.3.5 below, which security systems as well as the monthly payment of the security services will be for the account of the Bodies corporate.

11.3.3 All Bodies Corporate shall co-operate with the Association to integrate and maintain security systems that will integrate the security systems of the Association with those of the various Bodies Corporate, including the security service providers.

11.3.4 All Bodies Corporate shall maintain and operate such security systems.

11.3.5 All Bodies Corporate shall be obliged to integrate security systems such as access control systems, alarm systems, intercoms and close circuit video / camera systems which are compatible and capable of being integrated with the systems of the Association, and which have been approved by the Association in writing.

11.3.6 It is recorded that the aforesaid provisions are incorporated as being of crucial importance for purposes of a cohesive and effective security system for the Development, and in the best interests of all Bodies Corporate and their Members. All Bodies Corporate and Members shall accordingly be obliged to participate therein.

11.4 Maintenance of Common Areas

11.4.1 Landscaping and gardening and the on-going maintenance of Common Areas shall be the responsibility of the Association.

11.4.2 Landscaping and gardening and the on-going maintenance of Common Areas in each Erf owned by a Body Corporate shall be the responsibility of the Association.

11.5 Maintenance of Buildings

11.5.1 If, in the opinion of the Trustees, a Body Corporate or a Member fails to maintain the common property which is its responsibility in keeping with the general standard of the other Sectional Title Schemes in the Development and such Body Corporate fails or refuses to do so despite reasonable notice from the Trustees to undertake such maintenance, the Association shall be entitled, at the cost of such Body Corporate, to undertake such necessary maintenance and the Body Corporate shall, upon demand, be liable for payment of all costs so incurred.

11.5.2 The Association will be entitled to charge interest at the Prime Rate plus 3 (three) percentage points on any amounts payable by a Body Corporate in terms of clause 11.5.1 which interest will be calculated from the due date on the balance of such amounts owing from time to time until it has been paid in full.

11.6 Sewerage

11.6.1 The Association shall supply each Body Corporate, each Unit, and each Erf with a waste water disposal service at the cost thereof to the Association over and above the cost of such services as in 11.6.6 herein below, which shall include all costs of and incidental to such supply including the cost of installation, maintenance and servicing of pipelines, pumps, equipment, and materials.

11.6.2 The Body Corporate and all Owners of Units therein shall be liable for and shall pay the Association on demand all charges arising from the waste water service supplied to in or on an Erf and the Building thereon and the common property comprising a Sectional Title Scheme.

11.6.3 The liability of a Body Corporate and the Owners in question for such charges shall be in accordance with the rates and costs levied by the Local Authority serving the Sectional Title Scheme, Unit, or Erf in question which the Association shall be entitled to levy such Body Corporate or Owner, as the case may be.

11.6.4 Where waste water services charges are calculated and payable in terms of this clause 11.6, any value added tax levied in respect of the supply of such service shall be paid by the Body Corporate or Owner in question.

11.6.5 The Association will be entitled to charge interest at the Prime Rate plus 3 (three) percentage points on any charges payable by an Owner or Body Corporate in terms of this clause 11.6 which interest will be calculated from the due date on the balance of the charges owing from time to time until it has been paid in full.

11.6.6 The Association will charge the Body Corporates or Owners for waste water services at a rate equal or less than the approved Local Authority rate for such service which the Association is paying to the Local Authority. The rate may vary when tariffs are approved by the Council of the Local Authority.

11.6.7 It is recorded that the Association shall be obliged to enter into a contract with the Developer's nominated provider for the provision of sewerage services if such services are not rendered by the Local Authority at the time of transfer of any Units in the Estate and shall render an account to the Association in respect thereof. The Association will include in its levy account a contribution for sewerage along with e.g., security services, outside lighting, etc. rendered to Bodies Corporate.

11.7 Storm water management

11.7.1 The Association shall manage and maintain a storm water management service and system for the Estate.

11.7.2 The cost thereof to the Association, which shall include all costs of and incidental to such supply including the cost of installation, maintenance and servicing of pipelines, pumps, equipment, and materials, shall be recouped from the Body Corporates and Owners as provided for herein under clause 12.

11.7.3 The conditions of approval of the Estate require provision to be made for an effective rainwater harvesting system for all roof water. The volume of the storage facilities should be based on $0{,}02m^3/m^2$ roof area. In the case of the Estate there is a larger focus on ground water recharge than rainwater harvesting, for which purpose the courtyards have various landscaped areas to which stormwater is discharged, allowing groundwater sources to be recharged.

11.7.4 Irrigation for the Estate will take place by means of inter alia borehole water extraction. Management and maintenance of the system is the sole function of the Association, and no Body Corporate or Owner may intervene or disrupt the service.

11.7.5 The Association will maintain the storm water network, consisting of inlet structures and manholes by removing sand, silt, and litter on a six monthly basis and at least once before the winter season, to allow for maximum groundwater recharge.

11.7.6 Surface run-off structures such as headwalls, canals, pipes, and gabions will be maintained and cleaned on a six monthly basis and at least once before the winter season.

11.8 General

11.8.1 The Association shall have the right to convey water, electricity, sewerage, telephone information technology, telecommunication, security communication, and any other services over any Erf or Building or any other portion of the Development, whosoever is the owner thereof, and shall have the right of access to such premises for the purposes of

installing, replacing, maintaining, and/or repairing such services.

11.8.2 The Owners and Bodies Corporate will allow reasonable access to employees or representatives of the Association into the Buildings or Units for purposes of maintaining any pipes or equipment or in general any of the systems necessary for the conveyance or provision of the services referred to in 11.8.1 above.

11.8.3 Furthermore, and without derogating from the aforesaid all Members will be obliged to provide their co-operation and to allow reasonable access to employees or representatives of the Association to enable them to install, implement and maintain any pipes or other modes of conveyancing of the services referred to in 11.8.1 above.

11.8.4 The Developer shall have the right to register servitudes of right of way and/or servitudes for the conveyance of electricity, water, sewerage, telephone lines, information technology, security systems and any other type of services and/or servitudes of encroachment or servitudes in respect of any common walls or structural support or any other servitudes in respect of any other type of use over any Erf, Unit, Building or common property in any Sectional Title Scheme in favour of the Association or in favour of any adjoining Erf or any other part of the Development that in the opinion of the Developer is reasonably necessary for the proper functioning of the development of the whole or any part of the Development. In particular it is recorded that servitudes of right of way may be registered in favour of the Association for the benefit of its Members over portions of the common property of any Sectional Title Scheme along routes that will be delineated by the Developer on any Sectional Plan or on other servitude diagrams, and specifically a servitude of vehicular right of way over portions of the common property of a Building. The Association accepts and shall be bound by and consents to registration of such reciprocal servitudes between Bodies Corporate and the Association as are provided for herein. The Association shall have the right to allow all its members to move on foot and with vehicles over portions of the common property of any Sectional Title Scheme along routes as are delineated by the Developer in the Master Plan.

11.8.5 The Association is obliged to manage the collection and removal of solid waste for all its members by implementation of the Welmoed Village Estate Waste Management Plan. Nothing herein restricts the right of the Association to alter or amend the WMP and allocation subject to

compliance with the Stellenbosch Municipality: By-Law Relating to Integrated Waste Management (2020).

11.8.6 The Association is obliged to manage and maintain all access roads, walkways, and parking areas for all its members, amongst others by maintaining road markings, signage, paving, kerbs, and surfaces. Nothing herein restricts the right of the Association to temporarily close any such access roads, walkways, and parking areas for maintenance or special events, following due notice to all Bodies Corporate of such closure, at least 14 (fourteen) days in advance, unless due to an unforeseen occurrence.

11.8.7 The Developer shall for as long as it remains a Member of the Association, have the sole right to appoint service providers to assist with management and maintenance of any and / or all services and infrastructure, the collection and removal of solid waste and in general for the implementation of the Welmoed Village Estate Operational and Stormwater Management Plans. Nothing herein restricts the right of the Developer to make such appointments and to advise the Local Authority accordingly. Thereafter the service providers shall be appointed by the Trustees.

12. LEVIES

12.1 The Association shall establish and maintain a levy fund for the purposes of meeting all expenses of the Association in respect of:

12.1.1 the control, management, and administration of the Development;

12.1.2 in general, the attainment of its main objects as described in its Constitution;

12.1.3 the maintenance of Common Areas and the costs of services such as electricity, water and sewerage consumed or used on the Common Areas;

12.1.4 the supply of any services rendered by the Association;

12.1.5 payment of all expenses necessary or reasonably incurred in connection with the management of the Association;

12.1.6 the costs of the provision of security to the Development; and

12.1.7 in general, the cost of fulfilling any of the obligations of the Association.

12.2 The Trustees shall estimate the amount which will be required by the Association to meet the expenses referred to in 12.1 during each year, together with such estimated deficiency, if any, as shall result from the preceding year and may include in such estimate an amount to be held in a reserve to meet anticipated future expenditure not of an annual nature;

12.3 The Association shall be entitled to require Members, in accordance with the procedures set out in 12.4 below, to make contributions to such levy fund (in the form of levies), for the purposes of satisfying the expenses referred to in clause 12.1.

12.4 The procedure for raising and collecting POA Levies shall be as follows:

12.4.1 The Trustees shall submit the estimated expenditure referred to in 12.2 to the annual general meeting of the Association for consideration. It is recorded that:

12.4.1.1 the meeting shall be obliged to approve the following items of expenditure that are charged to the Association by outside third parties:

12.4.1.2 all rates and taxes payable by the Association to the Local Authority in respect of the Development;

12.4.1.3 the costs of the Developer's nominated provider of security services, including security guards, monitoring and surveillance;

12.4.1.4 the fee payable to any managing agent with whom the Association has entered into an agreement or remuneration payable to an estate manager and for a management office.

12.4.2 The Association shall have a discretion with regards to approval of the level of services, and the cost thereof, that the Association requires in respect of e.g., cleaning, gardening, general maintenance, etc.

12.5 The Association shall have its annual general meeting at least 60 (sixty) days prior to the financial year end of the Association and, subject to 12.4.1.1 above, decide on proposed increases of the POA Levies and the amounts to be charged

to Members in respect thereof.

12.6 Each Member shall, as consideration for the maintenance etc. of the Common Areas, Common Property and Common Services and the delivery of services by the Association to and on behalf of all its Members, as contemplated in clause 13 below, be levied with such proportion of the total POA Levies resolved upon in terms of 12.4.2 as equates to the proportion between such Member's Membership Quota and the total Membership Quotas of all Members of the Association;

12.7 The Association shall notify the Bodies Corporate at least 45 (forty-five) days prior to their respective annual general meetings of the POA Levies to be charged for the following year;

12.8 The Bodies Corporate must notify their members at least 28 (twenty-eight) days before their annual general meetings, in compliance with the Sectional Titles Act, and give them the details of the increases in the POA Levies which have been resolved upon by the Association's annual general meeting and communicated to the Bodies Corporate in terms of clause 12.4. above, and which must be included in the budgets of the Bodies Corporate that are tabled for approval;

12.9 At their annual general meetings, the Bodies Corporate shall resolve to impose the following levies on their own members:

12.9.1 the POA Levies imposed by the Association on the members in question, as communicated to the Bodies Corporate in terms of 12.4; and

12.9.2 the Bodies Corporate own levies as determined by its members in the meeting pursuant to the provisions of the Sectional Titles Act.

12.10 Each Body Corporate shall be responsible to collect on behalf of the Association the POA Levies pertaining to the members of that Body Corporate.

12.11 The Association may, from time to time by a resolution adopted by the Trustees, make special levies upon Members effective from the date of passing of the applicable resolution in respect of such expenses referred to in clause 12.1 which have not been included in the POA levies approved by the Association's annual general meeting in terms of 12.4, and such levies may be imposed and shall be payable in one sum or by such instalments and at such time or times as the Trustees may determine in its resolution. The decision of the Trustees in

calculating such special levies shall be final and binding on all Members.

12.12 Any amount due by a Member by way of a POA Levy shall be a debt due by him to the Association payable on such time or times as determined by the Trustees. The Trustees may determine that a levy is payable annually in advance in respect of the year for which it is calculated or in such monthly instalments as it may determine.

12.13 Until such time as a new POA Levy pertaining to a forthcoming year has been determined pursuant to the provisions of this clause 12, every member of the Association shall continue to pay the existing POA Levy currently in force, on account of the new POA Levy yet to be determined.

12.14 The obligation of a Member to pay a levy shall cease upon his ceasing to be a Member save that he shall remain liable for all levies calculated up to the date upon which he ceases to be a Member.

12.15 No levies paid by a Member shall be repayable by the Association upon cessation of the Member's membership.

12.16 A Member's successor in title to an Erf or Unit shall be liable, as from the date upon which he becomes a member pursuant to registration of transfer of such Erf or Unit in his name, to pay the levies attributable to that residential property.

12.17 A Member shall be obliged to pay interest on any levy not paid on the due date at the Prime Rate plus 3 (three) percentage points per annum calculated on the levies due from time to time from the due date until the date that the arrear levies have been paid in full to the Association.

12.18 The Association shall be entitled to require a Member to sign a debit order authority to collect levies directly from an operating bank account.

12.19 If any Member fails to make payment on due date of levies and/or other amounts payable by such Member including interest, the Association may give notice to such Member requiring him to remedy such failure within such period as the Association may determine and should he fail timeously to make such payments, the Association may institute legal proceedings against such Member without further notice and such Member will be liable for and shall pay all legal costs on the scale as between attorney and own client together with collection commission and any other expenses and charges incurred by the Association in recovering such amounts.

12.20 No Member shall (unless otherwise determined by the Trustees) be entitled to any of the privileges of Membership including:

12.20.1 his right of access to and use of any of the Common Areas;

12.20.2 his right to vote until he shall have paid every levy and interest thereon and any other amount which may be due and payable by him to the Association.

12.21 The Association shall not be entitled to undertake on behalf of its Members any permanent works of major capital nature without the sanction of a resolution of the Members adopted during a general meeting of Members. In this sub-clause "works of a major capital nature" means works that will cost more than R300 000 (three hundred thousand Rand) (excluding Value Added Tax).

12.22 The Trustees shall be empowered to determine the rate of interest from time to time chargeable upon arrear levies, provided that such rate of interest shall not exceed the rate laid down in terms of the Consumer Protection Act.

12.23 No Erf, Unit or Residential dwelling in the scheme shall be capable of being transferred without a certificate first being obtained from the Association confirming that all levies and interest have been paid up to date.

12.24 The Developer is exempted from payment of levies on any unsold property registered in its favor, which exemption only terminates on the date which all property registered in favor of the Developer is transferred to third parties.

13. MAINTENANCE AND ADMINISTRATION OF COMMON AREAS, PRIVATE OPEN SPACE, COMMON SERVICES, AND COMMON PROPERTY

13.1 The Association shall maintain, repair, and keep in good order and condition all Common Areas and Private Open Spaces where necessary refurbish same.

13.2 The Association will provide, administer, and maintain all Common Services.

13.3 The Association shall not be obliged to maintain any Common Property which is not part of the Common Areas or Private Open Spaces as defined. Those portions of the Common Property shall be administered and maintained by the Bodies Corporate of the Sectional Title Schemes in question in accordance with the provisions of this Constitution and the Sectional Titles Act.

14. AUTONOMY WITHIN THE DEVELOPMENT

14.1 The Development shall be developed as an integrated development, it being the intention that, subject to the provisions of this Constitution:

14.1.1 each Erf or Sectional Title Scheme on an Erf will be autonomous;

14.1.1.1 each Sectional Title Scheme established or to be established within the Development will be an autonomous legal Entity with its own Sectional Plan and Body Corporate;

14.1.1.2 every Owner and his guests and authorised occupiers of Units will be entitled to use the Common Areas;

14.1.1.3 each Body Corporate or registered Owner of an Erf will be responsible for the cost of maintaining its common property which is not part of Common Areas or landscaping and will be responsible for payment of all costs and expenses relating thereto, including rates and taxes and other municipal charges.

14.1.2 The Constitution and Rules developed for each Erf or Sectional Title Scheme on an Erf may not be conflicting with this Constitution.

15. THE TRUSTEES

15.1 The Trustees of the Association shall be constituted as follows:

15.1.1 The Board shall consist of not less than 3 (three) nor more than 5 (five) Trustees. Until the Developer has transferred all property in the development scheme registered in its favor to third parties, the Developer shall be entitled to appoint not less than 3 (three) of the Trustees to serve on the Board.

15.1.2 A Trustee shall, by accepting his appointment as such, be deemed to have agreed to be bound by the provisions of this Constitution.

15.1.3 Each Trustee shall continue to hold office until the annual general meeting following his appointment, at which meeting such Trustee shall be deemed to have retired from office but will be eligible for re-election at such meeting.

15.1.4 A Trustee shall be deemed to have vacated his office as such upon

15.1.4.1 his estate being sequestrated, whether provisionally or finally or upon his surrendering his estate.

15.1.4.2 him making any arrangement or composition with his creditors.

15.1.4.3 his conviction for any offence involving dishonesty.

15.1.4.4 him becoming of unsound mind or being found lunatic.

15.1.4.5 him resigning from such office in writing.

15.1.4.6 his death.

15.1.4.7 him being removed from office by a resolution of Trustees.

15.1.4.8 him being disentitled to exercise a vote in terms of his Constitution.

15.2 Notwithstanding the fact that a Trustee shall be deemed to have vacated his office as provided in clause 15.1 anything done by such Trustee in the capacity of a Trustee in good faith shall be valid until the fact that he is no longer a Trustee has been recorded in the Minute Book of the Trustees. Should the office of a Trustee fall vacant prior to the next annual general meeting of the Association, the vacancy in question may be filled by the Developer and the person so appointed shall hold office until the next annual general meeting.

15.3 The Developer shall appoint the first Chairman who shall hold office until the first annual general meeting provided that such office shall *ipso facto* be vacated by the Trustee who was appointed Chairman upon his ceasing to be a Trustee for any reason.

15.4 Within 7 (seven) days of the holding of each annual general meeting of the Association the Trustees shall meet and shall elect from their own number the Chairman who shall hold office until the annual general meeting held next after his appointment, provided that the office of Chairman shall *ipso facto* be vacated by the Trustee holding such office upon his ceasing to be Trustee for any reason. In the event of any vacancy occurring in the aforesaid office the Trustee shall meet as soon as reasonably possible to appoint one of their

number as a replacement in such office.

15.5 Save as otherwise provided in this Constitution, the Chairman shall preside at all meetings of the Trustees and all general meetings of the Association and shall perform all duties incidental to the office of Chairman and such other duties as may be prescribed by the Trustees or by Members and shall allow or refuse to permit guests to speak at any such meetings, provided that any such guest shall not be entitled to vote at any meetings.

15.6 If the Chairman vacates the chair during the course of a meeting or is not present or is, for any other reason, unable to preside at any meeting, the Trustee present at such meeting shall choose another Chairman for such meeting.

15.7 If any Chairman vacates his office as Chairman or no longer continues in office for any reason, the Trustees shall elect another Chairman who shall hold office as such for the remainder of the period of offices of the first mentioned Chairman.

15.8 A Trustee shall be disqualified from voting in respect of any contract or proposed contract or any litigation or proposed litigation of any dispute, with the Association, by virtue of any interest he may have therein save with the approval of the remaining Trustees after full disclosure of such interest.

15.9 No contract concluded on behalf of the Trustees shall be valid and binding unless it is signed by the Chairman and one Trustee, the latter specifically appointed as authorised signatory in terms of the Resolution of Trustees whereby the Trustees bind the Association.

15.10 Notwithstanding the provisions of this Constitution, the Trustees may formally resolve to ratify and adopt any unauthorised actions which may have been taken by any Trustee or any representative of the Trustees on behalf of the Association, if the Trustees deem it to be to the benefit of the Association to do so.

15.11 Trustees shall be entitled to be repaid all reasonable and *bona fide* expenses incurred by them in or about the performance of their duties as Trustees and/or Chairman, as the case may be, but save as aforesaid, shall not be entitled to any other remuneration, fees or salary in respect of the performance of such duties.

15.12 Trustees may not make loans on behalf of the Association to Members or to themselves.

16. FUNCTIONS, POWERS, AND DUTIES OF TRUSTEES

16.1 Subject to the express provision of this Constitution, the Trustees shall manage and control the business and affairs of the Association, shall have full powers in the management and direction of such business and affairs, including the right of appointment and dismissal of any Managing Agent, may exercise all such powers of the Association and do all such acts on behalf of the Association which are within the objects of the Association.

16.2 Save as specifically provided in this Constitution, the Trustees shall at all times have the right to engage on behalf of the Association the services of accountants, advocates, attorneys, auditors, architects, engineers, land surveyors, managing agents, town planners or any other professional firm or person or other employees whatsoever for any reason deemed necessary by the Trustees on such terms as the Trustees shall decide.

16.3 The Trustees shall have the right to vary, cancel or modify any of their decisions and resolutions from time to time.

16.4 The Trustees shall have the right to co-opt any person or persons chosen by them. A co-opted Trustee shall enjoy all the rights and be subject to all the obligations of the Trustees provided that such co-opted Trustee shall only serve until the next annual general meeting.

16.5 The Trustees may, should they so decide, investigate any suspected or alleged breach by any Member or Trustee of this Constitution in such reasonable manner as they shall decide from time to time.

16.6 The Trustees may make regulations and rules consistent with this Constitution:

16.6.1 as to the resolution of disputes generally;

16.6.2 for the furtherance and promotion of any of the objects of the Association;

16.6.3 for the better management of the affairs of the Association;

16.6.4 for the advancement of the interest of Members;

16.6.5 for the conduct of Trustees at meetings of Trustees and meetings of the Association;

16.6.6 to levy and collect contributions from Members in accordance with clause 12;

16.6.7 to levy and recover from Members moneys which are necessary to defray the necessary expenses of the Local Authority in the event of the Local Authority imposing any levies and imposts against the Association; and

16.6.8 to assist in administering and governing its activities generally.

16.7 Without in any way limiting the powers granted, the duties and powers of Trustees shall further specifically include:

16.7.1 the determination of what constitutes appropriate maintenance, repairs, additions to and Improvements of all Erven and Units in the Development in strict accordance with the provisions of the Waste Management Plan. The Trustees shall be entitled to require any Owner, who shall be obliged, to repair or renovate any Building or Unit if in the reasonable opinion of the Trustees such Building or Unit requires essential repairs or has become dilapidated;

16.7.2 the entering into of agreements with third parties on behalf of the Association for any purposes of the Association;

16.7.3 the employment on behalf of the Association of agents, servants and any other party and the payment of such persons;

16.7.4 the taking of steps in all matters of common interest in respect of the Association and, without detracting from the generality thereof, such as common sewage, electricity supply, landscaping, maintenance of private roads, refuse facilities and removal of refuse; and

16.7.5 the institution or defence of actions in the name of the Association and to appoint legal representatives for such purpose.

17. PROCEEDINGS AT TRUSTEE MEETINGS

17.1 The Trustees may meet for the dispatch of business, adjourn, and otherwise regulate their meetings as they deem fit, subject to the provisions of this Constitution.

17.2 Meetings of the Trustees shall be held at least once every 3 (three) months.

17.3 The Chairman always has the right to convene meetings of the Trustees.

17.4 A Trustee may, provided he has the support in writing of 2 (two) other Trustees, at any time convene a meeting of Trustees by giving to the other Trustees not less than 14 (fourteen) days written notice of a meeting proposed by him, which notice shall specify the reason for calling such a meeting, provided that in cases of urgency, such shorter notice as is reasonable in the circumstances may be given.

17.5 A resolution in writing signed by all the Trustees shall be valid and effectual as if it had been passed at a meeting of Trustees duly called and constituted.

17.6 The quorum necessary for the holding of any meeting of Trustees shall:

17.6.1 in the circumstances set out in 16.1, consist of 4 (four) persons;

17.6.2 in the circumstances set out in 16.2, consist of 4 (four) persons,

provided that at all times at least one of them must be a representative of the Developer.

17.7 If no quorum is present within 15 (fifteen) minutes after the time for commencement of the meeting then it shall stand adjourned for the same time and place on the following day which is not a Saturday, Sunday or public holiday and, if at such adjourned meeting, a quorum is not present within 30 (thirty) minutes after the time appointed for the meeting, the Trustees then present shall be a quorum.

17.8 Any resolution of the Trustees shall be carried by a simple majority of all votes cast.

17.9 The Chairman shall preside as such at all meetings of Trustees provided that, should at any meeting of Trustees the Chairman not be present within 15 (fifteen) minutes after the time appointed for the holding thereof, those present of the Trustees shall vote to appoint a Chairman for the meeting who shall thereupon exercise all the powers and duties of the Chairman in relation to such meeting.

17.10 A Trustee may be represented at a meeting of Trustees by a proxy provided such proxy is a Trustee.

17.11 The instrument appointing a proxy shall be in writing and signed by the Trustee concerned but need not be in any particular form. The proxy shall be deposited with the Chairman at any time before the time appointed for the commencement of a meeting and shall be valid only for such meeting or any adjournment thereof.

17.12 The Trustees shall:

17.12.1 ensure that minutes are taken of every meeting of Trustees, although not necessarily *verbatim*, which minutes shall be reduced to writing without undue delay after the meeting has closed and shall then be certified correct by the Chairman of the meeting;

17.12.2 cause such minutes to be kept of all meetings of the Trustees in a minute book of meetings of Trustees kept for that purpose;

17.12.3 keep all books of meetings of Trustees in perpetuity; and

17.12.4 on the written application of any Member, make all minutes of their proceedings available for inspection by such Member.

17.13 All resolutions recorded in the minutes of any meeting of Trustees shall be valid and or full force and effect as therein recorded within effect from the passing of such resolutions and until varied or rescinded, but no resolution or purported resolution of Trustees shall be of any force or effect or shall be binding upon the Members or any of the Trustees unless such resolution is competent within the powers of the Trustees.

17.14 Until such time that the last erf or unit in the Development is sold and transferred, the Developer shall have the right to veto any resolution if the impact of such resolution, in the reasonable opinion of the Developer, should such resolution be carried into effect, would negatively affect the image of the Estate, alter the aesthetic nature of the improvements on the Estate or be prejudicial to the ongoing marketing of the Erven and/or Units to sales of Erven and/or Units.

17.15 Save as otherwise provided in this Constitution, the proceedings at any meeting of Trustees shall be conducted in such reasonable manner and form as the Chairman of the meeting shall decide.

18. MANAGING AGENT

18.1 The Developer shall for as long as it remains a Member of the Association, be entitled to appoint a Managing Agent to administer the Association, at a market related fee in terms of a written appointment agreement. Thereafter the managing agent shall be appointed by the Trustees.

18.2 The Trustees shall ensure that there is included in the contract of appointment of a Managing Agent, a provision to the effect that if the Managing Agent is in breach of any of the provisions of his contract or if he is guilty of conduct which at common law would justify the termination of a contract between master and servant, the Trustees may, without notice, cancel such contract of employment and the Managing Agent shall have no claim whatsoever against the Trustees and/or the Association as a result of such cancellation.

18.3 Upon cessation of the Developer's membership of the Association, the Trustees shall have the power, in addition to the powers contained herein, to appoint a Managing Agent in terms of a written contract from time to time, to control, manage and administer the Development and to exercise such powers and duties as may be entrusted to the Managing Agent, including the power to collect levies, provided that a Managing Agent shall be appointed for a year at a time.

18.4 Unless the Developer or the Trustees, as the case may be, notify the Managing Agent to the contrary, such appointment will be automatically renewed from year to year.

19. GENERAL MEETINGS OF THE ASSOCIATION

19.1 The Association shall, within 12 (twelve) months of the date of commencement of the Association hold a general meeting as its first annual general meeting. Thereafter, within 3 (three) months of the financial year end of the Association it shall hold second and subsequent annual general meetings.

19.2 Such annual general meetings shall be held at such time and place, subject to the aforegoing provisions, as the Trustees shall decide from time to time.

19.3 The Trustees may, whenever they deem fit, convene a general meeting and a special general meeting shall also be convened on a requisition made by not less than 25% (twenty five per centum) of Members for the purposes of adding to, amending, substituting or repealing the provisions hereof or should the

Trustees fail to do so such meetings may be convened by the requisitionists themselves provided that notice thereof be given in terms of clauses 20.1 and 20.2.

20. NOTICE OF MEETINGS

20.1 An annual general meeting shall be called by not less than 21 (twenty one) days' notice and a special general meeting by not less than 14 (fourteen) days' notice, as provided in clause 19.3. The notice shall specify the place, the day and the hour of the meeting and, in the case of special business in addition to any other requirements contained in this Constitution, the general nature of that business and the reasons for it shall be given in the manner hereafter mentioned or in such other manner, if any, as may be prescribed by the Trustees to such notices from the Association, provided that a special general meeting or an annual general meeting of the Association shall notwithstanding that it is called by shorter notice than that specified in this Constitution, be deemed to have been duly called if it is agreed to by not less than 60 % (sixty per centum) of Members having a right to attend and vote at the meeting.

20.2 Notice of the annual general meeting and/or a general meeting shall be sent by registered mail, fax, electronic media, or e-mail to Members subject thereto that the sender can produce evidence of the sending of such notice.

21. PROXIES

21.1 A Member may be represented at an annual general meeting and/or special general meeting by a Proxy who must be a Member of the Association.

21.2 The instruments appointing a Proxy shall be in writing signed by the Members concerned or his duly authorised agent in writing but need not be in any particular form provided that where a Member is more than one person any one of those persons may sign the instrument appointing a Proxy on such Member's behalf. Where a Member is a company, the proxy may be signed by any person authorised by resolution of the board of directors of the company or by its secretary and, where a close corporation, by any member of such close corporation and, where an association of persons, by the secretary thereof and, where a trust, by a person duly authorised by the Trustees of such trust.

21.3 The instrument appointing a Proxy and the power of attorney (if any) under which it is signed or a notarially certified copy thereof shall be lodged with the Association at least 24 (twenty four) hours before the scheduled time for the

commencement of the meeting or adjourned meeting concerned. The instrument appointing a proxy shall be valid only for the specific meeting or the adjournment thereof.

21.4 Notwithstanding the aforegoing, the Chairman of the meeting may agree to accept a proxy tendered at any time before or during the meeting.

22. QUORUM

22.1 No business shall be transacted at any annual general meeting or special general meeting unless a quorum is present when the meeting proceeds to transact business and when any Resolution is to be passed. The quorum necessary for the holding of any meeting shall be Members having 25 % (twenty five per centum) of the total voting rights allocated in terms of clause 25 to Members entitled to attend and vote thereat.

22.2 If, within 30 (thirty) minutes after the time appointed for the commencement of the meeting, a quorum is not present, the meeting, if convened on the requisition of Members, shall be dissolved, in all other cases, the meeting shall stand adjourned to the same day in the next week at the same place and time and, if at such adjourned meeting, a quorum is not present, the Members present shall constitute a quorum.

23. AGENDA AT MEETINGS

23.1 In addition to any other matters by legislation or by this Constitution to be dealt with at any annual general meeting, the following matters shall be dealt with at every annual general meeting:

23.1.1 the consideration of the Chairman's report;

23.1.2 the election of Trustees;

23.1.3 the consideration of the financial statements of the Association for the last financial year of the Association preceding the date of such meeting;

23.1.4 the consideration of the budget as presented by the Trustees and consideration of levies as currently levied by the Trustees;

23.1.5 the confirmation of the appointment of the Auditors or other office bearers;

23.1.6 the consideration and approval of the report of the Auditors;

23.1.7 any other business pertinent to such meeting, including any Resolutions proposed for adoption by such meeting and the voting upon any such Resolutions.

24. PROCEDURE AT MEETINGS

24.1 The Chairman shall preside as such at all meetings provided that if he is not present within 15 (fifteen) minutes after the time appointed for the holding thereof, then the Members present at such meetings shall vote to appoint a Chairman for the meeting who shall thereupon exercise all the powers and duties of the Chairman in relation to such meeting.

24.2 The Chairman may, with the consent of any meeting at which a quorum is present (and if so, directed by the meeting), adjourn a meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business that might have been transacted at the meeting from which the adjournment took place. No notice need be given of the adjourned meeting save for an announcement at the meeting of the date, time, and venue of the adjourned meeting unless the meeting is to be adjourned for 30 (thirty) days or more, in which event notice is to be given in the same manner as for the original meeting. Only business left uncompleted at the original meeting may be transacted at the adjourned meeting.

24.3 Save as otherwise provided in this Constitution, the proceedings at any meeting shall be conducted in such reasonable manner and form as the Chairman of the meeting shall decide.

25. VOTING

25.1 At every annual general meeting or special general meeting of the Association every Member present in person or by proxy and entitled to vote shall, subject to 25.7.1, be allocated 1 (one) vote per residential Erf or Unit that such Member owns. Where a residential Erf or Unit is registered in the name of more than one person or Entity, they shall jointly enjoy 1 (one) vote.

25.2 Save as expressly provided for in this Constitution, no person other than a Member duly registered and who shall have paid every levy and other sum (if any) which shall be due and payable to the Association in respect of or arising out of his membership and who is not under suspension, shall be entitled to be

present and to vote on any question either personally or by proxy.

25.3 At any annual general meeting or general meeting, a resolution put to the vote at the meeting shall be decided on an ordinary majority of votes represented by Members entitled to attend and vote thereon present in person or by proxy.

25.4 Voting on any question of adjournment shall be decided on an ordinary majority of votes represented by Members entitled to attend and vote there at present in person or by proxy.

25.5 Every resolution for the addition to, amendment, substitution, or repeal of any provision hereof, and every amendment of a resolution proposed for adoption by a general meeting, shall be seconded at the meeting and, if not seconded, shall be deemed not to have been proposed.

25.6 Unless any Member present in person or by proxy at a meeting shall, before closure of the meeting, have objected to any declaration made by the Chairman of the meeting as to the result of any voting at the meeting, or to the propriety or validity of the procedure at such meeting, such declaration by the Chairman shall be deemed to be a true and correct statement of the voting and the meeting shall in all respects be deemed to have been properly and validly constituted and conducted and an entry in the minutes without a record of the number of votes recorded in favour of or against such motion shall be conclusive evidence of the resolution so recorded if such entry confirms with the declaration made by the Chairman of the meeting as to the result of the voting at the meeting.

25.7 A resolution put to the vote of the meeting of Members shall be decided on a show of hands, unless a poll is (before or on the declaration of a result of the show of hands) demanded by the Chairman of the meeting or by the Developer or any other Member and unless a poll is so demanded a declaration by the Chairman that a resolution has on a show of hands been carried or carried unanimously or by a particular majority or negatived and an entry to that effect in the book containing the minutes of the proceedings of the Company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against such resolution. The demand for a poll may be withdrawn. In the event of:

25.7.1 voting by a show of hands, every Member will have one vote, provided that a proxy or an authorised representative of an Entity shall have only one vote irrespective of the number of Members that he represents; and

25.7.2 voting on a poll, every Member, whether personally present or represented by proxy or authorised representative, shall have one vote.

25.8 A vote cast under a proxy, power of attorney, or other authority, which has been revoked, shall nevertheless be valid unless:

25.8.1 Written notice of the revocation is received by the Association prior to the meeting concerned; and

25.8.2 The Chairman of the meeting agrees to accept written or oral notice of such revocation at the meeting.

25.9 No objection shall be raised to the admissibility of any vote except at the meeting or adjourned meeting at which the vote objected to is cast and every vote not disallowed at such meeting shall be valid for all purposes. Any such objection made in due time shall be referred to the Chairman of the meeting whose decision shall be final and conclusive.

25.10 If any difficulty or dispute arises regarding the admission or rejection of a vote, or regarding any other matter, such difficulty or dispute is to be determined by the Chairman, whether or not scrutineers have been appointed to count the votes and his decision shall be final and conclusive.

26. MINUTES OF MEETINGS OF THE ASSOCIATION

26.1 The Trustees shall ensure that minutes are taken of every meeting of the Association, although not necessarily verbatim, which minutes shall be reduced to writing without undue delay after the meeting has closed and shall the be certified correct by the Chairman of the meeting.

26.2 The Trustees shall keep all minute books of meetings of the Association in perpetuity.

26.3 On the written application of any Member the Trustees shall make all minutes of the proceedings and/or meetings of the Association available for inspection by such Member.

26.4 All resolutions recorded in the minutes of any meetings of the Association shall be valid and of full force and effect as therein recorded, with effect from the passing of such resolutions, and until varied or rescinded, but no resolution or purported resolution of the Association shall be of any force or effect or shall be

binding upon the Members or any of the Trustees, unless such resolution is competent within the powers of the Association.

26.5 Save as otherwise provided in this Constitution, the proceedings at any meeting of the Association shall be conducted in such reasonable manner and form as the Chairman of the meeting shall decide.

27. FINANCIAL YEAR END

The financial year end of the Association is the last day of February of each year.

28. ACCOUNTS

28.1 The Trustees shall cause proper books of account and records to be kept so as fairly to explain the transactions and financial position of the Association including;

28.1.1 a record of the assets and liabilities of the Association;

28.1.2 a record of all sums of money received and expended by the Association and the matters in respect of which such receipt and expenditure occurred;

28.1.3 a register of Members showing in each case their addresses; and

28.1.4 individual ledger accounts in respect of each Member.

28.2 On the application of any Member the Trustees shall make all or any of the books of accounts and records available for inspection by such Member.

28.3 The Trustees shall cause all books of account and records to be retained for a period of 6 (six) years after completion of the transactions, acts, or operations to which they relate.

28.4 The Trustees may from time to time make reasonable regulations concerning the time (within normal business hours) and manner in which Members shall be allowed to inspect the accounts and books of the Association, or any of them, and the accounts and books of the Association shall be open to inspection accordingly.

28.5 At each annual general meeting the Trustees shall lay before the Association

financial statements for the immediately preceding financial year of the Association or, in the case of the first period since the date of commencement of the Association, made up for that period. Such financial statements shall be drawn up in accordance with generally accepted accounting practice and shall be accompanied by such additional reports as may be necessary at the discretion of the Trustees.

29. DEPOSIT AND INVESTMENT OF FUNDS

29.1 The Trustees shall cause all moneys received by the Association to be deposited to the credit of an account or accounts with a registered commercial bank in the name of the Association and such moneys shall be withdrawn only for the purpose of payment of the expenses of the Association or investment.

29.2 Any funds not immediately required for disbursements may be invested in a savings or similar account with any financial institution or any other registered deposit receiving institution approved by the Trustees from time to time.

29.3 Interest on moneys invested shall be used by the Association for any lawful purpose in the interest of the Association.

30. AUDIT

30.1 Once at least in every year, the accounts of the Association shall be examined, and the correctness of the income and expenditure account and balance sheets ascertained by the Auditors.

30.2 The duties of the Auditors shall be regulated in accordance with general practice and applicable professional standards.

30.3 The Association shall establish an audit committee in order to ensure good corporate governance. The committee will consist of two members to be elected at an annual general meeting. It is noted that the committee will report directly to the members.

31. INDEMNITY

31.1 All the Trustees are indemnified by the Association against any liabilities *bona fide* incurred by them in their capacities as such and in the case of the Chairman in his capacity as Chairman, as well as for all costs, losses and expenses (including travelling expenses) which they may incur or become liable for by

reason of any authorised contract entered into, or any authorised act or deed done, in the discharge of any of their duties and, without detracting from the generality thereof, whether defending any proceedings, civil or criminal or otherwise in which relief is granted by a court.

31.2 A Trustee shall not be liable for the acts, or omission of the Auditors or of any of the other Trustees whether in their capacities as Trustees or as Chairman or for any loss or expense sustained or incurred by the Association through the insufficiency or deficiency of any security in or upon which moneys of the wrongful act of any person with whom any moneys, securities or effects are deposited or for any loss or damage occasioned by any error or judgement or oversight on his part or for any loss, damage or misfortune of whatsoever nature occurring in the execution of his duties or in relation thereto unless occurring as a result of *mala fides*, breach of duty or breach of trust.

31.3 The Developer shall not be liable to compensate the Association in respect of any claims, losses, expenses, or damages suffered by the Association as a result of any act or omission on the part of the Developer in respect of any civil services installation on the Estate or any license or permit obtained by the Developer in respect of the Estate or any part thereof, except where such claims, losses, expenses, or damages was occasioned by the wilful misconduct or gross negligence of the Developer.

32. DEFAMATION PRIVILEGE

32.1 Every Member of the Association and every Trustee shall be deemed by virtue of his membership or, as the case may be, his holding office as a Trustee, to have waived as against every other Member, the Chairman, every other Trustee, and everybody else engaged to perform the function or duty on behalf of or for the benefit of the Association or the Trustees or any sub-committee, all claims and rights of action which such Member or the Trustees might otherwise have had in law arising as a result of any statement, report, complaint or notice of or concerning such Member or Trustee, or any reference to such Member or Trustee, made at any meeting of Trustees, or otherwise in the performance or exercise of any right, function, duty, power or trust, within the ambit of this Constitution, being a statement, report, complaint, notice or reference defamatory of such Member or Trustee, or otherwise injurious to the dignity, reputation, business or financial interest of such Member or Trustee, whether such statement be true or false.

33. ARBITRATION

33.1 Should any dispute, question or difference arise between Members or between a Member and Trustee or between Member and the Association out of or in regard to:

33.1.1 the interpretation of;

33.1.2 the effect of;

33.1.3 their respective rights or obligations under;

33.1.4 a breach of (but subject to 33.2),

this Constitution, such dispute shall be decided by arbitration in the manner set out in this clause 33.

33.2 Notwithstanding 33.1.4, in respect of any claim arising from non- payment of levies or any other amount due by a Member to the Association in terms of this Constitution, the Association and Trustees shall continue to enjoy common law rights and shall not be required to proceed to arbitration and shall not be precluded from instituting proceedings in any court of competent jurisdiction.

33.3 The arbitration referred to in clause 33.1 shall:

33.3.1 be conducted in an informal summary manner on the basis that it shall not be necessary to observe or carry out either the usual formalities or procedures relating to pleadings or discovery or the strict rules of evidence;

33.3.2 commence as soon as reasonably possible after it is demanded and with a view to its being completed within 30 (thirty) days after it is demanded;

and

33.3.3 be held under the provisions of the Arbitration act of the Republic of South Africa (as amended or replaced from time to time) except insofar as the provisions of this arbitration clause shall apply.

33.4 The arbitrator shall be a practicing senior counsel or attorney of not less than 5 (five) years standing appointed by agreement between the parties to the

arbitration within 7 (seven) days of being called upon to make such appointment and failing agreement on such appointment within 7 (seven) day period, appointed by the Chairman of the Cape Bar Council or the successor to that body.

33.5 The arbitrator shall in giving his award have regard to the principles contained in this Constitution and he shall decide the matter as submitted to him according to what he considers just and equitable in the circumstances and, therefore, the strict rules of law need not be observed or be taken into account by him in arriving at his decision. The arbitrator's decision shall be presented within 10 (ten) days after the completion of the arbitration in a written document and he shall state the reasons for his decision therein. The arbitrator may determine that the cost of the arbitration be paid either by one or other of the disputing parties or by the Association as he in his sole discretion may deem fit.

33.6 Each of the parties to the arbitration irrevocably agree that the decision of the arbitrator made at such arbitration proceedings;

33.6.1 shall be final and binding on each of them;

33.6.2 shall be carried into effect immediately; and

33.6.3 may at the instance of the parties be made an order of any Court to whose jurisdiction the parties are subject.

33.7 Notwithstanding anything to the contrary contained in this clause 33, the Trustees shall be entitled to institute legal proceedings on behalf of the Association by way of application, action or otherwise in any Court having jurisdiction for the purposes of restraining or interdicting breaches of any of the provisions of this Constitution, including the annexures hereto.

34. DOMICILIUM

34.1 The Trustees shall from time to time determine the address constituting the *domicilium citandi et executandi* of the Association, subject to the following:

34.1.1 such address shall be the address of the Chairman or of a resident trustee nominated by the Trustee or the address of any duly appointed Managing Agent; and

34.1.2 the Trustees shall give notice to all Members of any change of such address.

34.2 The *domicilium citandi et executandi* of each Member shall be the street address of the Member's Erf or Unit.

34.3 It shall be competent to give notice by registered mail, fax, electronic media, or e-mail subject thereto that the Trustees can produce evidence of the sending of such notice.

34.4 A Member may by notice in writing to the Trustees alter his *domicilium* provided such new address may not be a post office box or *poste restante* and provided such address is within the Republic of South Africa and shall not be effective until 14 (fourteen) days after receipt of such notification.

34.5 Notwithstanding anything to the contrary herein contained, a written notice or communication actually received by a Member shall be adequate written notice or communication to such Member notwithstanding that it was not sent to or delivered at his *domicilium citandi et executandi.*

34.6 Any notice to a Member

34.6.1 sent to him by prepaid registered post in a correctly addressed envelope at his *domicilium citandi et executandi* shall be deemed to have been received on the 7th (seventh) day after posting (unless the contrary is proved); or

34.6.2 delivered by hand to a responsible person at his *domicilium citandi et executandi* shall be deemed to have been received on the day of delivery; or

34.6.3 sent by electronic media, or e-mail to that registered in the Members' register shall be deemed to have been received on the 1st (first) day after the date of transmission, unless the contrary is proved; or

34.6.4 successfully transmitted by telefax to his chosen telefax number shall be deemed to have been received on the 1st (first) day after the date of transmission, unless the contrary is proved.

35. AMENDMENT

35.1 No provision hereof shall be added to, amended, substituted or repealed without the prior consent in writing of:

35.1.1 The Local Authority; and

35.1.2 The Developer, up and until the development has been fully developed.

35.2 Notwithstanding the provisions of clause 35.3, the Developer shall, for as long as any portion of the Development remains undeveloped and until such time that the last erf or unit in the Development is sold and transferred, have the right to amend this Constitution with the prior approval of the Local Authority in terms of clause 35.1, and shall further have the right to veto any proposed amendment of this Constitution if there is a reasonable apprehension that such amendment could detrimentally affect the Developer's ability to complete the Development in accordance with its development plans. Notwithstanding the provisions of this clause 35.2 above, the Developer shall not have the right to vary the provisions relating to qualification for membership of the Association, the proportionate liability of Ordinary Members for the payment of POA Levies or the voting rights of Members.

35.3 Subject to the provisions of clauses 35.1 and 35.2 above, every amendment of this Constitution of whatever nature including any addition thereto, deletion therefrom or substitution thereof (but excluding amendments to the Waste Management Plan, any Architectural Rules and the Estate Rules, which are governed by clause 10 above) shall require the approval of at least 75 % (seventy-five per centum) of the total number of votes allocated to Members of the Association as provided for in clause 25 above, which majority shall be expressed at a general meeting called specifically for such purpose and the notice of such meeting shall, in addition to comply with the requirements for the convening of a meeting, set out in specific terms the proposed amendment.

36. RISK

36.1 Any person using any of the services, land or facilities of the Association does so entirely at his own risk.

36.2 It is recorded that the Development incorporates an active construction site, and that presence anywhere in the Development exposes one to damages caused by construction machinery, falling trees, and other activities normally associated with building construction. The Association hereby draws the attention of

owners and residents to these possible dangers. The Association shall not be held liable for any damage to property or bodily injury, accidently or negligently caused to any person, including but not limited to owners or those in their care, residents or those in their care, workers, relatives or friends of owners or residents and requires them to waive all rights against the Association in this regard.

ANNEXURE S: ENVIRONMENTAL BASIC ASSESSMENT REPORT

Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

(For official use only)	
Pre-application Reference Number (if applicable):	16/3/3/6/7/1/B4/45/1247/23
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must include an overview of the project including the Farm name/Portion/Erf number)

The proposed development of Welmoed Village on Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch RD (Notice of Intent with Specific Fee Ref. B-BA-EIA-J24) refers. The farm has an area of 45,5 ha that is inside of the delineated urban edge of Lynedoch, but it is outside of the Lynedoch Village (established on a subdivided portion of Portion 28 in 2003) urban area.

The proposal is a phased development, by rezoning of the property to a subdivisional area that provides for mixed uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential units, inclusive of a retirement village, blocks of flats, group housing, townhouses, inclusionary housing, private roads, and renewable energy structures;
- private open space zone for conservation of the natural features, access and circulation, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone with a small retail outlet, restaurant, medical consulting rooms, and offices;
- community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the proposed development.

The external services infrastructure (none of which requires environmental authorisation) consists of the following:

- Widening of the Vlottenburg service road by 4m to create turning lanes for access to the development;
- An 11kV overhead feeder of approximately 4km from Lynedoch substation to the development and upgrading of the Lynedoch Substation transformer;
- A bulk potable water line of approximately 2,3km with a capacity of 20,47 kl/d and peak flow rate of 17,415 l/s (fire flow requirement 25 l/s); and
- A rising sewer main (pump line) of approximately 4km with peak wet weather flow 14,019 l/s in a 160mm Class 34 uPVC pipes.

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	**GEORGE REGIONAL OFFICE:** **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)** (Central Karoo District & Garden Route District)
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.*, 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow

	A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ (tick) or a **x** (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			✓ (Tick) or x (cross)
Appendix A:	Maps		
	Appendix A1:	Locality Map	✓
	Appendix A2:	Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning	N/a
	Appendix A3:	Map with the GPS co-ordinates for linear activities	N/a
Appendix B:	Appendix B1:	Site development plan(s)	✓
	Appendix B2	A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;	✓
Appendix C:	Photographs		✓
Appendix D:	Biodiversity overlay map		✓
Appendix E:	Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.		
	Appendix E1:	Final comment/ROD from HWC	✓
	Appendix E2:	Copy of comment from Cape Nature	N/a
	Appendix E3:	Final Comment from the DWS	✓
	Appendix E4:	Comment from the DEA: Oceans and Coast	N/a
	Appendix E5:	Comment from the DALR&RD	✓
	Appendix E6:	Comment from WCG: Dept of Infrastructure	X
	Appendix E7:	Comment from WCG: DoA	✓
	Appendix E8:	Comment from WCG: DHS	N/a
	Appendix E9:	Comment from WCG: DoH	N/a

	Appendix E10:	Comment from DEA&DP: Pollution Management	N/a
	Appendix E11:	Comment from DEA&DP: Waste Management	N/a
	Appendix E12:	Comment from DEA&DP: Biodiversity	N/a
	Appendix E13:	Comment from DEA&DP: Air Quality	N/a
	Appendix E14:	Comment from DEA&DP: Coastal Management	N/a
	Appendix E15:	Comment from the local authority	✓
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	X
	Appendix E17:	Comment from the District Municipality	X
	Appendix E18:	Copy of an exemption notice	N/a
	Appendix E19	Pre-approval for the reclamation of land	N/a
	Appendix E20:	Proof of agreement/TOR of the specialist studies conducted.	✓
	Appendix E21:	Proof of land use rights	✓
	Appendix E22:	Proof of public participation agreement for linear activities	✓
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.		✓
Appendix G:	Specialist Report(s)		✓
Appendix H:	EMPr		✓
Appendix I:	Screening tool report		✓
Appendix J:	The impact and risk assessment for each alternative		✓
Appendix K:	Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline		✓
Appendix…..	Any other attachments must be included as subsequent appendices		✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		~~GEORGE OFFICE: REGION 3~~
	~~(City of Cape Town, West Coast District~~	**(Cape Winelands District & Overberg District)**	~~(Central Karoo District & Garden Route District)~~
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Uniqon Developers (Pty) Ltd		
Name of contact person for Applicant/Proponent (if other):	Etienne Coetzer		
Company/ Trading name/State Department/Organ of State:	Uniqon Developers (Pty) Ltd		
Company Registration Number:	1997/021737/07		
Postal address:	17 Catherine Road, Shere, Pretoria East		
		Postal code: 0084	
Telephone:	+27 12 809 0262	Cell: +27 83 442 5799	
E-mail:	etienne@uniqon.co.za	Fax: ( )	
Company of EAP:	Virdus Works Environmental (Pty) Ltd (Reg. No. 2019/133896/07)		
EAP name:	Dupré Lombaard		
Postal address:	3rd Floor, Time Square, Elektron Street, Techno Park, Stellenbosch		
		Postal code: 7600	
Telephone:		Cell: +27 82 895 6362	
E-mail:	dupre.lombaard@virdus.com	Fax: ( )	
Qualifications:	MA; MSc		
EAP registration no:	EAPASA: 2019/304		
Duplicate this section where there is more than one landowner Name of landowner:	Billy Visser Trust (IT 15284/1996)		
Name of contact person for landowner (if other):	Ms Elrona Goosen (ID NO: 651226 0180 086)		
Postal address:	Shop 54, Bosman's Crossing Square, Distillery Road, Stellenbosch		
		Postal code: 7600	
Telephone:	021-8562451	Cell: 083 724 7551	
E-mail:	elrona.bvb@gmail.com	Fax: ( )	
Name of Person in control of the land:	Uniqon Developers (Pty) Ltd		
	As above – Mr Etienne Coetzer		
Name of contact person for person in control of the land: Postal address:	As above		
		Postal code:	
Telephone:	( )	Cell:	
E-mail:		Fax: ( )	

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Stellenbosch Municipality	
Contact person:	Schalk van der Merwe	
Postal address:	PO Box 17	
	Stellenbosch	Postal code: 7600
Telephone	(021) 808 8940 / 8679	Cell:
E-mail:	Schalk.VanderMerwe@stellenbosch.gov.za	Fax: ( )

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INCLUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	X	Expansion		
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.					
Greenfield. 45ha farm inside of the Lynedoch urban edge, but still used for agricultural purposes.						
3.	**For Linear activities or developments**					
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:					
N/a						
3.2.	Development footprint of the proposed development for all alternatives.					m²
N/a						
3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.					
N/a						
3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.					
3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives					
3.6.	**Starting point co-ordinates for all alternatives**					
	Latitude (S)	°	'	"		
	Longitude (E)	°	'	"		
	Middle point co-ordinates for all alternatives					
	Latitude (S)	°	'	"		
	Longitude (E)	°	'	"		
	End point co-ordinates for all alternatives					
	Latitude (S)	°	'	"		
	Longitude (E)	°	'	"		
Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.						
4.	**Other developments**					
4.1.	Property size(s) of all proposed site(s):					455 000 m²
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):					0 m²
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:					455 000 m²
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).					

The proposed development of Welmoed Village on Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch RD refers. The farm has an area of 45,5 ha that is inside of the delineated urban edge of Lynedoch, but it is outside of the Lynedoch Village urban area (established on a subdivided portion of Portion 28 in 2003).

The proposal is a phased development, by rezoning of the property to a subdivisional area that provides for mixed uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential units, inclusive of a retirement village, blocks of flats, group housing, townhouses, inclusionary housing, private roads, and renewable energy structures;
- private open space zone for conservation of the natural features, access and circulation, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone with a small retail outlet, restaurant, medical consulting rooms, and offices;
- community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the proposed development.

The external services infrastructure (none of which requires environmental authorisation) consists of the following:

- Widening of the Vlottenburg service road by 4m to create turning lanes for access to the development;
- An 11kV overhead feeder of approximately 4km from Lynedoch substation to the development and upgrading of the Lynedoch Substation transformer;

• A bulk potable water line of approximately 2,3km with a capacity of 20,47 k/d and peak flow rate of 17,415 l/s (fire flow requirement 25 l/s); and • A rising sewer main (pump line) of approximately 4km with peak wet weather flow 14,019 l/s in a 160mm Class 34 uPVC pipes.		
4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.	
Three accesses off the Vlottenburg service road.		
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C06700000000046800028
4.7.	Coordinates of the proposed site(s) for all alternatives:	
	Latitude (S)	-33° 58' 48.986"
	Longitude (E)	18° 46' 02.834"

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.		NO

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.		NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	YES	
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.		NO
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")		NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").		NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").		NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.		NO

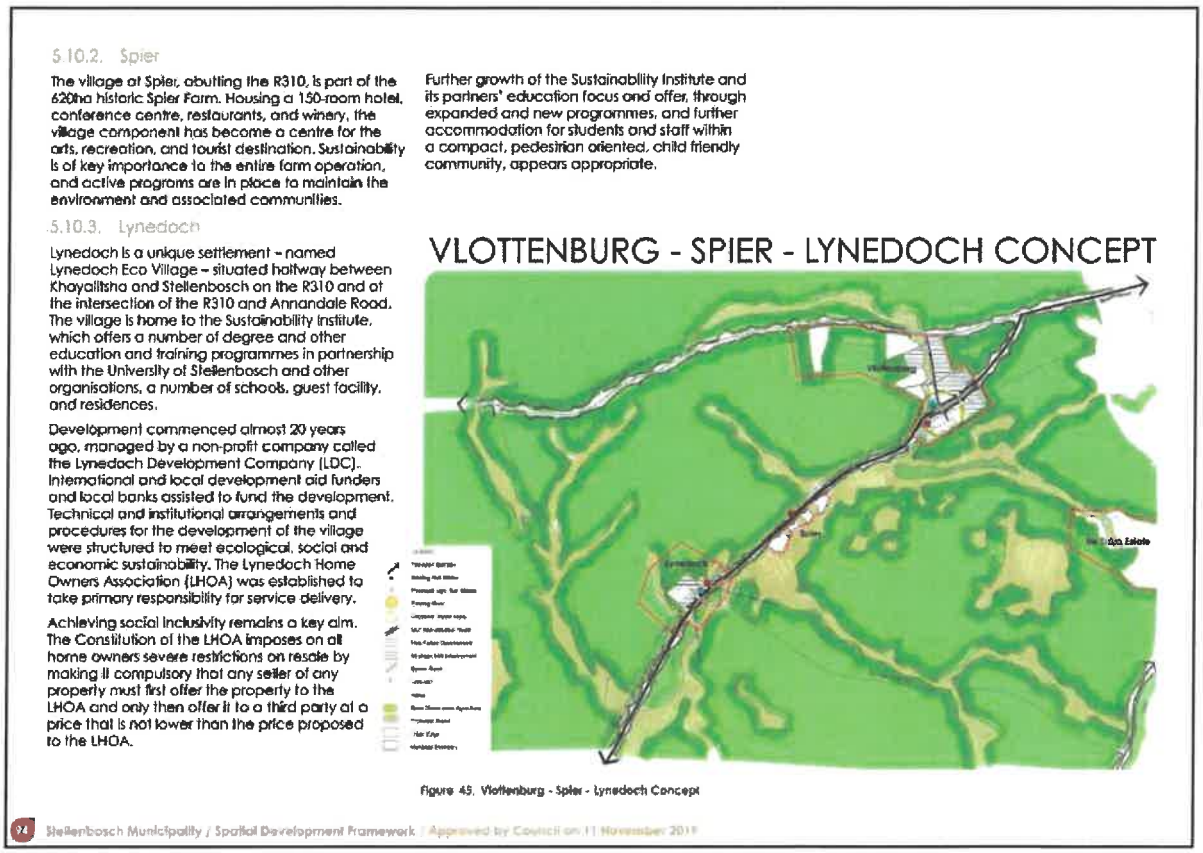
3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
Stellenbosch Municipality Land Use Planning Bylaw, 2023 Subdivision of Agricultural Land Act, 1970, Act 70 of 1970

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.
The approved Stellenbosch Municipality Spatial Development Framework, 2023 (SDF) indicates that: "*over the longer term, the Muldersvlei/ Koelenhof and Vlottenburg/Lynedoch areas can potentially develop into significant settlements.*" The settlements are identified "*as balanced, inclusive communities … to fulfil a role in containing the sprawl of Stellenbosch town, threatening valuable nature and agricultural areas. Importantly, they should not grow significantly unless parallel public transport arrangements can be provided.*" The SDF indicates the Lynedoch Node as being a rural node with social inclusivity as the aim thereof together with the expansion of the education and training facilities. The policy is for the gradual expansion of the "*unique development model based on sustainable living and education.*" The policy further and importantly determines that: "*Over the longer term, these expanded settlements … should not grow significantly unless parallel public transport arrangements can be provided.*" As a consequence of the policy, an integrated community with limited need for the use of private transport is envisaged over the long term. The public transport systems are non-existent and will not be operational or functional within the foreseeable future and only if economies of scale and appropriate threshold populations can be established to make use of such public transport. The spatial policy states that the relevant authorities must: "*Support private sector led institutional arrangements to enable joint planning and development*" of the node, thus a cooperative and facilitative approach to the land use planning process is foreseen.

The Stellenbosch SDF should be based on properly defined and consistently applied assumptions. On the one hand the SDF assumption is that the economy will not grow faster or stronger than at present and that the land demand for settlement will be in the *"middle of the road/ consensus development scenario."* On the other hand, the transport assumptions are for the *"transport specific strategies to manage travel demands ... providing a choice of alternative modes of travel to enable shifts to occur. ... future growth is enabled by the introduction of shared transport options, formal public transport and for the shorter journeys provision for safe cycling and walking."* The transport demand scenario is thus significantly more optimistic than the land demand scenario, indicating significant growth in demand.



5.10.2. Spier

The village at Spier, abutting the R310, is part of the 620ha historic Spier Farm. Housing a 150-room hotel, conference centre, restaurants, and winery, the village component has become a centre for the arts, recreation, and tourist destination. Sustainability is of key importance to the entire farm operation, and active programs are in place to maintain the environment and associated communities.

Further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate.

5.10.3. Lynedoch

Lynedoch is a unique settlement – named Lynedoch Eco Village – situated halfway between Khayalitsha and Stellenbosch on the R310 and at the intersection of the R310 and Annandale Road. The village is home to the Sustainability Institute, which offers a number of degree and other education and training programmes in partnership with the University of Stellenbosch and other organisations, a number of schools, guest facility, and residences.

Development commenced almost 20 years ago, managed by a non-profit company called the Lynedoch Development Company (LDC). International and local development aid funders and local banks assisted to fund the development. Technical and institutional arrangements and procedures for the development of the village were structured to meet ecological, social and economic sustainability. The Lynedoch Home Owners Association (LHOA) was established to take primary responsibility for service delivery.

Achieving social inclusivity remains a key aim. The Constitution of the LHOA imposes on all home owners severe restrictions on resale by making it compulsory that any seller of any property must first offer the property to the LHOA and only then offer it to a third party at a price that is not lower than the price proposed to the LHOA.

VLOTTENBURG - SPIER - LYNEDOCH CONCEPT

Figure 45. Vlottenburg - Spier - Lynedoch Concept

94 Stellenbosch Municipality / Spatial Development Framework / Approved by Council on 11 November 2019

Extract of the Stellenbosch SDF showing the Lynedoch concept

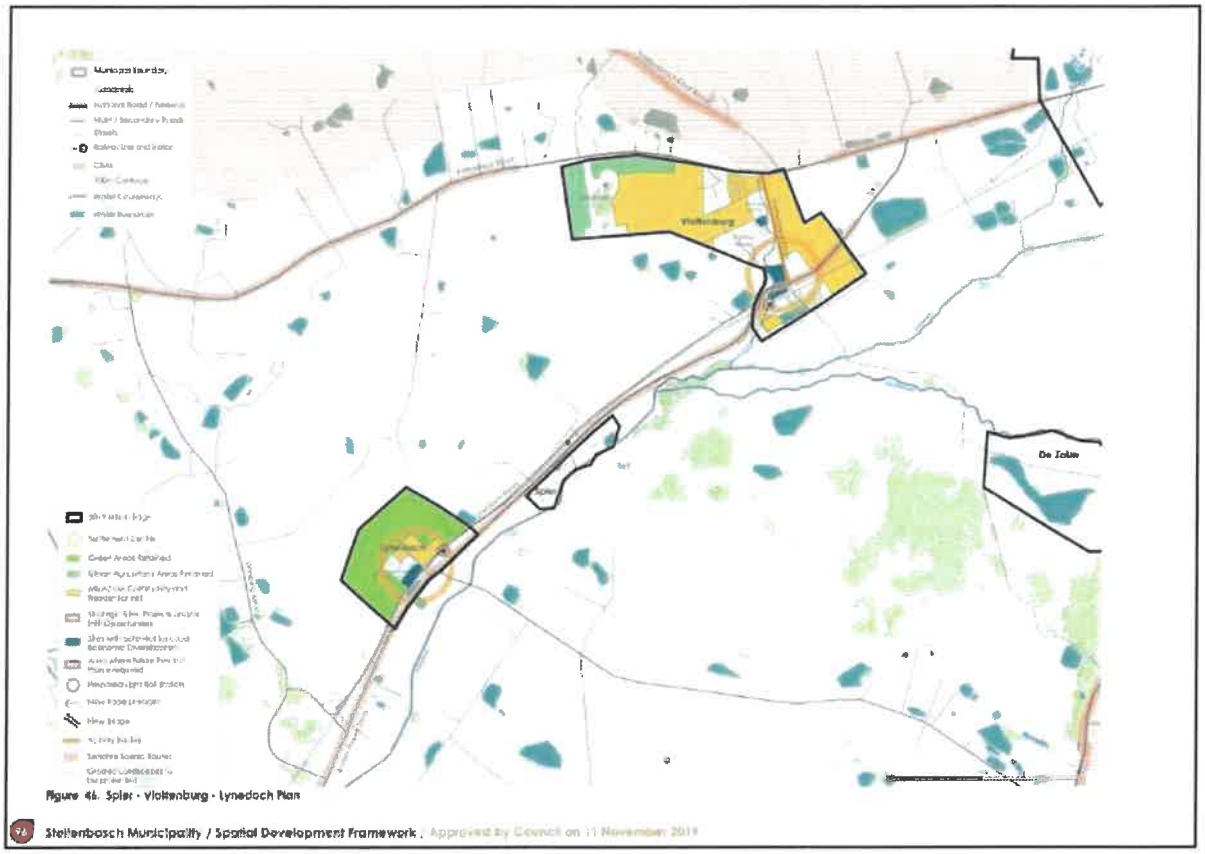
Due to there being no infrastructure services to support an urban development at Lynedoch, significant expenditure needs to be incurred to provide such infrastructure for a development on Portion 28. It must have sufficient capacity to accommodate the long term development vision for the node, which, according to the approved spatial development framework, is an urban node. Moreover, the indicated linking of the node via public transport to the surrounding urban areas further support a long term growth vision that would create a threshold population to make the provision of public transport and infrastructure services feasible.

The primary assumption in this application is that the national, regional, and local economies will not grow any faster or stronger in the coming five years than at present and that therefore the provision of public transport will not improve, but that the demand for affordable housing and demand for employment opportunities will remain the same, which is high. It is further assumed that the agricultural sector would need to be strengthened and supported if it is to overcome the effects of settlement development for large unemployed communities and climate change. The farms in the area range in size from small to well above the municipal average. The crops that are produced are varied and the water demand for the continued production of vegetables, vineyards, and irrigated grazing is increasing, while the supply of irrigation water is not growing, and climatic conditions are requiring increased irrigation or crop protection through shade netting and cover, albeit both climate change responses are not acceptable and desired in the approved Stellenbosch Heritage Survey, 2019.

The Stellenbosch Rural Area Plan (RAP) already indicated in 2016 that Stellenbosch Municipality experienced significant population growth at a rate of 3,7% per year. The Integrated Development Plan (2023) estimates current population growth at 2% per year, which equates to approximately 4 000 new residents annually. The average household size is 3,6, i.e., the estimated number of new households establishing in Stellenbosch is 1 110 per year. As will be shown in the socio-economic impact assessment and demographic assessment of the development proposal, the population growth and socio-economic situation, including urbanisation trends, require a growth in residential accommodation units in excess of 1 100 units per year. There is an existing shortfall in accommodation for daily commuters to Stellenbosch, for which provision should also be made, in addition to the expected population growth.

The RAP and the Urbanisation Strategy (2016) indicated that the Municipality became more urbanised, with more than 73%, up from 70% in 2011, then residing in urban areas, while the IDP indicates that 74,5% of the population currently resides

in urban settlements. There is therefore a definite need for housing in the Stellenbosch Municipal area, and more so for affordable housing.



Extract from Stellenbosch Municipality Spatial Development Framework

The demographic trend highlights the need for proactive planning of sustainable urban settlements:

- It requires planning for access to community facilities and services.
- Such services are difficult to provide in dispersed rural populations and requires rural residents, who can mostly least afford it, to travel to urban settlements.
- Without efficient (or non-existent) public transport, essential travel creates challenges for the relevant authorities and the residents in need of services, as well as those affected by congestion.
- Small population nodes cannot function efficiently as the low population numbers do not warrant sustainable service delivery.
- It requires planning for and the provision of municipal infrastructure services, whether publicly or privately supplied, which cannot grow incrementally due to the prohibitive cost of replacement of redundant infrastructure.

The IDP lists a number of spatial challenges, as indicated in the extract inserted below. Of note is the reference to the need to adapt to climate change, with reference to the current agricultural use of the property, which is no longer sustainable, and the need for the provision of planned urban settlements for those who cannot afford to live in the low density unaffordable residential neighbourhoods of the major towns.

Table 29: Spatial Challenges

Theme	Spatial Challenges
Biophysical context	The degradation of key ecological assets and loss of productive agricultural land has been ongoing. The condition of the river systems within the municipality has deteriorated. Climate change is likely to have a significant impact on the natural resource base of the municipal area, which will include a reduction in water, increased temperatures, increased fire risks, and increased incidences of extreme weather events. This in turn will impact agricultural production, scenic landscapes, the liveability of urban areas and the ability to provide basic services such as water and sewerage treatment.
Socio-economic context	The population in the municipality will continue to grow above the average provincial rate, and urbanisation rates will increase with settlements absorbing the bulk of growth. The ability of the economy to absorb growth, particularly concerning job creation, is concerning. The informal sector will continue to provide livelihoods to a significant proportion of residents. The growing youthful population, large student population, and the seasonal influx of labour are likely to increase the municipality's dependency ratio, in addition to a smaller base from which the municipality can collect revenue to provide services and opportunities that will improve the lives of the poor. Inequality in the municipal area, and particularly in historic towns such as Stellenbosch and Franschhoek, remains significant and current development patterns are not addressing the issue. Crime rates remain high and the market response i.e. private security provision for those who can afford it, is likely to exacerbate inequality.

Extract of Table 29 from Stellenbosch Municipality IDP, 2023

The development includes provision for inclusionary housing, thus providing for affordable housing at the lowest level possible for private sector developers, and further proposes housing for middle income commuters through the provision of high density dwellings within walking distance of the Lynedoch Station. It is thus responsive to the stated needs of the IDP.

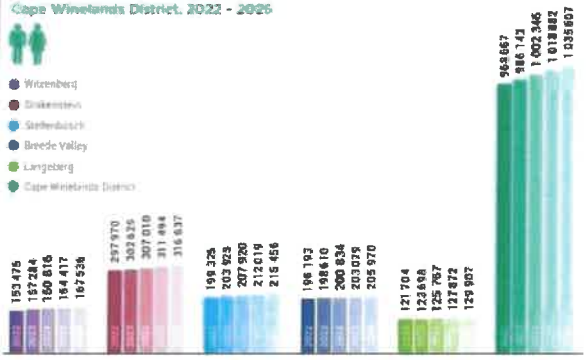
Access to social and community facilities, with specific reference to educational facilities, is an issue that is highlighted in all strategic planning documents, together with the need for housing and employment opportunities. The proposed long-term development of a sustainable urban node at Lynedoch Village seeks to participate in the provision of the required resources and satisfaction of the demand and needs, with minimal investment by the Municipality.

MERO 2022 extract showing population trends.

3.2 POPULATION PROFILE

Figure 3.1 illustrates the future population growth of the CWD and its municipal areas between 2022 and 2026. In 2022, the CWD's population is forecast at 968 667, and is mainly concentrated in the Drakenstein (30.8 per cent), Stellenbosch (20.6 per cent) and Breede Valley (20.3 per cent) municipal areas. The least populated municipal area in the District is the Langeberg municipal area, with a concentration of 12.6 per cent.

Figure 3.1
FUTURE POPULATION GROWTH,
Cape Winelands District, 2022 - 2026



Source: Western Cape Government PPU, 2022. Provincial, district and local municipal area population estimates by sex and age (2002 to 2037) based on Stats SA MYPE series 2021 and 2022

Between 2022 and 2026, the CWD is forecast to grow annually by 1.7 per cent, reaching above 1.0 million people in 2024. The Witzenberg municipal area is forecast to have the highest population growth rate across all municipal areas in the District, growing annually by 2.2 per cent in the period. This is followed by the Stellenbosch municipal area, which is forecast to grow annually by 2.0 per cent. Though the Drakenstein municipal area is forecast to grow annually at a lower rate than the District across the period (1.5 per cent), it is also forecast to have the highest population share of all the municipal areas in the District (30.6 per cent). The Breede Valley municipal area is forecast to have the lowest growth rate across all municipal areas in the District in the period, with annual growth of 1.2 per cent. The Langeberg municipal area is forecast to grow by 1.6 per cent in the period. It is also forecast to shrink in population share across the District in 2026, contributing 12.5 per cent of the population in the District.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.
DEA&DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP). A plan of study has been submitted and it included the required public participation process. DEA&DP (2011) Information Document on the Guidelines, Policies and Decision-Making Instruments Relevant to EIA Applications in the Western Cape, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP), October 2011. Department of Environmental Affairs (2017), Public Participation guideline in terms of NEMA EIA Regulations, Department of Environmental Affairs, Pretoria, South Africa. DEA (2017), Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa, ISBN: 978-0-9802694-4-4. All of these have been considered in setting up the process and in undertaking the assessment.

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form
Protocol for the specialist assessment and minimum report content requirements for environmental impact on agricultural resources and site sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed, (Gazette Notice no. 320, 2020)

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
24	The development of a road— (i) [a road] for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) [a road] with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road— (a) [roads] which [are] is identified and included in activity 27 in Listing Notice 2 of 2014; (b) [roads] where the entire road falls within an urban area; or (c) which is 1 kilometre or shorter.	Internal main roads exceed the parameters.
28	Residential, mixed, retail, commercial, industrial, or institutional developments where such land was used for agriculture, game farming, equestrian purposes, or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial, or institutional purposes.	The proposed development will contain residential, mixed use and institutional development components on land used for agriculture after 1998. The proposed development footprint will be larger than 5 hectares.
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. Western Cape i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas; (aa) Areas containing indigenous vegetation; (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or iii. Inside urban areas: (aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.	Internal roads will exceed the limits.
18	The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.	Upgrading of the Vlottenburg service road as confirmed in the TIA to create turning lanes.

Note:

- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.

List the applicable waste management listed activities in terms of the NEM:WA

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**	Describe the portion of the proposed development to which the applicable listed activity relates.

List the applicable listed activities in terms of the NEM:AQA

Activity No(s):	Provide the relevant **Listed Activity(ies)**	Describe the portion of the proposed development to which the applicable listed activity relates.

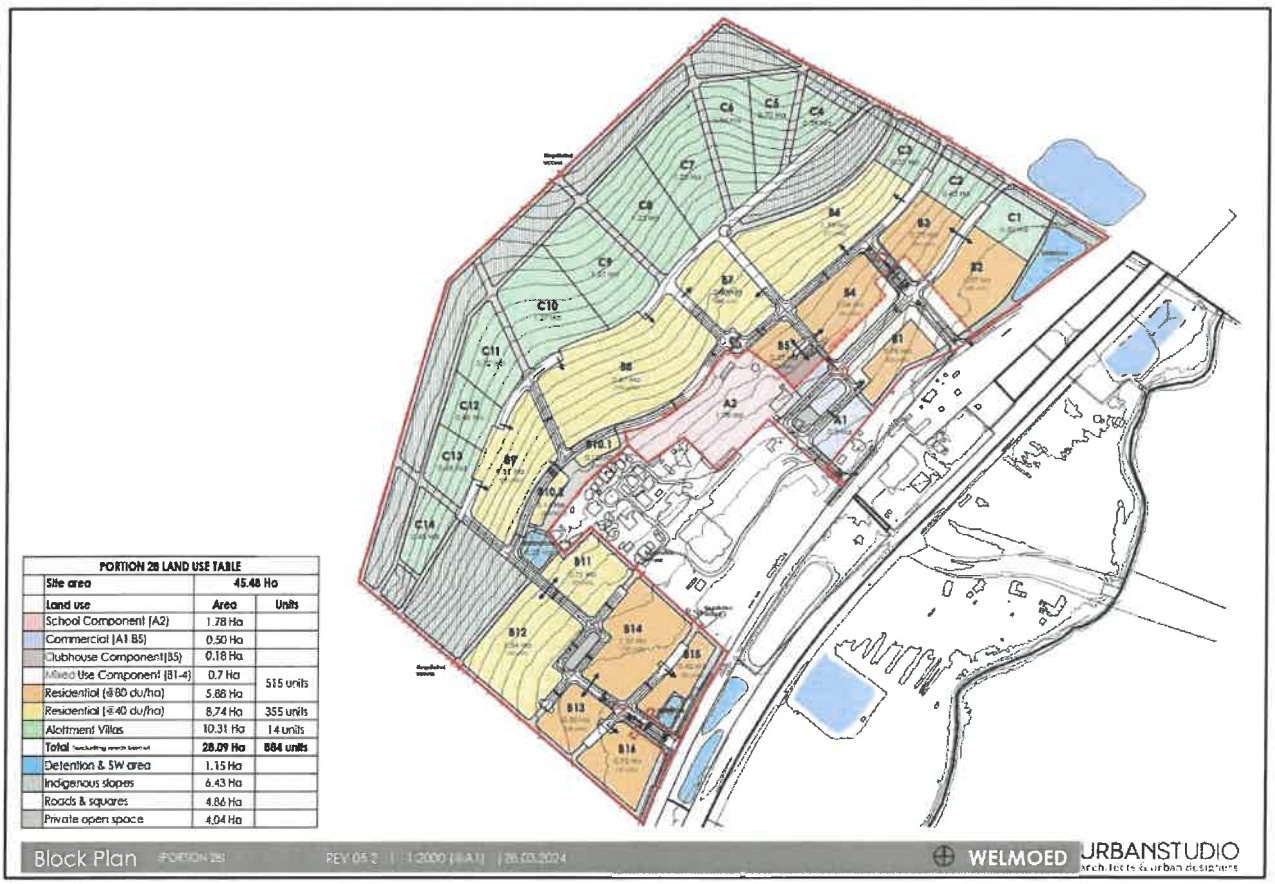
SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

See Section B, Paragraph 4.4 above for broad description. The attached concept site development plan (Urban Studio, Welmoed Context and Concept, dated 28 March 2023) provides a graphic description of the development concept and some of the proposed design details, e.g., development densities, land uses, public and private roads, and developmental elements.

Due to the need to maximise the use of the scarce land resources, development densities of up to 80 dwelling units per hectare are planned for the area. A residential development with integrated community facilities is planned on an area of only 29,13 ha, with servitudes, storm water run-off detention facilities, and site constraints such as slopes steeper than 1:4, limiting development on 7,97 ha. The proposed residential development consists of 878 units, with planned densities of up to 80 units per hectare inside of individual blocks. The average development density is 30 units per hectare. Communal private open space and internal roads take up 8,43 ha.

The internal roads are planned as a grid with due consideration of the slopes and the need to design the development in such a way that it can be accommodated in the landscape without significant negative visual effect. Densities of development will be highest in proximity of the main transport infrastructure, while higher lying development will be structured to avoid skyline effect and allow for significant terrace forming. As a result of the site characteristics and grading of the development, and the need for affordable and inclusionary housing in the area, nett densities of development on the lower-lying areas and abutting the public facilities (school, railway station, commercial use) will be up to 80 units per hectare.



Phased development of Portion 28

The purpose of the application for the long-term phased development and the planning of the property is to be proactive in planning the future shape and form of Lynedoch Village in a certain population growth scenario. The current land use management system is a reactive system, that reacts to urban challenges, rather than a proactive system that creatively plans for the future shape and form of settlements and predetermines a vision and development pattern inclusive of the required infrastructure to sustain the settlement. With a growing urban population, proactive planning can and must play an important role in creating environmentally sustainable communities.

The phased development of Portion 28 will occur over a period of more than 10 years unless there is a significant increase in demand for housing in the area. Currently the demand exceeds the supply (Housing Market Studies for Intermediate Cities / Larger Towns in the Western Cape, Stellenbosch Town Report, August 2022, Department of Environmental Affairs and Development Planning). The socio-economic impact and market assessment (Demacon) provides a good estimate of the demand over time. Any development will be phased to limit capital expenditure not recoverable through short term supply to the market and therefore continued use of the remaining (undeveloped) land for agricultural purposes.	
2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.
The existing use rights are for agriculture and rural use and need to be changed by way of rezoning to subdivisional area in terms of the Stellenbosch Municipality: Municipal Land Use Planning Bylaw, 2023.	
3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

The Western Cape Land Use Planning Act, 2014, Act 3 of 2014, and the Stellenbosch Planning Bylaw obligate the Municipality to have regard (amongst other things) to the desirability of the proposed land use when it considers and decides a land development application. Regulation 18 of Government Notice No. R. 326 of 07 April 2017 (amendment of the Environmental Impact Assessment Regulations, 2014 made under Section 24 of NEMA) also requires consideration of the need and desirability of the proposed activity.

In terms of the planning legislation, a municipality should refuse an application if it does not comply with the stated minimum threshold requirements or is inconsistent with a spatial development framework. Both aspects are addressed in the land development application submitted to the Stellenbosch Municipality.

The concept of desirability relates to the type of development being proposed in a specific place and its impact (positive or negative) on the larger community, i.e., more than the immediate neighbours. It is a matter of illustrating that the proposed development is the best practicable environmental option for the property concerned. The Guideline on Need and Desirability, EIA Guideline and Information Document Series (March 2013) determines that: *"the construct of "need and desirability" must also be informed by the sum of all the impacts considered holistically. In this regard "need and desirability" also becomes the impact summary with regard to the proposed activity*".

Consideration is therefore given in the application motivation as to who would be adversely or positively affected by the proposed development activities if the application should be approved. The question is whether Portion 28 is the right place for the proposed development, considering the nature and scale thereof, and its impact on infrastructure services.

As indicated in the relevant applications, there are no municipal infrastructures services readily available for the proposed development and the existing Lynedoch Eco Village is largely independent in its provision and use of infrastructure services. It relies on its own waste water treatment system, it relies heavily on rain water harvesting, water storage, and has a single communal municipal connection shared by all properties. It has a separate or dual water circulation system for treated effluent to be used for flushing and irrigation. The Village operates a waste reduction and recycling system in conjunction with a private contractor, with minimal waste going to landfill. Eskom provides the electricity to the Village, with all houses supplementing their energy requirements in different manners, mostly through the use of micro solar systems and some houses connected to gas derived from bio-digesters. Road access is off Lynedoch Road, a service road constructed parallel to Baden Powell Drive following the closure of the level crossing at the Annandale Road intersection.

Thus, when a development of Portion 28 is being considered, it must be considered simultaneously with a full (municipal) services infrastructure plans and designs. Such new infrastructure might be beneficial to the existing Village, but it would not have any negative effects on the Village, as it would not cause a reduction in the existing standards and levels of service. Two new access roads with intersections on the service road are proposed, to avoid congestion at the existing main entrance to the Village at the station, while the existing main access road, which is substandard and without any sidewalks for pedestrians, will be upgraded.

According to the available information, the Village residents use the property for informal recreation, by walking their dogs, for hiking and in general outdoor recreation, even if not by agreement with the owner. The residents of the surrounding community, who make use of the services offered by the Sustainability Institute, gain access to the Village across the farm, using it for direct access rather than trying to access it on foot via existing formal roads which are significantly lengthier and riskier, with no walkways or even space for pedestrians. Both of these uses, namely accessibility and recreation are addressed in the application and planning, allowing for formalisation of the pedestrian access across the land, by the creation of pedestrian walkways along the public roads where possible and within limits of acceptability in terms of the current legislation, and the creation of green lanes and trails for Village (and future) residents to enjoy the outdoors.

As for the desirability of the development of the land for urban purposes from a regional perspective, it is necessary to consider the history of it being indicated as an urban node. The spatial planning strategies for the land in the

approved 2023 version of the SDF indicate that a portion of the land is set aside for urban development purposes, even if the entire property is shown to be inside of the urban edge. The intention is a low density development which allows for the retention of green space around an urban node focused on "*further growth with an education focus and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community*".

In 2018 the land was however shown as being designated for full urban development, together with Portion 27, on the eastern side of the railway line, i.e., at the time it was indicated as being a desirable location for a nodal development. In 2019 the proposed urban development footprint was reduced, still indicating the desirability of an urban node on the land, albeit that the overall extent and scale was reduced. A reduced urban footprint and scale is described as "*an irrational approach to the establishment of an urban node in an environment where the population is growing, where land is a scarce resource, and where a node can be established around a transit node, in keeping with the policy to maximise the use of land around such transit nodes*" in the land development application.

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

The PSDF focuses strongly on densification and intensification of urban areas to achieve its desired outcomes. The average gross residential density of urban areas should increase to 25 units / ha before extensions to an urban edge are considered. The proposed development is within the designated urban edge of the Lynedoch node, but the proposed use of the land is limited to a small footprint which will cause the development densities in the node to be significantly lower than sustainable from a service delivery perspective. A low density development which retains the area surrounding Lynedoch as a cultural landscape conservation area will cause the development not to achieve the population thresholds essential for the establishment of efficient public transport systems and services infrastructure for amongst others affordable (inclusionary) housing. The proposal for the development of a feasible urban node at a major transport interchange is consistent with the PSDF.

The policy of more intense use of nodes and urban core areas further requires consideration of the bio-physical environment, cultural heritage, municipal infrastructure services and social infrastructure issues and factors. The purpose of densification and best use of scarce land resources in appropriate locations, is primarily to maintain sustainable supplies of natural resources, for food production and ecological functioning, which are not relevant to the subject property. The PSDF seeks to achieve more economical use of municipal services infrastructure and community facilities, provide for efficient public transport services, and reduce traveling distances to a variety of opportunities. The proposed development is aligned to the policy as illustrated above.

The proposed use of the property inside of an identified node and abutting an existing public transport interchange for a development aimed at affordable medium to high density residential use containing retail opportunities and community facilities is aligned to the PSDF. It contributes to intensification and densification of the Lynedoch node, and it leads to improvement of the efficiencies in service provision as indicated above. It does not diminish the supply of ecological or agricultural resources, opportunities for redress, or improved spatial integration with access to land for those previously dispossessed.

4.2	The Integrated Development Plan of the local municipality.

The node is described as Rural Node 5.

The development includes provision for inclusionary housing, thus providing for affordable housing at the lowest level possible for private sector developers, and further proposes housing for middle income commuters through the provision of high density dwellings within walking distance of the Lynedoch Station. It is thus responsive to the stated needs of the IDP.

Access to social and community facilities, with specific reference to educational facilities, is an issue that is highlighted in all strategic planning documents, together with the need for housing and employment opportunities. The proposed long-term development of a sustainable urban node at Lynedoch Village seeks to participate in the provision of the required resources and satisfaction of the demand and needs, with minimal investment by the Municipality.

The IDP however cautions against capital investment by the Municipality in the smaller settlements other than Stellenbosch, Klapmuts and Franschhoek. It determines that: *Over the longer term, Muldersvlei / Koelenhof and Vlottenburg / Lynedoch along the Baden Powell Adam Tas-R304 could accommodate more growth and be established as inclusive settlements offering a range of opportunities. However, much work needs to be done to ensure the appropriate make-up of these settlements (including each providing opportunity for a range of income groups) and integration with the corridor in terms of public transport. They are therefore not prioritised for significant development over the SDF period. Should significant development be enabled in these areas now, it is likely to be focused on private vehicular use and higher-income groups (in gated developments) and will in all probability reduce the potential of initiatives to transform Stellenbosch town and Klapmuts.*

The focus on Stellenbosch town and Klapmuts does not exclude all development focus in Franschhoek and the smaller settlements. Rather, it is argued that these settlements should not accommodate significant growth as the pre-conditions for accommodating such growth do not exist to the same extent as in Stellenbosch town and Klapmuts.

What should be emphasised in Franschhoek, and smaller settlements are improving conditions for existing residents and natural growth within a context of retaining what is uniquely special in each (from the perspective of history, settlement structure and form, relationship with nature and agriculture, and so on).

4.3.	The Spatial Development Framework of the local municipality.

Section C Paragraph 4 above contains an extract of the land development application that addresses the SDF.

The SDF states as a strategic objective that: "Over the longer term, Vlottenburg, Spier, and Lynedoch along the Baden Powell-Adam Tas-R304 corridor could possibly accommodate more growth and be established as inclusive settlements offering a range of opportunities. However, these settlements are not prioritized for development at this stage" and that the Municipality must:" Support private sector led institutional arrangements to enable joint planning and development".

Lynedoch is identified and proposed as a socially inclusive urban node with a focus on education and training (for future development) in the 2019 Stellenbosch SDF. It is further indicated as a node in a range of other related documents, and it has been designated as a node since at least 2010 when the concept of a "string of pearls", relating to the nodes along the railway line and at major intersections on the main transport corridors, was promoted as the growth strategy for Stellenbosch.

The provisos in the SDF are:

- *That public transport systems must first be established before any significant nodal development may occur.*
- *That cognisance be taken of the agricultural potential of the land.*
- *That appropriate green corridors and spaces be retained in view of the need for environmentally sustainable development and the location of the node at the gateway to Stellenbosch.*
- *That maximum protection be given to valuable agricultural resources and land around the node.*
- *That the availability and extension of municipal infrastructure services be considered in the assessment of the spatial planning issues.*
- *That the historical character of the area and the landscape be protected and complemented by development.*

The expansion of the Lynedoch node, with amongst others inclusionary and affordable housing, is argued in the land development application to be "aligned to the Spatial Planning and Land Use Management Act, 2013, Act 16 of 2013 (SPLUMA), which, together with the Western Cape Land Use Planning, 2014, Act 3 of 2014 (LUPA), promotes the following five general principles for spatial planning, land development and land use management, as applicable to the subject area.

Spatial Sustainability: The proposed residential development is within the future fiscal, institutional, and administrative means of government. Bulk municipal services infrastructure has to be established and external services provided for the development of the node, to which the development would make a significant contribution. It will create economies of scale and by facilitation of improved access to housing that is not within the fiscal other means of government.

The protection of prime and unique agricultural land might not be an issue in this instance, as the land has not been used for viable commercial agriculture for approximately 10 years, primarily due to the changing climatic conditions and lack of water resources for irrigation. The changes in the surrounding land use and agricultural environment have also impacted on the agricultural use of the land." (This aspect has been appropriately assessed in a specialist assessment by AgriInformatics.)

"A residential development at Lynedoch will promote and stimulate effective and equitable functioning of land markets, as it will provide for affordable housing and access opportunities for middle and lower-middle income groups by using land included in the urban edge of the node.

Given the long term development view of the node, it follows that land which could be feasibly used for agriculture will be retained for at least or more 10 years, but allowance will be made in the planning (of infrastructure and transport infrastructure and systems) for eventual development, to achieve appropriate threshold populations and economies of scale. The loss of the agricultural production on Portion 28 will thus occur over time and not immediately.

Efficiency: The proposed land development, albeit in the medium to long term, will optimise the use of existing resources and infrastructure.

The bulk of the proposed residential development is within 500m of the Lynedoch rail commuter station and a potential bus stop on Baden Powell Drive. The proposal complies with the approved Stellenbosch Comprehensive Integrated Transport Plan (CITP) policy statement, namely: "to maximise the use of land accessible by public transport in walkable (industrial) neighbourhoods where jobs can be created without negative impact on the natural resources of the area." *Its treated effluent can be availed to surrounding farmers for irrigation purposes, thus enhancing the viability of the local agricultural sector, making up for any loss of agricultural production on the land.* *Spatial Justice: Past spatial and other development imbalances will be redressed through improved access to and use of land for affordable housing opportunities in proximity of an existing node and a public transport interchange and corridor. It is located along one of the primary movement corridors, where land development has to be considered in view of the settlement and human needs of a growing middle and lower income population.* *Resilience: Spatial plans, policies and land use management systems must be flexible to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks. By allowing the proposed development, it would create a more resilient spatial development pattern with limited effect on the natural or agricultural resources.* *Re-use of the water consumed in the proposed node for irrigation of surrounding agricultural land will increase the resilience of the farms where it is used.* *Good governance: An integrated approach to land use and land development in the area must be considered in keeping with the stated policy of the Municipality.* *The development of the node is supported in the Stellenbosch SDF, although only for a partial development, the argument being that the majority of the land should be retained as a visual and heritage resource. The question is which needs are to be served, those which have an effect on the health and well-being of the residents and those in need, or those who wish to retain the character of the area and trust that the provision in the needs of the people can be satisfied elsewhere?* *It is only a matter of timing, i.e., whether planning and gradual development should occur in expectation of the future public transport system upgrades or prior thereto to fit in with the socio-economic needs of the growing population.* *The proposed rezoning, subdivision and use of the land is "consistent with norms and standards, measures designed to protect and promote the sustainable use of agricultural land, national and provincial government policies and the municipal spatial development framework", as indicated above.*
4.4. The Environmental Management Framework applicable to the area.
The Draft Stellenbosch EMF indicates the land around the Lyndoch node as marginally arable and non-arable.
5. Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
Due to the nature of the site, used for mono-culture (vineyards) with only two minor disconnected portions of natural vegetation where granitic outcrops occur, less than 3ha, biodiversity played a role in the overall master plan consisting of the urban design framework and the landscape master plan. Green corridors and networks are proposed to increase the biodiversity on the site.
6. Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
None.
7. Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
N/A
8. Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
No change.
9. Explain how the proposed development will optimise vacant land available within an urban area.
As under paragraph 4 above.
10. Explain how the proposed development will optimise the use of existing resources and infrastructure.
As under paragraph 4 above.
11. Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
The GLS civil services report for the Stellenbosch Municipality concludes as follows:

The developer of portion 28 of Farm 468 (Welmoed development) in Stellenbosch may be liable for the payment of a Development Contribution (as calculated by Stellenbosch Municipality) for bulk water and sewer infrastructure as per Council Policy.

The development of Phase 1 to Phase 13 below the 60 m contour line can be accommodated within the existing Faure rural water system without any upgrades required.

The development of Phase 14 on portion 28 of Farm 468 above the 60 m contour line should be supplied with water directly from the Skilpadvlei reservoir in the Polkadraai system. Master plan item SPW3.1 will be required to supply the development with bulk water from the Skilpadvlei reservoir and master plan item SPW3.2 will be required to manage static pressures at the development.

There are no sewer services in the vicinity of the proposed development and master plan items SSS4.1, SSS3.1 & SSS3.2 will be required to pump sewage from the proposed development area to the existing Blaauwklippen bulk sewer pumping station, located roughly 5.0 km to the north east of the proposed development.

The existing Blaauwklippen pumping station has sufficient spare capacity to accommodate the proposed development.

The electrical engineering report concludes as follows:

1. Alternative energy sources such as gas and PV Solar will be used for the development. LED street lightning recommended.
2. The NMD for the development will increase in relation to construction of the development. Application for increase to a 2MVA NMD supply will follow the completion of the designed consumers (886).
3. The annual energy consumed form the grid will be reduced by the proposed PV solar system.
4. Ring feed MV reticulation recommended for the development MV network.
5. MV underground armoured cable design has been allowed for. Overhead MV reticulation recommended as a more cost-effective approach, subject to development allowance for MV overhead line reticulation.
6. Option 1 is recommended to start the project and establish a point of supply for the development. Instruction to proceed required.
7. Option 2 is recommended to supply remaining demand to the development. Approved overhead line route to be confirmed.

Option 1:
Transfer load to interconnecting feeders to de-load both the substation and Lynedoch farmers 1 feeder. The amount of load that can be transferred is limited due to the capacity limitations of the interconnecting feeders. This approach is considered a temporary solution and upgrading of the substation transformer will still be required eventually. Eskom confirms 650kVA can be made available of the required maximum demand (MD). See Annexure A.

Option 2:
Construct as second overhead feeder (approximately 4km) from Lynedoch substation to the development to share the current load. This option will also require upgrading of the Lynedoch Substation transformer.

This option will require an approved route between Lynedoch substation and Welmoed, Portion 28. Wayleaves assuring legal right of way will be required prior to construction. The overhead powerline will become Eskom property after construction. A self-build project may be considered to speed along the process. See figure 6.



Figure 6: Eskom MV network

12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.

Desirability is addressed in various sections and paragraphs above as quoted from the land development application.

The need was assessed by Demacon, and the full assessment is annexed hereto. In brief, the need determined for the area is 1 500 residential units together with other commercial and community facilities to create a sustainable node.

LYNEDOCH Mixed-Use Market Study - *September 2023*

REPORT PREPARED FOR:
UNIQON

LYNEDOCH MIXED-USE DEVELOPMENT LAND BUDGET & PHASING

The individual land uses are allocated in the table below.

Land Use Budget & Phasing – 10 year timeframe

Land Use	Proposed Size	Net demand (ha)	Surplus buffer (10%)	Including roads (15%)	Composition (% of land)	OPME*	Market Gap
Residential Bonded (Low Density)	±630 units	25.2	27.73	31.89	82.2%	2024+	Moderate to High
Student Accommodation (Medium Density)	±120 units	2.0	2.20	2.53	6.5%	2024+	Moderate
Retail (Small Commerce Centre)	±2 859m²	0.8	0.99	1.04	2.7%	2029+	Moderate
Trade (Automotive)	±455m²	0.1	0.14	0.16	0.4%	2028+	Moderate
Offices / Administrative Functions	±2 082m²	0.5	0.57	0.66	1.7%	2029+	Moderate
Private Day Clinic	±488m² (5 to 7 beds)	0.1	0.13	0.15	0.4%	2028+	Moderate
Private School	±3 720m² (350 to 400 pupils)	1.9	2.05	2.35	6.1%	2028+	Moderate
Total Hectare Take-up		30.7	33.72	38.78	100.0%		

Source: Demacon Demand Modelling, 2023
**Optimum point of market entry*

A total of 38.78 hectares could be developed and taken up over a 10-year timeframe. This includes 88.7% (34.41 ha) for residential uses and 11.3% (4.37 ha) for non-residential uses. The site is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. Take-up is forecast to accelerate as the development gains traction in the market.

Considering the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45.48 ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development.

LEADERS IN ECONOMIC & REAL ESTATE MARKET INSIGHT

DEMACON

66 | Page

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

N/A

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

The public participation process will be completed in keeping with the applicable statutory requirements and the guidelines.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

Western Cape Dept Infrastructure (roads and transport infrastructure): Pieter Pienaar <Pieter.Pienaar@westerncape.gov.za> Western Cape Dept Agriculture (land use management): Cor Van der Walt <Cor.VanderWalt@westerncape.gov.za> Department of Agriculture, Land Reform and Rural Development: Serah Muobeleni <SerahMu@Dalrrd.gov.za> Department of Water and Sanitation (E-WULAAS) <E-WULAASCalls@dws.gov.za> Department of Mineral Resources and Energy (MPRDA Sec 53 application): Morne Koen <Morne.Koen@dmre.gov.za> Heritage Western Cape (heritage matters and NID submitted): HWC HWC <HWC.HWC@westerncape.gov.za> Stellenbosch Municipality (spatial planning and land use): Stiaan Carstens <Stiaan.Carstens@stellenbosch.gov.za> PRASA (rail transport) Paul Motsoaledi <paul.motsoaledi@prasa.com>

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

Those who were not consulted have no interest in the matter.

5. If any of the State Departments and Organs of State did not respond, indicate which.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

Note:
A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?		NO
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		

2. Surface water

2.1.	Was a specialist study conducted?	YES	
2.2.	Provide the name and/or company who conducted the specialist study.		
EnviroSwift, Nick Steytler			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		
Specialist assessment was related to the external services crossing water courses. No surface water features occur on the site. The study found that the proposed services infrastructure could be installed without any significant negative effect on the water courses.			

3. Coastal Environment

3.1.	Was a specialist study conducted?		NO
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		

4. Biodiversity

4.1.	Were specialist studies conducted?		NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
N/A			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		
4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.		
4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.		
4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.		
4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.		

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
The site slopes up westerly from the Eerste River, between 25 and 110m above MSL. A geotechnical assessment of the site was prepared by Delta Geotech. Topographically there is an average fall of approximately 3.5% and a max fall of 22% from the northwest to the south-east with a small dam located off site adjacent to the site. The site closest to Lynedoch Road, on the south-east side has a smaller fall than the steeper slope on the north-west side. Regionally, the general geology of the area comprises Quaternary colluvial gravelly clay loam soils and phyllite and greywacke of the Tygerberg Formation and granites of the Cape Granite Suite. Locally the site is overlain, as intersected in the test pits, by made ground, colluvial and residual soils and granite rock. Perched groundwater was not intersected across the site. This is mostly likely due to the slope of the land. During and after peak rainfall periods strong surface stormwater flow may occur. To prevent erosion, precautions will likely be required in this regard. Stormwater run-off is expected to accumulate in the lower lying parts of the site. Drainage measures to remove this water will be required. The main water table is expected to occur at depth within the fractured rock aquifer.

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	
6.2.	Provide the name and/or company who conducted the specialist study.		
Hearth Heritage, Emmylou Bailey			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
The conclusion of the heritage impact assessment is that: "*an appropriate residential and educational development that considers the recommendations, heritage indicators and guidelines contained in this report, will benefit the area, and uplift the R310 scenic drive. The site has been consistently included within the urban edge, in both heritage surveys and planning documentation and sensitive and appropriate development will encourage local economy without further damage to the rural aesthetic of the cultural landscape. The success of the Sustainability Institute's model should be taken as guidance and a village node, with similar aesthetic and impact should be encouraged and will improve the experience of this historically and scenically significant cultural landscape*". Considering that the landscape has changed over time and will continuously change, in view of the environmental changes experienced in the area, the planning of the development must be sensitive to, but not inhibited by the heritage aspects. From the point of view of the local community and those with strong bonds to the Lynedoch Village, the landscape is not only observed. It is part of their frame of reference, perceived to be part of their social assets. On the other hand, there is the growing population in need of housing and social infrastructure. Therefore, in planning an area which is designated as a cultural landscape, to which an existing community has specific feelings, while simultaneously located in proximity of significant infrastructure such as the public transport node and an identified urban node, the planning should strive to create a human habitat that provides existing and future residents with balance. The balance must be between retention of some of the landscape features dear to the existing community, while providing for future activities dedicated to work and those which are dedicated to relaxation for the envisaged larger community. The settlement is planned with due cognisance of the heritage indicators as reflected in the urban design study.			

7. Historical and Cultural Aspects

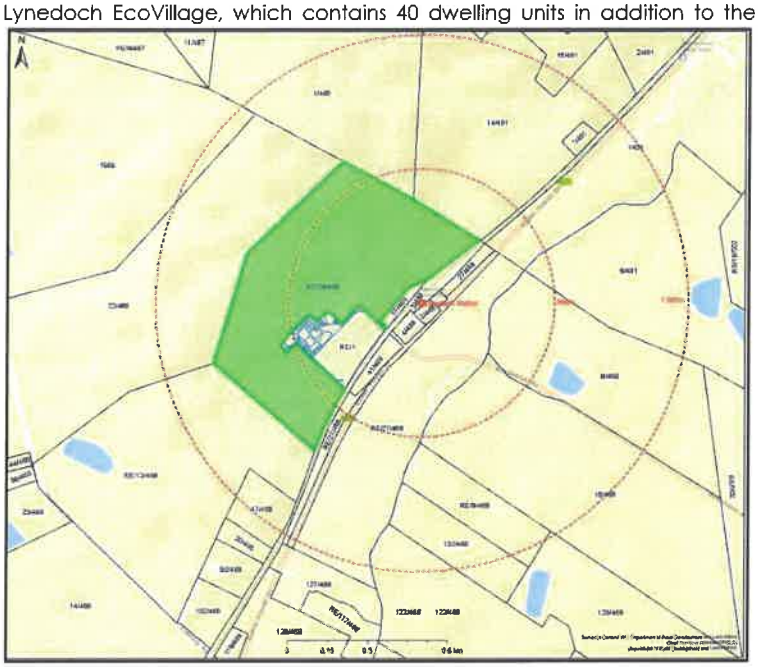
Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
The Cultural Landscape Study and associated Visual Study of the site have revealed a context and site of medium heritage significance but with very high scenic qualities, particularly in providing an agricultural backdrop to other heritage sites within the vicinity. It follows that, to preserve heritage significance (especially tangible heritage significance associated with physical elements) these fundamental elements must be identified, protected, and enhanced in the course of the future development and densification of the site. Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node. The site has consistently been included within the urban edge, in both heritage surveys and planning documentation. The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
The property is located along the Baden Powell transport corridor, at the intersection with Annandale Road, around Lynedoch Village. Lynedoch EcoVillage is the described as "*the first ecologically designed socially mixed intentional community in South Africa*" (http://www.sustainabilityinstitute.net/lynedoch-ecovillage10/detailed-story). It was established around the Drie	

Gewels Hotel, which was a student hangout and party place into the early 1990's. The hotel facilities were converted with the development of the Village in the early 2000's to accommodate a guest accommodation establishment, the Sustainability Institute, and the Lynedoch Primary School that accommodates up to 500 children, mostly from farm worker families in the surrounding area. The Village also contains a pre-school and other community facilities aimed at serving the surrounding community.

Lynedoch EcoVillage, which contains 40 dwelling units in addition to the aforementioned facilities, does not receive full municipal services and relies mostly on its own resources for the provision of infrastructure services (potable water, internal roads, sewerage, solid waste, electricity, and storm water). It is managed by a non-profit company that, with the Sustainability Institute, focuses on creating and maintaining a sustainable socio-economic living environment through innovation, and community development.



Prior to the closure of the at-grade level crossing at the Lynedoch Station in 2014, the Lynedoch node and urban edge was inclusive of land to the east of the railway line and amongst others Portion 27 of the farm, up to the Eerste River. The node forms part of the so-called "string of pearls" of settlements occurring along the transport corridors through the Stellenbosch municipal area. The entire property is within 750m of the railway station and the erstwhile level crossing, and major road intersection, which is the reason why in the first instance the node was identified as one of the "pearls" in the "string" and why it was designated as an urban node of secondary significance.

Locality of Portion 28 of Farm No. 468, Stellenbosch in context

8.2.	Explain the socio-economic value/contribution of the proposed development.

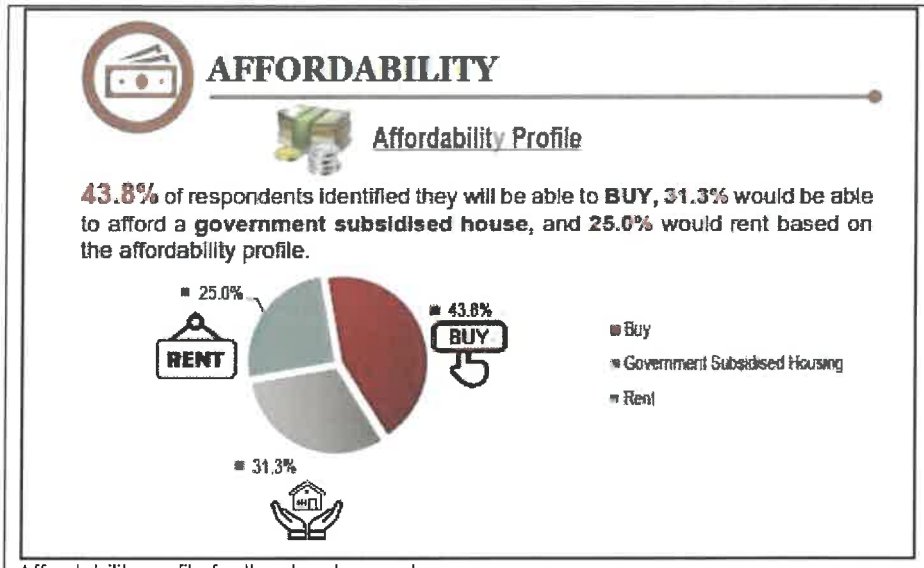
The socio-economic impact and need were assessed by Demacon in the Lynedoch Mixed-use Market Study, September 2023.

According to the study a total of 38,78 hectares could be developed and taken up over a 10-year timeframe. This includes 88,7% (34,41 ha) for residential uses and 11,3% (4,37 ha) for non-residential uses. The site, albeit smaller than the area needed, is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. "*Take-up is forecast to accelerate as the development gains traction in the market. Considering, the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45,48ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development*".

According to the study there is a current demand for approximately 322 medium density residential dwelling units, the property fitting as a desirable location from a market perspective with a score of 73,2%. Take-up of units over time is estimated as:

- Short to medium term (3 to 5 years): 100 – 150 units;
- Medium to longer term (5 – 10 years): 431 additional units up to 750 units; and
- Long term (10 – 15 years)): up to 1 500 units.

The market assessment further indicated that there is a need for a small retail component to serve the development and surrounding market area, defined as the area within 10 minutes' drive time from the property. Offices, automotive services, and private healthcare are also listed as being in demand for the area. The estimated land requirement for the activities and uses highlighted in the study as appropriate for the area is 38,78 ha.



Affordability profile for the development

The affordability profile in the study provides guidance on the implementation of the Stellenbosch Municipality Inclusionary Zoning Policy, 2023.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.

The developer has offered to develop inclusionary housing in the project and to establish a property owners' association for the entire development, through which all residents can be involved in the management of the future village.

8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics.

On the one hand the development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community. On the other hand, these negative effects will be the result of all development within existing urban areas or designated urban edges where there are existing resident communities, i.e., the negative effects cannot be avoided. These are necessary "evils" to cater for a growing population.

There are however positive effects as a result of the establishment a larger resident community, e.g., the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities, to mention a few. The wellbeing of the community is thus likely to be improved by a larger settlement.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred property and site alternative.

The attached concept site development plan for Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch (Urban Studio, Welmoed Context and Concept, dated March 2024) provides a graphic description of the development concept and some of the proposed design details, e.g., development densities, land uses, public and private roads, and developmental elements.

Due to the need to maximise the use of the scarce land resources, development densities of up to 80 dwelling units per hectare are planned for the area. A residential development with integrated community facilities is planned on an area of about 28 ha, with servitudes, storm water run-off detention facilities, and site constraints such as slopes steeper than 1:4, limiting development on 7,97 ha. The proposed residential development consists of 884units, with planned densities of up to 80 units per hectare inside of individual blocks. The average development density is 34 units per hectare. Communal private open space, indigenous vegetation areas and internal roads take up about 8,50 ha.

The internal roads are planned as a grid with due consideration of the slopes and the need to design the development in such a way that it can be accommodated in the landscape without significant negative visual effect. Densities of development will be highest in proximity of the main transport infrastructure, while higher lying development will be structured to avoid skyline effect and allow for significant terrace forming. As a result of the site characteristics and grading of the development, and the need for affordable and inclusionary housing in the area, nett densities of development on the lower-lying areas and abutting the public facilities (school, railway station, commercial use) will be up to 80 units per hectare.

The residential component will consist of clusters of group housing, townhouses, three storey walk-ups and four storey apartment blocks. Although the different block clusters might in future be on separate erven, each block is holistically planned, and the layout includes open space, access and parking as integrating elements. Parking and open space are planned with due cognisance of the zoning requirements as reflected in the Municipality's Zoning Scheme Bylaw.

While a total of 884 dwelling units are planned in the residential component, the ideal would have been between 1 250 and 1 500, as a critical threshold number. The provision of educational facilities to also satisfy a demand in the surrounding area, public transport, healthcare, and a sustainable community require minimum population thresholds, which in this instance is determined at between 1 250 and 1 500 households. The surrounding area within which the Sustainability Institute provides community and educational services, approximately in a radius of 3,5km, already accommodates an estimated 100 – 150 households, with 40 in the Village and 878 planned.

Although the node is not identified in the Stellenbosch Municipality housing pipeline as an area earmarked for social or subsidy housing development, inclusionary housing is included in the planning in accordance with the Municipality's policy (Inclusionary Zoning Policy, 2023). In terms of the Policy, 20% of the proposed residential units (176 units) need to be set aside for inclusionary housing. The Policy states that: *"Inclusionary zoning is mandatory for all new development applications under the jurisdiction of Stellenbosch Municipality that request additional development rights from the municipality within their new residential or mixed-use developments"*. The value of the inclusionary housing units still needs to be determined, but it will fall into the categories as defined in the Policy and related documents. The following quote from the Policy is indicative: *"Based on the aforementioned standard definitions of affordability and the evidence gathered through the Stellenbosch housing market study, affordability in the Stellenbosch Municipality context refers to the following market segmentations – affordable (R300 000 – R600 000), conventional (R600 000 – R900 000), and high-end (R900 000 - R1.2 million)"*.

Provide a description of any other property and site alternatives investigated.

None

Provide a motivation for the preferred property and site alternative including the outcome of the site selection matrix.

The reason for the selection of the site is that it is included in the urban edge of the Lynedoch node. A development of this nature cannot be considered favourably outside of a designated urban edge. The alternative would be to develop in one of the three primary nodes, being Stellenbosch, Klapmuts of Franschhoek. Each of these however have limitations in terms of locational, demographic, and market factors. Stellenbosch is being extended northwards along the R304 with a development of similar scale. Klapmuts serves a completely different market, with potential residents employed along the N1 corridor. Franschhoek is too far off and does not have any likelihood of being connected to a public transport network, which is a criterion in the decision-making process. Much of the available land for development in Stellenbosch is brownfields development, where the land is currently used for other purposes and where redevelopment must occur. The proposed brownfields developments in Stellenbosch will be too costly for the majority of people seeking affordable housing and the Municipality has not been able to provide any significant subsidised housing for those who do not qualify for full state subsidies. Low and middle income earners are excluded from the housing market in Stellenbosch. The SDF recognises this shortcoming, and it states amongst others that it is necessary to focus on: *"Broadening of residential opportunity for lower income groups, students, and the lower to middle housing market segments"*.

Provide a full description of the process followed to reach the preferred alternative within the site.

The Welmoed Urban Design Framework, dated April 2024, provides the rationale for the preferred layout alternative.

The framework is based on the input from the various specialists, with due consideration of the cultural landscape development indicators, the visual impact assessment, the landscaping master plan, the topography, and the existing activities of the Sustainability Institute and the nature of Lynedoch Eco Village.

Provide a detailed motivation if no property and site alternatives were considered.

As above, a development of this nature can only be considered inside of a designated urban edge and there are no such designated areas to the southwest of Stellenbosch other than the Vlottenburg node, where an industrial park is being planned.

List the positive and negative impacts that the property and site alternatives will have on the environment.

Positive
It is believed that a development on this site will contribute to the retention of higher value agricultural resources elsewhere in the Stellenbosch or surrounding municipal areas and is therefore supported.
Accessibility and movement to and from Lynedoch Village and the node will be improved, with the establishment over time of a threshold population large enough to warrant a public transport system.
In addition to the educational and other community facilities which will be added as a result of the development, there will be retail and other commercial facilities and opportunities as well, providing a benefit by reducing the residents' reliance on transport to access such opportunities.
The positive effects as a result of the establishment a larger resident community include the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities. The wellbeing of the community is thus likely to be improved by a larger settlement.
Expansion of the Lynedoch urban node and urban development of Portion 28 will not have any significant negative effect on the surrounding agricultural uses. Surrounding land is predominantly used for viticulture, all of which accessed from the surrounding farms. The likelihood of the urban development for middle income homeowners having any negative effect on the viticulture is very low, as experience in Stellenbosch has shown over many years.

Negative
The development will transform ±29 ha of farmland that was used for wine grape production.
The proposed development will have an impact on the use and enjoyment of the environment by the residents of Lynedoch Village.
A small urban community where every resident knows every other resident will change into a large community where residents are largely unknown except to neighbours and where the erstwhile sense of security will change to one of uncertainty.
The sense of place enjoyed by the existing Village residents will change from a small rural node to a small urban node.

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics. The development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community.	
1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred activity alternative.	
None.	
Provide a description of any other activity alternatives investigated.	
Provide a motivation for the preferred activity alternative.	
Provide a detailed motivation if no activity alternatives exist.	
The only activity alternative is the no-go option for retention of the land for agricultural purposes.	
List the positive and negative impacts that the activity alternatives will have on the environment.	
1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts
Provide a description of the preferred design or layout alternative.	
The Welmoed Urban Design Framework, dated April 2024, illustrates the preferred development and layout alternative.	



PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Allotment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

Provide a description of any other design or layout alternatives investigated.

A much denser development containing 1 500 residential units was considered, but it did not fit the in with the development indicators established in terms of the visual and heritage impact assessments. It would require visible medium and high density development on the slopes above the 60m contour, with significant negative visual impact according to the specialist assessment.

A much smaller development with significantly lower density, limited development footprint, and extensive open space as shown in the Stellenbosch SDF was considered. Such a limited footprint development consisting of Block A1, A2, B1, and B5 as on the Maste Plan would probably result in the development of only 75 – 100 residential units, educational facilities and large tracts of open space, or the retention of the remaining vineyards / agricultural land. In such development the potable water pipeline from the Skilpadvlei reservoir need not be constructed, as all development would be located below the 60m contour line. The electricity, road and sewerage infrastructure would nonetheless need to be upgraded to accommodate the development.

Provide a motivation for the preferred design or layout alternative.

The preferred alternative contains a sufficient number of residential units to create a threshold population to sustain a school, and other facilities in the node, and to justify the establishment of a link to a public transport system. Moreover, it creates a sufficient consumer base for the provision of municipal services infrastructure to be installed and maintained and can accommodate the growing population in a pre-planned manner.

Provide a detailed motivation if no design or layout alternatives exist.

N/a

List the positive and negative impacts that the design alternatives will have on the environment.

Same as under 1.1 above.

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

An on-site wastewater treatment works (package plant) and water re-use system would have been an ideal technology alternative to create an irrigation water resource for surrounding farms. The Municipality has however opposed such private technology development and insists on the wastewater being treated in the Stellenbosch WWTW.

Provide a description of any other technology alternatives investigated.

Community septic system and an absorption field (reed-bed system as currently in operation for Lynedoch Village) with enhancements to improve effluent quality: recirculating sand filter and UV disinfection.

Provide a motivation for the preferred technology alternative.

Centralised municipal system allows for appropriate quality management, risk avoidance, and reuse by local farmers over a wider area.

Provide a detailed motivation if no alternatives exist.

The Stellenbosch Municipality as the water services authority does not allow for the development of alternatives.

List the positive and negative impacts that the technology alternatives will have on the environment.

Stellenbosch Municipality regularly in the news for release of effluent that is not compliant with regulated standards.

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

A mixed-use urban development in the Lynedoch node operated as an open private village under the management of a property owners' association.

Provide a description of any other operational alternatives investigated.

A mixed-use urban development in the Lynedoch node as urban settlement under the management of the Municipality.

Provide a motivation for the preferred operational alternative.

The Stellenbosch Municipality indicated that it will not allocate funds to the development or management of any nodes other than Stellenbosch town, Klapmuts or Franschhoek in the foreseeable future.

Provide a detailed motivation if no alternatives exist.

List the positive and negative impacts that the operational alternatives will have on the environment.	
Same as under 1.1 above.	
1.6.	The option of not implementing the activity (the 'No-Go' Option).
Provide an explanation as to why the 'No-Go' Option is not preferred.	
The agricultural potential study and impact assessment by Agri Informatics provides the reason. The land is not capable of being farmed viably unless significant irrigation water resources are availed to it. As it is, the land is not and can be sustainably and productively used for agricultural purposes.	
1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.
No other alternatives have been considered.	
1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.
The proposed planning and phased development of the property contribute to intensification and densification around existing urban nodes in proximity of major transport interchanges, corridors, and infrastructure by development that improves the efficiencies in service provision as set out above, on under-utilised land within an identified urban node and in an area of need where housing demand outstrips supply. It does not diminish the supply of ecological or commercially viable agricultural resources and does not have any significant negative effect on the surrounding agricultural area.	

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).
There are no no-go areas on the site. The two portions of the site where natural vegetation still occur around rocky outcrops are proposed to be retained and used a private open space for conservation purposes and as anchor points for the green network proposed through the development.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.

The methodology used by Virdus Works Environmental in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risk associated with the alternatives is an accepted methodology of impact and issue identification and assessment. Identification and assessment of environmental impacts is a process during which quantitative and qualitative techniques and evaluations are applied. The application of scientific measurements and / or professional judgement leads to the determination of the significance of the probable environmental impacts associated with the proposal. Identified impacts and issues are described in terms of the nature, extent, duration, consequence, and probability, with reversibility and possibility of avoidance or mitigation also considered.

Probability	None	Unlikely	Low	Medium	High	Unknown
	0	1	2	3	4	5
Extent	Footprint	Site	Local	Regional	National	Unknown
	0	1	2	3	4	5
Consequences	None	Minor	Low	Medium	High	Very high
	0	1	2	3	4	5
Duration	None	Immediate	Short term	Medium term	Long term	Permanent
	0	1	2	3	4	5

Significance rating	SR=(E+C+D)xP
Low (L)	< 12
Medium (M)	13-27
High (H)	28-48
Very high (VH)	49 <

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

Alternative:	Preferred development	No-go (agriculture)	SDF development
PLANNING, DESIGN AND DEVELOPMENT PHASE	See Appendix J	See Appendix J	See Appendix J
OPERATIONAL PHASE	See Appendix J	See Appendix J	See Appendix J
DECOMMISSIONING AND CLOSURE PHASE	See Appendix J	See Appendix J	See Appendix J

Potential impact	**Preferred alternative (Master plan development)**
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
1. Construction phase	
1.1 Nuisance impacts	Dust and noise during construction.
· Nature of impact	Earthmoving and construction activities will cause noise, and dust.
· Extent	Local, with abutting properties potentially affected.
· Duration	Duration of project (medium term).
· Consequence	Neighbours disturbed by noise. Dust potentially damaging crops on adjacent properties and dirtying houses.
· Probability	Heavy construction equipment will cause noise and dust will be generated by all vehicle movement on soil cleared of vegetation.
· Reversibility	The effects of dust are reversible by washing. Noise effects reverse with cessation.
· Irreplaceable loss of resources	No resources would be lost as a result.
· Avoidance	Effects are unavoidable. Effects can be mitigated through implementation of an EMPr.
· Management	EMPr to address potential effects.
· Mitigation	Limit construction times and movement of vehicles on bare untreated soil.
· Residual impact	None.
· Significance rating	H
1.2 Resource loss	Removal of vineyards and agricultural activity.
· Nature of impact	Loss of wine production and land for alternative crops.
· Extent	The agricultural production has regional effects due to it being linked to other services and service providers.
· Duration	Replacement of vineyards with urban settlement will be permanent.
· Consequence	29ha of low potential vineyards exchanged for 884 dwelling units for which a demand exists.
· Probability	Any settlement development will cause loss of vineyards which are unproductive and replaced by needed residential dwellings.
· Reversibility	Wine production is expanding to new regions as a result of climate change and cultivar adaptation. Locally irreversible but with limited negative effect.
· Irreplaceable loss of resources	Loss of wine production capacity has limited negative effect.
· Avoidance	Effects could be mitigated through refusal of urban development, but retention of vineyards and agricultural production not guaranteed.
· Management	Allow best use of land for urban development to reduce demand elsewhere in same area.
· Mitigation	Support agricultural production elsewhere and cause highest possible density and intensity of development to occur to reduce demand for urban land use elsewhere.
· Residual impact	Urban development.
· Significance rating	M
1.3 Traffic impacts	Movement of construction vehicles.
· Nature of impact	Construction vehicles using roads could disrupt traffic and pedestrian movement in surrounding area and around station.
· Extent	Extent will differ depending on the phase of development, e.g., external services, road upgrading, internal services.
· Duration	Every new development phase will have short term effects during construction.
· Consequence	Traffic congestion or disruptions might occur and risk to pedestrians.
· Probability	It is unlikely that the surrounding farms will suffer negative effects, but construction traffic will affect Lynedoch residents.
· Reversibility	The effects are immediately reversible.
· Irreplaceable loss of resources	None.
· Avoidance	Effects can be mitigated through implementation of an EMPr.
· Management	EMPr to address potential effects.
· Mitigation	Set times for movement of vehicles.
· Residual impact	None.
· Significance rating	L
1.4 Socio-economic impacts	Employment creation, influx of labourers, security of existing residents, and changing living patterns.
· Nature of impact	The construction will create new employment opportunities and benefit job seekers. Continuous influx of job seekers is however always perceived as a risk due to increased crime levels during construction periods.
· Extent	The effects will be positive and negative locally.
· Duration	Medium term positive and negative effects during construction.

Potential impact	**Preferred alternative (Master plan development)**
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
· Consequence	The potential positive socio-economic effects will improve the livelihoods of some citizens, while local residents will feel threatened during the construction periods.
· Probability	It is likely that the effects will occur.
· Reversibility	The effects are reversible as they cease when construction ceases.
· Irreplaceable loss of resources	None.
· Avoidance	Effects need to be managed to increase benefits and reduce negative effects.
· Management	Mitigation measures are required in the EMPr.
· Mitigation	Establish a labour and security (risk avoidance) plan.
· Residual impact	None.
· Significance rating	L
1.5 Bio-physical environmental impacts	Loss of habitat for fauna adapted to the agricultural environment.
· Nature of impact	The construction activities and change in use of the buildings could cause loss of habitat to birds, rodents and reptiles which have adapted to the vineyards.
· Extent	Effects will be on the site only.
· Duration	Medium term effects during construction and development.
· Consequence	The potential negative effects will be minimised by the introduction of landscape networks aimed at improving biodiversity.
· Probability	It is unlikely that the bio-physical environment will suffer enduring negative effects as a result of construction.
· Reversibility	The effects are reversible by the creation of specific biodiversity attributes.
· Irreplaceable loss of resources	Loss of mono-culture environment is unavoidable, and a new more biodiverse environment can be created through landscape networks.
· Avoidance	Avoidance of negative effects during construction is not possible.
· Management	Mitigation measures are required in an Operational Phase EMPr.
· Mitigation	No mitigation is required during the construction phase.
· Residual impact	None.
· Significance rating	L
1.6 Surface water resources	No on-site surface water resources exist or are affected. The external services for the development cross streams and there are water bodies within 500m of the site.
· Nature of impact	Construction activities could damage stream banks, bottoms, and ecosystems, or lead to runoff that could impact nearby waterbodies.
· Extent	Effects will be localised due to the nature of the environment, with potential only for minor sediment transport downstream in one water course (crossed by potable water pipeline).
· Duration	Medium term effects during construction.
· Consequence	The potential negative effects are minor as reported by specialist.
· Probability	Negative effects are unlikely if construction is managed.
· Reversibility	Negative effects of construction are partially reversible.
· Irreplaceable loss of resources	None.
· Avoidance	Effects can be mitigated.
· Management	Specific mitigation measures provided by specialist to be included in EMPr.
· Mitigation	Construction through streams to occur during dry summer months and natural vegetation disturbance to be minimised.
· Residual impact	None.
· Significance rating	L
1.7 Surface run-off and pollution	No on-site surface water resources exist. There are water bodies (dams, man-made wetlands, and the Eerste River) within 500m of the site.
· Nature of impact	Construction activities could disturb the surface and increase runoff that could impact nearby waterbodies.
· Extent	Effects will be localised if polluted or sediment bearing runoff is retained on site. If not it has the potential to affect the environment downstream.
· Duration	Medium term effects during construction.
· Consequence	The potential negative effects should be minor as reported by specialist.
· Probability	Negative effects are unlikely if construction is managed.
· Reversibility	Negative effects of sediment transport and pollution might not be reversible.
· Irreplaceable loss of resources	Significant pollution could cause resource loss.
· Avoidance	Potential negative effects can be mitigated.
· Management	Mitigation measures provided by specialist and best practice to be included in EMPr.
· Mitigation	Construction management and early creation of storm water systems.
· Residual impact	None.
· Significance rating	L

2. Operational phase

2.1 Change in social environment	Small interactive community in Lynedoch and surrounding area will significantly increase and become urbanised.

Potential impact	**Preferred alternative (Master plan development)**
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
· Nature of impact	Change in the community dynamics and management.
· Extent	Changes will only affect Lynedoch and the immediate surrounding agricultural community.
· Duration	Change will be permanent.
· Consequence	Urban settlement and increased population will lead to loss of social cohesion.
· Probability	The larger community will not have the same dynamic as the existing small village.
· Reversibility	The effects are irreversible.
· Irreplaceable loss of resources	None.
· Avoidance	Effects can be mitigated but not avoided.
· Management	A property owners' association (POA) could be implemented to mitigate potential effects.
· Mitigation	Establish a management body and POA.
· Residual impact	Less control over built environment, resource use, and security.
· Significance rating	M
2.2 Traffic impacts	Additional traffic on Vlottenburg service road and around Lynedoch Village.
· Nature of impact	Traffic congestion and increased pedestrian movement in surrounding area.
· Extent	Vlottenburg service road up to intersections with Vlaeberg and Vlottenburg Road, i.e., Baden Powell connections.
· Duration	Long term effect with gradual increase as settlement occurs.
· Consequence	Traffic congestion or disruptions and risk to pedestrians.
· Probability	All properties with access off Vlottenburg service road will experience negative effects.
· Reversibility	The effects are reversible.
· Irreplaceable loss of resources	None.
· Avoidance	None.
· Management	Road traffic management processes.
· Mitigation	Effects can be mitigated through appropriate road upgrading and establishment of a public transport system.
· Residual impact	Higher levels of traffic.
· Significance rating	H
2.3 Socio-economic impacts	Creation of opportunities for employment and business, also changing living patterns of existing residents.
· Nature of impact	The development will create new economic opportunities and benefit the larger community. Threshold population established for various services.
· Extent	The effects will be positive for a larger community and negative only locally.
· Duration	Medium term positive and negative effects during construction.
· Consequence	Positive socio-economic effects for larger community, while local residents will feel negative effects.
· Probability	It is likely that the effects will occur.
· Reversibility	The negative effects are reversible over time with residents benefitting from additional services.
· Irreplaceable loss of resources	None.
· Avoidance	Effects need to be managed to increase benefits and reduce negative effects.
· Management	Services need to be provided by developer.
· Mitigation	Developer needs to provide opportunities and services.
· Residual impact	Economic and social opportunities for residents.
· Significance rating	H
2.4 Settlement impacts	Provision of housing in high demand.
· Nature of impact	High demand for housing in Stellenbosch over range of market categories.
· Extent	Additional housing in affordable categories will benefit citizens currently residing in wider region.
· Duration	Long term positive effects.
· Consequence	The positive effects of housing in proximity of place of demand include indirect effects such as reduced traffic movement, and benefits to local businesses.
· Probability	Housing in a wide range in the affordable categories is likely according to the application.
· Reversibility	The positive effects are not reversible.
· Irreplaceable loss of resources	None.
· Avoidance	Positive effects need not be mitigated.
· Management	Inclusionary housing in terms of the Stellenbosch policy must be a condition of the development.
· Mitigation	None required.
· Residual impact	Improved housing supply for growing population.
· Significance rating	H
2.5 Visual impact	Built environment will change agricultural character of area.
· Nature of impact	The visual experience of the area will change with vineyards being replaced by an urban settlement.
· Extent	Site is visible only from certain places in the surrounding area.
· Duration	Long term effects albeit that change is accepted over time.

Potential impact	Preferred alternative (Master plan development)
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
· Consequence	The effect is to the experience of the sense of place for citizens who have known the area for a long time.
· Probability	The change in character is definite, but the negativity of the effect might not be significant.
· Reversibility	The change is not reversible.
· Irreplaceable loss of resources	The rural character will be lost.
· Avoidance	Effect cannot be avoided.
· Management	Mitigation measures required in EMPr.
· Mitigation	Recommendations of the visual impact assessment to be introduced, e.g., placement of buildings, landscaping, nature of the development.
· Residual impact	Loss of rural character of node.
· Significance rating	H
2.6 Surface run-off and pollution	No on-site surface water resources exist. There are water bodies (dams, man-made wetlands, and the Eerste River) within 500m of the site.
· Nature of impact	Development increases the surface runoff and decreases the quality thereof that could impact nearby waterbodies.
· Extent	Effects will be localised if polluted or sediment bearing runoff is retained on site. If not it has the potential to affect the environment downstream.
· Duration	Long term effects.
· Consequence	The adjacent freshwater habitats could be degraded if effects are not avoided.
· Probability	Negative effects are likely if run-off is not managed.
· Reversibility	Negative effects of enduring pollution might not be reversible.
· Irreplaceable loss of resources	Enduring pollution will cause resource loss.
· Avoidance	Potential negative effects can be mitigated.
· Management	Mitigation measures provided in storm water management plan and best practice to be included in EMPr.
· Mitigation	Construction and management of storm water systems.
· Residual impact	Storm water ponds on site to be managed.
· Significance rating	M

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

Agricultural: Land is not suitable for economically viable agriculture. Make best use of land to reduce demand elsewhere.

Socio-economic: Need is for medium and high density affordable housing. 1 500 units to be developed on the land over time.

Visual: Certain parts of the land are highly visible or sensitive landscapes. Development to be planned according to indicators.

Archaeological: The proposed development will not negatively impact on the archaeological heritage resources.

Heritage: Cultural landscape is sensitive. Development to be planned and undertaken according to indicators.

Landscaping: Landscaping can be used to mitigate the visual effects of the proposed development. Wider road reserves and visual focus areas are required to allow for appropriate landscaping.

Traffic: Road infrastructure requires upgrading. Intersections and access off Vlottenburg service road to be upgraded.

Geotechnical: Some parts of land are "made ground", i.e., filled, with limited granite intrusions and no groundwater intersections. Earthworks and foundation preparation to be cognisant of soil conditions.

Freshwater: The external services infrastructure will cross three freshwater streams. One is in a near natural state and requires special construction mitigation measures, while the other two are significantly transformed and can be improved by construction.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

Construction phase EMPr

Geotechnical evaluation:
1. Site Clearance and Preparation. Site clearance and preparation should include but will not necessarily be limited to the following:
- Removal of grasses and trees and associated root systems.
- The removal of roots will likely require ripping and removal to spoil of approximately 0,20m of loose colluvial rootbound soils.
- Demolishing existing farm structures, foundations, septic tanks etc. These will also have to be backfilled accordingly. Backfilling protocols similar to the below test pitting regimen would be effective.

• Removal of dumped waste across the site but particularly in areas B14 and B15. Or utilization of these areas as green zones or drainage areas etc.
• Identifying the positions of the 23 test pits and removing, say, 1m of the very loose backfill, compacting the newly exposed base of the excavation to at least 95% of mod AASHTO maximum dry density and then re-using the excavated colluvium or importing geotechnically inert material to backfill the pit and compacting it to at least 98% of mod density. These operations are required wherever the test pits could affect subgrade conditions for roads and parking or founding conditions for the buildings.
2. Earthworks.
• It is assumed that level cuts to create platforms will be required. During cut to fill operations, due to the quality and post compaction strength of the colluvial soils, it is not recommended that the colluvial soils are used as recompacted fill below surface beds or foundations. Foundations should extend through the fill into at least medium dense in-situ soils or geotechnically inert imported materials.
• Once the upper root bound soils are removed, medium dense in-situ soils will form a suitable in-situ subgrade for pavements and surface beds. Loose disturbed soils can then be compacted using a vibratory roller to at least 95% MDD below pavements and 98% MDD below structures.
• During bulk earthworks, if the soils become saturated, an allowance should be made to remove and spoil saturated soils and emplace imported gravels to create temporary access and work areas. The early site drainage measures such as upslope cut off trenches should be implemented.
• Excavation in materials on site in terms of the SANS 1200DM Earthworks Specifications generally classifies as "soft excavation" in soils. With "intermediate" to "hard rock" excavation expected to occur in localized areas where granite outcrop occurs. "Boulder Class B" excavation may also occur due to the presence of granite core stones.
3. Stability of Temporary Slopes.
a. Temporary excavations for service trenches and foundations will be required. These will intersect granular colluvial and residual soils. The following batters can be used for temporary cuts:
• 0,00 to 1,0m – Vertical to 1,50m – 1:0,50;
• 1,00 to 1,50 – 1:0,5;
• 1,50 to 2,50 – 1:1.
b. The following precautions are required: All trenches must be reviewed by a suitably qualified person. If groundwater is intersected work must be stopped and the stability reassessed. No surcharging should be allowed near excavations.
4. Stability of Permanent Slopes.
a. In areas of cut permanent slopes with retaining structures may be required. In order to undertake design, the parameters as indicated in Table 2 of the Geotechnical Evaluation should be considered.
b. The granular colluvial soils will have a unit weight of 17 to 19kN/m3 zero cohesion and an internal friction of 32° to 34°. Alternatively, if a larger area is provided batters of 1:1,5 could be considered throughout the materials, but the slopes would have to be well vegetated and provided with sufficient drainage to prevent erosion and sloughing.

Archaeological recommendations:
1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures directly related to the Drie Geuwels Hotel building should be retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Geuwels should be retained in form.
5. No development within 20m of the concrete boundary marker at LYN149 (33.977012°S 18.769523°E).
6. Archaeological monitoring of all development within 50m of the structures directly related to the Drie Geuwels Hotel and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
9. The HWC Fossil Finds Protocol is to be implemented.
10. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685).

Freshwater Ecological assessment recommendations:
1. Essential mitigation measures to address alteration of flow regime during the development/construction phase:
□ Avoid the impact as far as is practically possible by undertaking the watercourse crossings (vegetation clearing and trench excavations) during the dry summer season, where possible;
□ If installation of the external services cannot be undertaken prior to the onset of the winter rainy season then the Environmental Control Officer (ECO) must advise on measures to ensure that run- off from cleared areas is contained and encouraged to infiltrate rather than discharge directly into the downstream watercourses;
□ Timeously revegetate areas cleared by construction activities near the watercourse crossing points with suitable indigenous plants.
2. Essential mitigation measures to address the development/construction phase impact of erosion and sedimentation:
□ Avoid the impact as far as is practically possible by undertaking the watercourse crossings (vegetation clearing and trench excavations) during the dry summer season, where possible;
□ If the installation of the external services cannot be undertaken prior to the onset of the winter rainy season then the ECO must advise on measures to ensure that sediment plumes from the trench excavation are contained and run-off from cleared areas

upslope of the watercourses is contained and encouraged to infiltrate rather than discharge directly into the receiving watercourses;

□ Formulate and implement a Development/Construction phase EMP which includes the following specifications:

o No stockpiles may be located within 30m of the crossing point;

o The ECO shall designate the site for stockpiling (note this should preferably take place at the Construction Camp but an alternative site can be identified closer to the crossing site, but no closer than 30m, in consultation with the ECO);

o Protect soil stockpiles, if required, from erosion using a tarp or erosion blankets;

o Implement erosion control measures in order to prevent erosion and sedimentation of the receiving watercourses as required by the ECO. For example. strategically place straw bales or sediment fences/traps, to divert stormwater away from areas susceptible to erosion etc.);

o Any sediment contaminated runoff should be contained and allowed to settle before being discharged. The settled-out sediment collected in this manner should be cleared manually as needed and removed from site;

o The ECO shall check erosion control measures weekly to ensure these are still intact (and cleared of sediment in accordance with the recommendations above) as needed;

o The ECO shall check the site for erosion damage and sedimentation after every heavy rainfall event. Should erosion or sedimentation be noted, immediate corrective measures must be undertaken; and

o Ensure that any area within 50m of the crossing point that is damaged as a result of construction activities is suitably and timeously rehabilitated to the satisfaction of the ECO.

□ Any areas that need to be cleared in close proximity to the crossing points because they contain listed alien invasive species or are cleared for any other purpose must be revegetated timeously with appropriate indigenous vegetation.

3. Essential mitigation measures to reduce water quality impairment associated with construction activities:

□ Formulate and implement an EMP for the development/construction phase which includes the following specifications:

o Where cement is mixed in a cement mixer ensure that the cement mixer operates at all times within a bunded area with an impermeable base;

o Where cement is mixed by hand, ensure that the cement is mixed at all times in impermeable containers or in a bunded area with an impermeable base;

o All wet and dry cement deposits outside the contained areas are to be cleaned at the end of each day and disposed of off-site as rubble;

o Store fuel, chemicals, and other hazardous substances in suitable secure weather-proof containers with impermeable and bunded floors to limit pilferage, spillage into the environment, flooding, or storm damage and to be located at least 100m from any wetland;

o Inspect all storage facilities and vehicles daily for the early detection of deterioration or leaks;

o Clean up any spillages (e.g. concrete, oil, fuel), immediately. Remove contaminated soil and dispose of it appropriately;

o Dispose of used oils, wash water from cement and other pollutants at an appropriate licensed landfill site. Disposal of any of these waste materials into any watercourse is strictly prohibited;

o Dispose of concrete and cement-related mortars in an environmental sensitive manner (as this can be toxic to aquatic life). Washout may not be discharged into any watercourse;

o Provide an adequate number of portable toilets where work is being undertaken. These toilets must be located at least 30m from the watercourse and must be serviced regularly in order to prevent leakage/spillage;

o All contaminated soil removed from the site by excavator or hand is to be immediately placed in a skip (i.e. no stockpiling of contaminated soil on-site);

o All skips containing waste shall be immediately transported to landfill for disposal when the skip becomes full;

o Any skips containing solid waste at the end of the day shall be covered to prevent wind from blowing the waste away; and

o Receipts for the safe disposal of solid waste shall be kept on record by the Contractor.

4. Essential mitigation measures to minimise biota loss associated with construction activities:

□ Clearly demarcate the edge of the 'clean' watercourse (viz-a-viz the un-channelled valley bottom wetland) for a distance of 20m either side of the crossing point using weather-proof markers for the full duration of the construction phase;

□ Any part of the wetland upstream and downstream of the marked-off portion of the wetland must be off-limits to construction workers, vehicles and machinery unless authorised by the ECO); and

□ Construction material stockpiles should be kept at least 20m from the wetland edge.

5. Essential mitigation measures to address the alteration of flow regime during the operational phase:

□ Ensure that all pipelines within the 1:50 year flood lines of the watercourses are lined with an internal Kevlar or similar sleave;

□ Inspect the water supply and sewerage pipelines within the 1:50 year flood lines of the affected watercourses annually and repair / address leaks timeously.

6. Essential mitigation measures to address water quality impairment during the operational phase (both alternatives):

□ Ensure that all new sewerage pipelines within the 1:50 year flood line of the Sand River are lined with an internal Kevlar or similar sleave;

□ Inspect all sewerage infrastructure within the 1:50 year flood line annually and repair / address leaks timeously.

Operational phase EMPr

Implement the recommendations of the TIA to accommodate the development traffic:

1. Dedicated left- and right-turn lanes along all approaches, and traffic signals be provided at the Vlaeberg Road/Lynedoch Road intersection.

2. Dedicated left- and right-turn lanes be provided along all approaches to the development accesses.

3. That the existing pedestrian crossing across Lynedoch Road (at the railway station) be raised and that the existing sidewalk along Lynedoch Road be improved and extended up to the eastern development-access.

Implement the recommendations of the electrical engineer:
The design load of 2.5kVA as calculated for each dwelling unit must be supplemented with the following alternative energy measures to limit energy consumption from the national grid:
1. Gas stoves and ovens to be used.
2. Gas geyser to be used.
3. A 4,5kW PV solar system to be installed per dwelling unit. The PV solar efficiency of each induvial dwelling to be maximised by design according to the roof structure, aspect, and exposure.

Implement the recommendations of the HIA:
1. The historic farm barn structures and small "managers house" should be retained and adaptively re-used.
2. All existing areas of Fynbos and/or natural vegetation must be retained and reinforced on the site.
3. The spring course identified on the c1938 SG Diagram and the dam along the roadway to the south-east should be preserved as assets of the site.
4. The mature trees on and around the site are higher-order landmark elements and should be retained.
5. A plan for the staggering or replacement of mature planting must be put in place. Existing treelines should be reinforced and extended to screen the development.
6. Planting as visual screening must be used extensively on the southern slopes which are visually exposed from the east.
7. New buildings must follow the contour, as the existing buildings within the Lynedoch node currently do.
8. Verges/Pavements: It is preferred that verges and pavements are grassed, hard-packed soil or brick paving, and planted with trees. Brickwork and laterite surfacing should be preferred to tarmac throughout.
9. Boundary Treatments: High and solid walls are not permitted, as well as pre-cast concrete fencing, exposed blockwork, and face-brick walling. Historic boundary elements such as fences and hedges must be preserved and extended as far as possible.
10. Street-facing stoeps are a common feature of the buildings in the area and new residential development should include these elements.
11. Heights: New buildings must respond to and interpret the character-giving aspects of the site. New buildings should predominantly be no more than double storey.
12. Materials, Colour and Architectural Detail: Building materials should be compatible with traditional materials in terms of scale, colour, and texture.
13. New buildings should be of a walled architectural type. New structures should be painted a muted colour and be rectilinear in form. Corrugated roofs should be darker colours.
14. Scenic Route Restrictions within 500m of the roadway: Foreground guidelines:
a. Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.
b. New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road- related interventions affecting its sense of fit in the landscape must be avoided.
c. Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as they detract from the rural character of the Winelands.
d. Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas.
e. Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.
f. The natural character of Fynbos vegetation, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with over-scaled entrance structures.
g. Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before they can be considered (from the list of deviated land-use documented for the Stellenbosch Winelands:
- Farm stalls/restaurants.
- Nurseries/mixed use/garden centres/timber yards.
- Greenhouses, agricultural netting, chicken broilers, strawberry fields.
- Subdivisions, gated communities, shopping centres, business parks.
- Large scale industrial structures.
- Open Air Markets.

15. Scenic Route Restrictions within 500m of the roadway: Background guidelines:
h. Avoid development on rocky outcrops or ridgelines.
i. Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines, and hillcrests.
j. Avoid the construction of over-scaled private dwellings and other structures in locations of high visual significance.
k. Respect traditional settlement patterns.
l. Promote urban densification within the historic node to protect the rural landscape as the main communal asset.
m. Respect the layout, scale, massing, hierarchy, alignments, access, landscaping and setting of the existing settlement pattern.
n. Prevent the gentrification of rural settlements through "lifestyle rural estates".
o. The development of security estates and gated communities must be prevented.

Archaeological recommendations:
1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures directly related to the Drie Geuwels Hotel building should be retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Geuwels should be retained in form.

5. No development within 20m of the concrete boundary marker at LYN149 (33.977012°S 18.769523°E).
6. Archaeological monitoring of all development within 50m of the structures directly related to the Drie Geuwels Hotel and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
9. The HWC Fossil Finds Protocol is to be implemented.
10. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685).

Geotechnical evaluation:
1. Foundation Recommendations. The following options should be considered:
a. Single and double storey structures. After the recommended bulk earth works and preparations, found the structures in at least medium dense colluvial or residual soils using reinforced strip or pad footings with modified construction techniques.
b. Articulation joints should also be considered at the cut to fill transition of each structure. While modified construction should account for minor collapse and variability that may occur and minimize differential settlement between varying substrates. If foundation depths through fill soils are to be reduced, consider importing geotechnically inert materials to form a soil mattress.
c. Foundation inspections will be required to ensure ground conditions are as specified. A bearing pressure of 150kPa would be achievable on medium dense natural and in-situ granular soils.
d. Where deep made ground / fill soils occur, removal of these soils and replacement with an engineered soil mattress could be considered. Or founding of structures below the uncontrolled fill onto medium dense in-situ soils using pad footings or caissons.
e. The foundations and surface beds should be designed to tolerate alkaline soil conditions. This based on laboratory results that indicate pH values of between 8.5 to 9.0.
f. A Phase 2 geotechnical investigation will be required. This to confirm the ground conditions are as anticipated after bulk earthworks have been completed.
2. Pavements and Surface Beds
a. If loose soils occur, re-compaction of the subgrade will be required. Once compacted, or where medium dense in-situ soils occur, the granular colluvial and residual soils would form a suitable in-situ subgrade (conservatively anticipate G9 quality) for surface beds and pavements.
3. Use of On-site Soils for Backfill
a. The colluvial soils classify at best as G9 with two of the three samples classified as <10. Through control testing and careful selection, G9 soils could be identified and utilized on site for general fill. But these soils should not be compacted and utilized below foundations or surface beds.
b. The residual granite with completely weathered granite gravels classified as G7. If an excess of these materials occurs, then these soils could be utilized on site. However, continuous control testing would be required as it is unlikely that these soils will be readily available.
4. Drainage
a. During the rainy season, surface water flow can be expected across the site. Measures to prevent erosion would be as follows:
• Cut off trench along the upper portions of the site with surface water diverted into formalized drainage areas.
• V drains upslope of proposed structures and parallel to paved access roads and parking areas.
• Also allow for collection of rainwater through downpipes and drains directed away from structures.

Freshwater Ecological assessment recommendations:
1. Essential mitigation measures to address the alteration of flow regime during the operational phase:
□ Ensure that all pipelines within the 1:50 year flood lines of the watercourses are lined with an internal Kevlar or similar sleave;
□ Inspect the water supply and sewerage pipelines within the 1:50 year flood lines of the affected watercourses annually and repair / address leaks timeously.
2. Essential mitigation measures to address water quality impairment during the operational phase (both alternatives):
□ Ensure that all new sewerage pipelines within the 1:50 year flood line of the Sand River are lined with an internal Kevlar or similar sleave;
□ Inspect all sewerage infrastructure within the 1:50 year flood line annually and repair / address leaks timeously.

Storm water management plan:
The property owners' association must undertake the following management actions:
1. Inlet structures and manholes.
□ Clean and remove litter.
□ Clean and remove sand and silt.
□ Inspect for damages and implement remedial action.
6 month basis (at least once before winter).
2. Pipework
□ Clean and remove litter.
□ Clean and remove sand and silt.
□ Inspect for damages and implement remedial action.
6 month basis (at least once before winter).

3. Head wall and gabion structures.
□ Clean and remove litter.
□ Clean and remove sand and silt.
□ Inspect for damages and implement remedial action.
6 month basis (at least once before winter).
4. Vegetated channels
□ Clean and remove litter.
□ Maintain grass to a height of below 50mm.
□ Remove sediment from channel as required.
Continuous, but not less than once per month.
5. Embankments of vegetated channels, swales, and attenuation ponds.
□ Inspect embankment for signs of erosion.
□ Implement remedial action as required.
6 month basis.
6. Plant species.
□ Inspect plant species for successful establishment. If unsuccessful plant new/ different species.
6 month basis

Waste management plan:
The property owners' association must undertake the following management actions:
1. Register as waste minimisation / management club in keeping with the Stellenbosch Municipality Integrated Waste Management Bylaw, 2021.
2. Conclude a contract with an accredited service provider, to collect waste generated by the development in keeping with the Stellenbosch Municipality Integrated Waste Management Bylaw.
3. Submit the integrated waste management plan that forms part of the EMPr to the Municipality for approval.
4. Cause separation of recyclable and non-recyclable material at the point of source.
5. Set targets for waste reduction through waste minimisation, re-use, recycling, and recovery.
6. Determine methods for monitoring and reporting on the implementation of the integrated waste management plan.

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

None.

4.	Explain how the proposed development will impact the surrounding communities.

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics.

On the one hand the development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community. On the other hand, these negative effects will be the result of all development within existing urban areas or designated urban edges where there are existing resident communities, i.e., the negative effects cannot be avoided. These are necessary "evils" to cater for a growing population.

There are however positive effects as a result of the establishment a larger resident community, e.g., the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities, to mention a few. The wellbeing of the community is thus likely to be improved by a larger settlement.

Potential impact	**Development issue / Activity**	**Potential effect**	**Remedial / mitigation measure**
Quality of life of citizens	Rural setting to change to an urban setting. Loss of "freedom to roam" by informal use of under-utilised agricultural holding.	Loss of uniqueness of Lynedoch Village with perceived effect on property values.	Plan settlement with elements of the existing landscape and assets retained. Phase growth over time to systematically effect change.
Health and well-being of citizens	Disturbances during construction. Change in environment post construction.	Dust, noise, and emissions which could lead to health issues. Houses and assets could be affected by dust. Citizens could be affected by noise. Sense of place could be lost, and existing residents could feel negative about it. New residents would feel positive about finding a place to settle in a desirable environment. Feeling of ruralness and open space will be lost for existing residents, while new residents will enjoy the relative ruralness of the setting.	Construction and operational management plans to be prepared and implemented. Planning and development to incorporate features that would create an attractive human habitat and environment for all residents.
Disintegration of community	Small integrated community becomes a larger, less integrated, and cohesive community.	Management of the home owners' association and Village becomes more difficult and complex.	Establish home and /or property owners' associations to assist in managing the social and other

			aspects of the new urban environment.
Change in built environment	Existing community / Village becomes surrounded by urban development.	Micro-climatic changes.	Plan settlement with elements of the existing landscape and bio-physical assets retained. Phase growth over time to systematically effect change.
Loss of agricultural resource	Removal of vineyards and fields which provided a rural setting, but no meaningful economic opportunities.	Seasonal agricultural activities no longer have a negative effect on the citizens. Insignificant loss in productive capacity of the area.	No mitigation required. New development brings economic opportunity for more employment seekers.
Loss of natural resource	Land surrounding the Village becomes an urban environment with altered bio-physical characteristics.	Increased surface run-off and loss of habitat for fauna that survived in the agricultural setting.	Planning of the development must ensure sufficient greenery and vegetation to in corridors to enhance the urban environment and create storm water retention ponds.
Loss of cultural landscape	Vineyards deemed of cultural significance are converted to an urban setting.	Stellenbosch area and Baden Powell Drive become less attractive as a tourist destination.	Establish an attractive settlement with features that produce a desirable human habitat.
Municipal administration and service delivery	Additional ratepayers and residents to be provided services. New connector services infrastructure for maintenance.	Additional revenue and expenditure to local authority.	Manage the settlement through a property / home owners' association and reduce the administrative demands on the Municipality by also managing services infrastructure.
Services infrastructure	New services infrastructure required as existing Lynedoch was designed only for the Village. Municipal services need to be extended to provide appropriate connections.	No negative effect on existing community. Additional extent of municipal (link) services infrastructure.	Operational management of internal services becomes a property owners' association function, while only external services are municipal.
Roads and access	Major road upgrading on and off site required. Non-motorised transport facilities such as sidewalks for pedestrians to be created and Lynedoch (service) Road to be upgraded.	Increased traffic in and around the Village. Better access to the Village and the Station area. Effect on the abutting bio-physical environment.	Create alternative entrances and access to the settlement and improve the existing deficient roads with no sidewalks for pedestrians.
Traffic	Increased traffic on access roads.	Increased risk for pedestrians and farm traffic.	Improve road layout and design to create safe NMT facilities where permitted by relevant authorities.
Security and vulnerability of citizens	A larger community means a less connected community with more uncertainties and less control, a greater sense of insecurity for existing residents. Shorter distance to destination for new residents improves their sense of security and vulnerability.	Need for increased security and integration measures in the community.	Establishment of a property owners' association could mitigate the effects.
Pressure on educational facilities	A larger population increases the demand for educational and social facilities, with limited investment in such facilities by government.	Overcrowded schools.	Provide additional private educational facilities and attract a private operator.
Pressure on social facilities	A larger population increases the demand for health and social facilities, with limited investment in such facilities by government.	Overcrowded facilities.	Consider provision of a club house which includes space for social facilities and where private practitioners can provide services without having to develop own offices and rooms.
Air quality	A change in use from agriculture to urban settlement will lead to increased traffic.	Lower air quality.	Reduce the need for vehicle use inside of the settlement by provision of mixed use space where retail and other needs can be met.
Affordable housing provision	Inclusionary and other forms of affordable housing to be provided.	More housing for lower income families subsidised by government in the consumption of services.	Provide inclusionary housing as per the Municipality's policy.

Economic impact	Urbanisation is proven to be a contributor to economic growth.	Increased economic opportunities in the community. Loss of or effect on the landscape character will not have any proven significant effect on tourism.	Settlement will provide more opportunities than the current agricultural use.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

The primary assumption in the land development application is that the national, regional, and local economies will not grow any faster or stronger in the coming five years than at present and that therefore the provision of public transport will not improve, but that the demand for affordable housing and demand for employment opportunities will remain the same, which is high. It is further assumed that the agricultural sector would need to be strengthened and supported if it is to overcome the effects of settlement development for large unemployed communities and climate change. The farms in the area range in size from small to well above the municipal average. The crops that are produced are varied and the water demand for the continued production of vegetables, vineyards, and irrigated grazing is increasing, while the supply of irrigation water is not growing, and climatic conditions are requiring increased irrigation or crop protection through shade netting and cover, albeit both climate change responses are not acceptable and desired in the approved Stellenbosch Heritage Survey, 2019.

The IDP lists a number of spatial challenges, as indicated in the land development application. Of note is the reference to the need to adapt to climate change, with reference to the current agricultural use of the property, which is no longer sustainable, and the need for the provision of planned urban settlements for those who cannot afford to live in the low density unaffordable residential neighbourhoods of the major towns.

The construction and operational phases of the development need to be managed according to the recommendations of the geotechnical evaluation and the storm water management plan.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

None.

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.

The urban design framework is based on the development indicators established by the various specialists. The first two specialist input were the Agri Informatics Agricultural Impact Assessment and the Demacon Demographic and Market Assessment. These determined that the agricultural use of the property is not viable or sustainable and that there is a demand / need for 1 500 odd residential dwellings in an integrated urban settlement in the Lynedoch node. All specialists received the same input assessments and considered the different site sensitivities from the different specialist viewpoints, leading to the determination of a site sensitivity map and development indicators, on which the urban design framework is based, and to which is added the landscape management plan to ensure further mitigation of any potential visual effects.

8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

AVOID – The site has been farmed and fully cultivated with vineyards except for two rocky outcrop areas and the area of excavation below the neighbour's dam in the northeastern corner. It thus does not contain environmentally sensitive features or elements. External municipal services infrastructure associated with the proposal has to cross three streams, of which only one is unmodified. The impacts on non-tangible elements associated with the development have been assessed and considered in the planning and design process. Adverse impacts have been avoided where possible.
MINIMISE - The adverse impacts relating to the social, heritage, visual, and traffic impacts, which could not be avoided, can be minimised through the mitigation measures to be incorporated in the EMPr.
RECTIFY - Rehabilitation of the streams where external municipal services infrastructure is installed will be undertaken as per the specialist recommendations. Landscaping of the development as recommended in the landscape master plan will enhance the biodiversity of the site and soften the visual impact thereof.
REDUCE – Energy efficiency measures and actions as recommended in the electrical infrastructure report will reduce demand. Waste generated on site to be reduced in keeping with the integrated waste management plan to form part of the EMPr.
OFFSET - No biodiversity offset is required due to the nature of the site that is covered in vineyards and transformed.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

Although the Department of Agriculture, Land Reform and Rural Development did not issue consent for the exclusion of the property from the provisions of the Subdivision of Agricultural Land Act, 1970, (DALR&RD) Act 70 of 1970, the specialist finding by Agri Informatics indicates that the development proposal will not have significant adverse impact on agricultural resources. Moreover, as the land is and has been included in the urban edge of the approved Stellenbosch Spatial Development Framework (SDF) since 2010, to which the DALR&RD was a party and did not object (see PPP summary of approved 2019 and 2023 SDF). Thus, the proposed nodal development is deemed not to have significant negative environmental effect on agricultural resources.

The SDF includes the entire property in the urban edge, but since 2019 indicates only a portion of the property as designated for settlement development as "*further accommodation for students and staff within a compact, pedestrian oriented, child friendly community*". The settlement is "*not prioritized for development at this stage*" but when public transport systems can be expanded. The Municipality will also not invest in the provision of external services to the node.

There is an identified need for housing and related uses in the area, predominantly in the affordable market categories.

There are no botanical, freshwater, or faunal constraints associated with the proposed development of Portion 28 of Farm 468.

The Heritage and Archaeological Impact Assessments confirm that the proposed development could occur without significant negative effect on the heritage, archaeological, and cultural resources of the area, subject to certain mitigation measures implemented in the design of the development. The two remnants of natural vegetation located high up the slopes on the property boundaries were identified as anchor points for landscaping as recommended by the visual specialist. To this end the urban design framework considered the development indicators as provided by the various specialists and contained the footprint of the development to the less sensitive areas of the site and grading the development from high density in proximity of the public transport systems to low density higher up the slope.

The traffic impact assessment identified and assessed certain impacts and recommended mitigation measures, such as the creation of three accesses and upgrading of intersections and pedestrian routes.

GLS, as the municipal civil services infrastructure advisor, has indicated that the bulk infrastructure has the capacity to accommodate the proposed development, subject to the installation of external (linear) services infrastructure to connect to the bulk services. The external water and sewerage services do not trigger an environmental authorisation application, but the potential effects thereof on the biophysical environment were assessed and a freshwater specialist assessment undertaken for the three stream crossings required for installation. The potential negative effect of the stream crossings can be mitigated.

Upgrading of and connection to the ESKOM grid is necessary for the development. The upgrading and external linear services do not trigger an environmental authorisation application and ESKOM has given confirmation of the availability of the capacity. The demand for energy is proposed to be reduced by measures recommended by the electrical engineer.

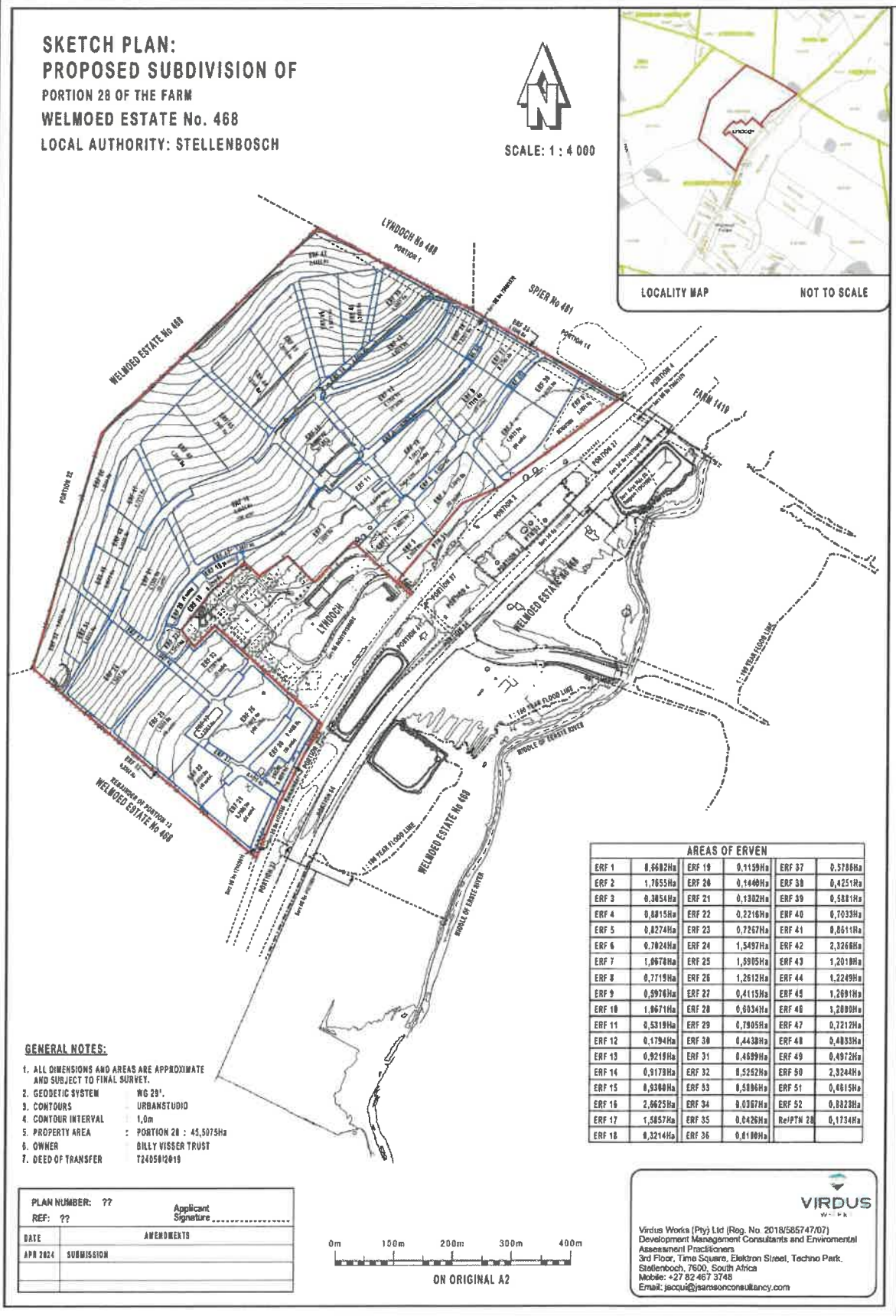
An assessment of the geotechnical situation determined that the site contains significant volume and area of "made ground", i.e., introduced fill. The site is sufficiently stable for development purposes subject to certain precautions relating to trenching, cutting, use of site material for fill, and management of storm water.

A storm water management plan has been prepared by the civil engineer and it responds to the requirements of the geotechnical assessment and the identified effect of the development on run-off. The development layout was adjusted to accommodate the storm water management proposals.

- The farm is not economically viable, and the agricultural resource is of low value.
- The property is located within the urban edge and indicated for development subject to certain guidelines and constraints.
- Any urban development will cause a further lowering of the already identified low agricultural potential of the site.
- The proposed development surrounds the existing Lynedoch Village and is within walking distance of the Lynedoch Station and the bus route on Baden Powell Drive, i.e., public transport.
- External / linear services upgrades have to be u, as confirmed by ESKOM and the Municipality.
- The population of the entire region is constantly growing, and the growth is projected to continue for the medium to long term. Planning and project assessment should thus focus on the medium to long term and not short term.
- The impacts on the historical and cultural environment can be mitigated.
- The traffic impacts can be mitigated.
- The effects of the construction activities can be mitigated.
- Social effects are the most difficult to manage and mitigate, but there are positive (for people seeking housing in the area) and negative effects (for the existing residents of Lynedoch) which are deemed to balance the effects.
- Operational effects on the provision of services can be managed and mitigated by the retention of the settlement as a private village, as in the case of the existing Lynedoch settlement.

With due consideration and assessment of the potential environmental effects associated with the proposed development, the conclusion is that the proposed development will not have any significant or detrimental effects or impacts on the environment. Impacts can be mitigated by the implementation of an EMPr and where not, e.g., the expected negative social impacts, progressive adaptation is required and will be an effect regardless of where the development occurs.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)



Erven 13 and 24 contain the only remnants of natural vegetation and Erf 6 contains the uncultivated land below the neighbour's dam.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.
See Appendix J and Section H, Paragraph 4 above.	

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

1. IMPACT MANAGEMENT OUTCOMES - PRE-CONSTRUCTION ACTIVITIES

The following outcomes are desired during the construction planning and preparation phase (following numbered items):

1.1 Approvals, permits and licensing requirements for operations

All engineering designs and plans relevant to the phase of the development under construction must be submitted to the Municipality and any other relevant authority for approval prior to commencement of any construction activities. Plans for all buildings and structures must be submitted to the Municipality for approval prior to commencement of any building construction.

Construction activities must comply with the authorisation and the EMPr.

1.2 Method statements

Method statements from the contractor will be required for specific sensitive actions on request of the authorities or the ECO. A method statement forms the base line information on which sensitive area work takes place and is a "live document" in that modifications are negotiated between the contractor and ECO, as circumstances unfold. All method statements will form part of the EMPr documentation and are subject to all terms and conditions contained in the original EMPr document. The contractor must submit the method statement to the ECO, who must ensure that it is workable and approve it before any particular construction activity commences. Work may not commence until the method statement has been approved by the ECO, or if it requires a departure from the authorisation / EMPr, then also the authorities.

A method statement describes the scope of the intended work in a step-by-step manner for the ECO to understand the contractor's intentions. This will enable interaction in devising mitigation measures, which would minimise environmental impact during these actions. For each instance where the contractor must submit a method statement, it should clearly indicate the following:

- What: a brief description of the work to be undertaken;
- How: a detailed description of the process of work, methods, and materials;
- Where: a description / sketch of the locality / outcome of work (if applicable);
- When: the sequencing of actions with due commencement dates and completion date estimates; and
- What thereafter: how the work area will be rehabilitated and returned to its original state prior to the activity or the agreed state.

All work in a "no-go" area shall be subject to the prior submission and approval of method statements, as will all work outside of the site boundaries, e.g. where the erosion occurs downstream from the dam. A method statement will be specifically required for each of the following:

- Construction of external services through streams.
- Any construction activities on land other than the site (Portion 28 of Farm No. 468).
- Any construction activities over or along the bulk water pipeline servitude along the northeastern boundary of the site.

1.3 Environmental engineering design requirements

The works must make special provision for erosion and siltation prevention. The engineer must prescribe methods and designs for water run-off systems that feed into detention structures and the storm water management infrastructure on the site and for containment of effects in stream courses through which infrastructure will be installed.

- Run-off from any cleared and hardened surface must be managed to reduce or avoid the risk of erosion and effect on the river systems, primarily through siltation and reduced water quality.
- No surface drainage of water from any construction activity shall be allowed to run off the construction site other than through a planned and designed system.
- All contaminated water from the construction site must be contained on the site and be allowed to filter into the soil in a position where no erosion risk occurs or it must be polished by the removal of all contaminants, e.g. litter, cement, silt, acid, fuel, oil, and other substances that could cause harm to the aquatic environment and released through an appropriately designed storm water management system.

1.4 Environmental awareness training for employees and contract workers

Awareness training should address, but not be limited to, the demarcation of the site, the erection of the camp site for construction teams, establishment of working and storage areas, training of staff and labourers in emergency responses, protection of flora, fauna, natural features and any archaeological material of significance that may be discovered, cultural issues (e.g. religious activities), landscaping and re-vegetation of indigenous plants and trees, refuse and waste management, dust and noise control, effluent and storm water management, hazardous material use and handling, fire prevention measures, hygiene, pollution control measures, monitoring and reporting, penalties and the system of claims and damages.

The awareness program must include hygiene, maintenance of the integrity of the environment, waste management and water saving. It should specifically address the demarcation of no-go areas and the prevention of damage to third party property, the routing of construction vehicles, and the handling and removal of all waste.

The contractor and the ESM will be responsible for ensuring that the environmental training or education course and the requirements in the EMPr are presented to the staff and labourers. The contractor will be responsible for training of sub-contractors and their staff and labourers, either by arranging with the ESM to undertake such training whenever new sub-contractors come on site or by presenting the course and confirming such actions with the ECO. During construction, if new labourers arrive on the site, the contractor shall be responsible for ensuring that they are aware of the environmental specifications.

1.5 Site management

1.5.1 Contractor's yard

A suitable contractor's yard must be identified by the contractor and its location must be approved by the ECO prior to its establishment.

The contractor's yard is intended for storage, administration, and the location of facilities for the labourers and staff. Only security personnel may be accommodated in the contractor's yard, with a maximum occupation of five people.

1.5.2 Demarcation of sensitive and out of bounds / no-go areas

The "no-go" areas must be clearly and effectively demarcated (or fenced) prior to the commencement of any construction activities. Danger tape attached to a wire fence may be used for this purpose. All demarcation material, items and tape must be maintained for the duration of the construction phase. Signage must be placed on the "no-go" boundary demarcation, to clearly indicate that there shall be no access to the area.

The demarcation and fencing of "no-go" areas on third party property, especially farms and along public roads, must not obstruct the movement of the normal users of the land.

The construction site(s) must also be demarcated as such, to advise the general public not to enter it and of all construction activities that could cause harm.

1.5.3 Hygiene

All staff and labourers must be advised of the unacceptability of defecating and urinating in public and anywhere else than in a toilet or ablution facility. The staff and labourers must be made aware of the importance of waste management, with specific reference to placing of empty food containers and wrappers into refuse bins at clearly defined eating areas.

Toilets, at a ratio of one toilet per 12 people employed on the site (labourers and staff) must be erected for the full duration of construction activities. All employees must be advised to only use the site ablutions for "relief", to specifically prevent the use of the surrounding bush as an informal toilet area. Sanitation provision and servicing of the ablutions must be to the satisfaction of the municipality. The contractor must ensure that toilets are emptied and cleaned weekly and before any builders' holiday and that the service provider uses approved sewerage disposal points for dumping of the waste. Temporary toilets shall be of a neat construction and shall be provided with doors and locks and shall be secured to prevent them blowing over.

1.5.4 Site instruction book and diary

The contractor must keep these records in the site office. The responsible parties will use the site instruction book entries for the recording of general site instructions. The site instruction book will also be used for the issuing of stop work orders for the purposes of immediately halting any particular activities of the contractor in view of the environmental risk that they may pose. The records must be available to the authorities for inspection or on request to a member of the public. Contractor's meeting minutes must reflect environmental queries, agreed actions and dates of eventual compliance. These minutes form part of the official environmental record and must be recorded in the site diary.

1.5.5 Fires and cooking facilities

The contractor must provide adequate facilities for all staff and labourers so that they need not supplement their comforts on site by accessing what can be taken from the natural surroundings. Fires are not permitted on site, unless in a specially constructed barbeque / braai and limited to a single fireplace. Activities that may pose a fire risk must be identified and suitable preventative measures must be put in place to prevent any possible damage by fire. Contractors must inform the staff of the risk of fire and fire prevention and emergency procedures in the event of a fire. Firefighting equipment shall be supplied by the contractor at suitable locations.

The Contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

The desired outcome is an approved construction phase, where the contractor and all contract workers are aware of the environmental sensitivities and mitigation measures, and all stakeholders are aware of what the phased construction activities will entail.

2. IMPACT MANAGEMENT OUTCOMES - CONSTRUCTION ACTIVITIES

The following outcomes are desired during the construction phase (following numbered items):

2.1 Management of job seekers

An appropriate employment policy to accommodate and manage local job seekers is required from the contractor.

The contractor must develop and apply an appropriate communications plan and introduce signage at the site to advise job seekers and suppliers of the construction activities and requirements.

The contractor must manage the congregation and movement of job seekers to avoid risks to job seekers and disturbance of traffic, pedestrians, and construction activities by job seekers by appropriate placement of signage, implementation of the communications plan, and active interaction with job seekers.

2.2 Support opportunities for skills development

All stakeholders need to create opportunities for small enterprises and service providers to work with established enterprises and service providers to build skills in keeping with government policy and statutory provisions (Skills Development Act, 1998, Act 97 of 1998 as amended).

2.3 Responsible and essential site clearing

Site clearing must be limited to the area approved for construction activities only. Site clearance and construction must also consider seasonal factors and avoid leaving cleared surfaces for extended periods in adverse weather conditions. Site clearance must be planned and executed to avoid further negative effects such as windblown dust, surface run-off causing erosion and siltation.

Prior to commencement of land-clearing and construction activities, the outer boundary of the development area must be surveyed and demarcated in consultation with the ECO to ensure that clearing and construction activities are restricted to the area required for the approved development.

Soil and earth removal and stockpiling must be undertaken in consultation with the ECO and where possible used in the erosion control activities as described in the annexed method statement.

2.4 Phased removal of vegetation where development has been authorised

The applicant must prepare and present a plan for the management of the remnant vegetation and agricultural infrastructure. The remnants must be utilised and / or managed to avoid negative effects.

2.5 Archaeological resources

Archaeological monitoring of all development within 50m of the existing buildings and structures and excavation of existing farm roads must be undertaken by a qualified archaeologist. The ESM and ECO will be responsible for ensuring that an archaeologist is alerted when such construction is scheduled.

Any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.

If any human remains are found, work in the immediate vicinity must cease and the prescribed protocols followed, inclusive of notification of Heritage Western Cape.

2.6 Soil erosion prevention

The vegetation on the land where development activities will not occur as part of a development phase in progress must be maintained and managed to avoid soil erosion.

Site clearing and construction must be planned in consultation with the engineer and ECO to ensure that surface run-off can be contained and channelled to planned storm water retention facilities and that windblown erosion is minimised through appropriate measures.

2.7 Management of remnants and uncleared land

The applicant is responsible for the appropriate management and use of the land not cleared for construction forming part of future development phases. The land must be maintained in a manner that is does not have negative effects on the construction or operations of the current development phase(s).

2.8 Avoid and manage littering by workers

Appropriate signage must be erected by the applicant at strategic places around the dam to warn about the negative effects of littering, together with the signs intended for the management of the use of the area and public safety.

Appropriate refuse bins and receptacles must be placed around the dam along accessible places and pathways for use by people by the applicant and the bins must be maintained regularly.

2.9 Effective water use management

Potable water is a scarce and costly resource, and it must be used sparingly and primarily for the purpose it was purified. Construction activities should make use of the existing boreholes on site and other non-potable water where possible and where not, then consume water from a metered connection only.

2.10 Risk averse materials handling and storage

Construction activities must not have any significant impact on the ecosystem. All materials that are potentially harmful to the aquatic ecosystem must be stored at least 40m away from a watercourse in appropriately bunded space and no vehicles or equipment must be washed or refuelled within the 40m buffer area.

Where hazardous substances and fuels (such as diesel, oil, lubricant, detergent, chemicals, paint, cleaning agents) are to be stored on site for construction purposes, a designated and appropriately enclosed area must be set aside for it in the contractor's yard.

2.11 Fire control and emergency procedures

Appropriate usable and functional fire safety equipment must be present in the construction site and a fire safety team has to be trained by the contractor to ensure an effective first response when "hot works" (e.g. welding, grinding, cutting) occur and it causes a risk to any buildings, lives, or vegetation.

The contractor must always adhere to the relevant legislation (Occupational Health and Safety Act, 1993, Act 85 of 1993).

2.12 Solid waste management

An integrated waste management system must be adopted on site. It is the responsibility of the contractor to ensure that a waste minimisation approach is followed, and that reduction, recycling, re-use, and disposal occurs as appropriate. Waste bins for the different categories of recyclable waste (paper, plastic, metal) must be provided on site and effectively maintained with proper records available for the ECO to monitor.

The non-recyclable or reusable waste (builder's rubble, household general waste) must be appropriately contained in bins and regularly disposed of at a licensed landfill in keeping with the relevant legislation (National Environmental Management: Waste Act, 2008, Act 59 of 2008).

Waste management offers economic opportunities for individuals and small businesses with appropriate certification or under appropriate supervision, aligned to a skills and economic development programme.

2.13 Dust management

The surrounding environment, property owners and users must not be exposed to significant dust-related impacts, which cause nuisance and health risks. Dust levels may not exceed that specified in the National Dust Control Regulations (G.N. 827 of November 2013) i.e. 1200mg/m2/day.

2.14 Noise management

The surrounding environment, property owners and users must not be exposed to and impacted by noise arising from the construction activities, which must comply with the relevant legislation (Western Cape Noise Control Regulations, 2013, RN 627/PG 5309/19981120, as amended).

2.15 Storm water management

The contractor must implement appropriate measures to control the flow of storm water across the construction site, to prevent flooding, erosion, sedimentation, and dispersion of pollutants. Surface run-off must be contained and channelled to planned storm water retention facilities.

2.16 Wastewater and storm water management

The contractor must implement appropriate measures manage wastewater. All wastewater from on-site ablutions must be disposed of into the municipal sewerage system after gaining formal approval for such disposal from the Municipality, while wastewater from construction activities (contaminated water) must be contained and disposed of in consultation with the ECO to avoid any negative environmental effects.

The environment (terrestrial and aquatic ecosystems) must not be contaminated or negatively affected by the leaching of polluted water into any watercourse, fuel and contaminants leaking from vehicles, or by changing the landscape hydrology.

2.17 Avoidance of stream bed and bank destabilisation

Prior to commencement of construction activities through stream courses, the outer boundary of the line must be surveyed and demarcated in consultation with the ECO to ensure that clearing and construction activities are restricted to the line required for the approved installation and that the watercourse is not at risk.

Avoid negative impacts by undertaking the watercourse crossings (vegetation clearing and trench excavations) during the dry summer season.

Areas cleared for construction must be revegetated with suitable indigenous plants upon completion of the backfilling of the trenches.

2.18 Temporary and permanent site closure procedures

The contractor and the ECO must agree on site closure procedures to ensure that no negative effects occur during periods of inactivity on the site. These must take cognisance of all the outcomes as set out herein.

On completion of the construction phase and any related activities, all areas utilised for the construction activities have to be rehabilitated by removal of all rubble, litter, contaminated soils, structures, and infrastructure solely intended for the construction phase and the ECO must certify the site as cleared to the applicant.

3. IMPACT MANAGEMENT OUTCOMES - REHABILITATION OF THE ENVIRONMENT AFTER CONSTRUCTION AND WHERE APPLICABLE POST CLOSURE

The following outcomes are desired after conclusion of the construction activities:

Alien vegetation management and watercourse rehabilitation

The applicant must ensure that at least one inspection of the external services construction sites is undertaken, which inspection must include alien removal, erosion control, and further introduction of appropriate indigenous vegetation in late winter or early spring following the construction. An inspection report must be prepared and submitted to the EAP responsible for the audit and the relevant authorities in terms of the approved water use licence.

4. IMPACT MANAGEMENT OUTCOMES - OPERATIONAL ACTIVITIES

The following outcomes are desired over a long term as operational activities (following numbered items):

4.1 Management of the Village

A property owners' association constitution must be prepared to establish a management body for the entire Welmoed Village. The constitution must be submitted to the Municipality for consideration, and it must be made applicable to all properties, property owners, and tenants in the development of the property.

The management body must endeavour to promote integration of the residents into the Lynedoch Village community and must interact with the Lynedoch Home Owners' Association or any other established body to find solutions to issues of common interest which might arise as a result of the new development.

All services infrastructure in Welmoed Village will be private and must be managed by the property owners' association or management body established in terms of the constitution.

4.2 Waste management post development

An integrated waste management system must be promoted and adopted in the development. The applicant must prepare and submit an integrated waste management plan for the development to the Municipality.

Waste management services must be provided by accredited service providers in keeping with the relevant legislation (National Environmental Management: Waste Act, 2008, Act 59 of 2008) and the Stellenbosch Municipality Integrated Waste Management Bylaw, 2021.

4.3 Landscaping

The Welmoed Village Landscape Strategy and Master Plan (Terra, April 2024) must be implemented.

4.4 Management of storm water

The storm water management plan (UDS Africa, Revision 00, April 2024) must be implemented.

4.5 Management of water use

Effective rainwater harvesting systems for all roof water must be installed. The volume of the storage facilities should be based on 0,02m³/m² roof area and the water used to supplement non-potable uses.

Irrigation of all landscaping, sports fields, and gardens in the Village must be done with non-potable water, e.g., by means of borehole water extraction.

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

The need for housing in the area as determined by Demacon in the market study and the findings of Claire Abrahamse in the visual impact assessment were the two main determining reports, further informed by the other specialist studies, which led to the final and preferred development alternative. The urban design framework took cognizance of the input and resulted in the plan as indicated in Section H above. This urban design framework formed the basis of the assessment for the on-site activities, while the infrastructure master plans (GLS) of the Municipality formed the basis of the offsite activity assessments.

All specialists confirmed and agreed that the development of the preferred alternative could be authorized, and that the impacts thereof could be sufficiently mitigated or that it produced sufficient positive impacts to warrant authorization.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

The predicted possible impacts associated with the proposed Welmoed Village development on Portion 28 of Farm No. 468, Stellenbosch, and the construction of external services infrastructure on adjacent land have been assessed.

The content of and recommendations in the specialist assessments have been considered and incorporated into the basic assessment for the Welmoed Village development. It has been determined that there is a need for the development as in the Lynedoch Mixed-use Market Study, the impacts of the proposed development are negligible, as in the Agricultural Agro-Ecosystem Specialist Assessment Report, or can be mitigated to an acceptable level, amongst others by the implementation of an EMPr as contained in Appendix H.

Three alternatives were investigated in the process, namely:

- the preferred option with a phased full development containing 884 residential dwelling units and other land uses over the full extent of the property;
- a much denser development containing 1 500 residential units and other land uses over the full extent of the property; and
- a much smaller development with significantly lower density, limited development footprint, and extensive open space as shown in the Stellenbosch SDF.

The preferred alternative is recommended for authorisation, as it can be implemented in a phased manner over time and it leads to the creation of a node with a threshold population that can sustain services provided for it, e.g., municipal infrastructures services, public transport, and educational and community facilities.

A smaller limited footprint development as in the SDF does not provide for a viable threshold population, providing only for 75 – 100 residential units, educational facilities, and large tracts of open space as described in the SDF. It is unlikely that such a small settlement would be able to cover the cost of the electricity, road and sewerage infrastructure that would be required for it. Moreover, a limited development would have similar impacts as a larger development, and cause similar effects, without the benefit of a planned node for future growth that does not require upgrading of infrastructure and recurring capital expenditure.

The denser development option with more residential units could not be accommodated on the site unless with significant negative visual impact in conflict with the development indicators provided by the heritage and visual specialists.

This Basic Assessment process has been concluded in compliance with the requirements of Regulation 40 of the NEMA: EIA Regulations, 2014 (as amended). All potential and registered I&APs have been given appropriate opportunity to consider and comment on the development proposal, the assessment, and the environmental management program.

The proposed node on the property that is fully included in the urban edge is consistent with the Stellenbosch SDF, although the extent and character of the proposed development is inconsistent with it. A land development application motivating site specific conditions for consideration of the preferred option has been submitted to the Municipality and it is under consideration.

In view of the aforementioned it is concluded that the development of the preferred alternative can be authorised subject to conditions relating to the implementation of the mitigation measures as contained in the EMPr and the following specialist assessment reports:

- Visual: Cultural Landscape & Visual Impact Study For The Proposed High Density Residential With Additional Facilities On Portion 28 Welmoed Farm 468, Stellenbosch. Case Number: HWC23040509AM0411. August 2023. Claire Abrahamse.
- Archaeological: Archaeological Impact Assessment Re/ Portion 28, Welmoed Farm 468, Stellenbosch, HWC Case Reference: HWC23040509AM0411, August 2023. Hearth Heritage.
- Heritage: Heritage Impact Assessment Phase 1 In terms of NHRA Section 38(8). Re/ Portion 28, Welmoed Farm 468, Stellenbosch. HWC Case Reference: HWC23040509AM0411, August 2023. Hearth Heritage.
- Landscaping: Welmoed Village Landscape Strategy and Master Plan, April 2024. Terra Landscape Architects.
- Traffic: Application For Rezoning To Subdivisional Area For Proposed Development Of Portion 28 Of Remainder Farm 468, Lynedoch, Stellenbosch: Traffic Impact Assessment. April 2024. UDS Africa.
- Geotechnical: Report to Uniqon - Geotechnical Investigation for a proposed Residential Development – Welmoed – Stellenbosch, Delta Geotech, Reference: 24-713, Dated: March 2024.
- Freshwater: Detailed Freshwater Ecological Assessment: Proposed installation of external services entailing stream crossings for the proposed urban development on Portion 28 of the Farm Welmoed Estate No. 468, Stellenbosch, Western Cape, Nick Steytler SACNASP Reg. no. 400029/02, EnviroSwift, Date: 22.03.2024.
- Electrical: Portion 28 Of Farm Welmoed Estate No. 468, Stellenbosch Infrastructure Report Electrical Services April 2024, DMCE.
- Engineering: Portion 28 Of Farm 468, Lynedoch, within the Stellenbosch Municipal Area, Western Cape, Stormwater Management Plan Revision 00, UDS Africa, April 2024.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.

Assumptions:

- It is assumed that all the authorities have agreed to the designation of the urban edge as delineated in the Stellenbosch SDF and that the entire property could and should be excluded from the provisions of the relevant legislation as agricultural land.

- It is assumed that the information obtained from other sources in the preparation of the BAR is true and correct or was at the time of collection.
- It is assumed that the availability of capacity in the bulk services on which the development will rely will be reserved for the development and that such services will be available when the development is authorised and commences.
- It is assumed that the population growth trend in the area will continue.

Uncertainties:

- The period within which the development will occur is uncertain, as the market will have a significant effect on the phasing and implementation.
- The level to which integration of the existing and new resident community at Lynedoch can occur is uncertain.

Gaps in knowledge:

There are no identified gaps in knowledge relevant to the BAR.

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.

The EA should be valid for a period of no less than 15 years, as the projected development will be done in phases, the last of which will probably only commence 10 -12 years after authorization. Moreover, the activity includes an operation phase, which will also be implemented in a phased manner.

The development activity (construction) will probably only be concluded in 15 years, with on-going building construction following on the earthworks, installation of services, and construction of roads.

The post construction monitoring requirements should be concluded with four months of the conclusion of construction of each phase.

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

Construction phase

The applicant and contractor have access to existing groundwater sources (boreholes) which can be used for construction purposes.

Operational phase

All wastewater to be conveyed to the Stellenbosch WWTW (on condition of the Stellenbosch Municipality) where all wastewater is treated through membrane bioreactor process to guarantee a high-quality effluent, which surpasses the standards prescribed in the water use licence issued by the Department of Water and Sanitation and ensures high-quality, compliant effluent for reuse in line with the Municipality's water conservation and demand management strategy.

All buildings to be fitted with water saving devices and rainwater harvesting systems.

Irrigation of gardens and landscaping to be done with non-potable water only.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.

An integrated waste management plan has been prepared and must be implemented in terms of the Stellenbosch Municipality Integrated Waste Management Bylaw, 2021.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

The recommendations of the electrical engineer as indicated in Section I, paragraph 2 above to be implemented.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

Note: Duplicate this section where there is more than one Applicant.

I....., ID number .....in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;
- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;
- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;
- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;
- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Signature of the Applicant: Date:

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I ....., EAP Registration number ..... as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

I ....., EAP Registration number ..... as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I ....., as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST

I ....., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

HERITAGE IMPACT ASSESSMENT

PHASE 1
In terms of NHRA Section 38(8)

RE/ PORTION 28, WELMOED FARM 468, STELLENBOSCH

HWC CASE REFERENCE: HWC23040509AM0411

August 2023

Prepared by

HEARTH HERITAGE
conversations about conservation

Emmylou Rabe Bailey
Disakloof Farm
Hout Bay, 7806

Submitted to
Virdus Works (Pty) Ltd
77 Buitekring, Dalsig,
Stellenbosch
7600

EXECUTIVE SUMMARY

This HIA is prepared as a PHASE 1 HIA report to inform HWC of the heritage resources identified and the proposed heritage indicators in order to obtain HWC's preliminary comment to inform the development design which will be for HWC comment in Phase 2.

A NID for the proposed development was submitted to Heritage Western Cape and tabled at the Heritage Officers' Meeting on 4 May 2023 and resulted in the Record of Decision (10 May 2023) request for a Heritage Impact Assessment that included specifically an Archaeological Impact Assessment and a Visual Impact Assessment.

1. Site description

RE/Ptn 28 of historic farm Welmoed 468, Stellenbosch (45,4ha), is agricultural zoned land under old vineyards and rested lands surrounding Lynedoch Eco-Village and the Sustainability Institute, adjacent and to the west of the R310 Baden Powell scenic route and the railway line.

2. Site Location

Off Lynedoch Road, Stellenbosch: S -33.981101° E 18.768424

3. Description of the proposed development

The proposed development will change agricultural land to medium to high-density residential development with additional facilities. The focus for RE/ Portion 28 is for rezoning and development of medium to high density housing (apartments, townhouses, and single dwelling), with the objective of achieving 2 475 dwelling units, and an educational facility with an area of no more 3ha.



Figure 1: Satellite image of study site (Google Earth, 9 July 2021

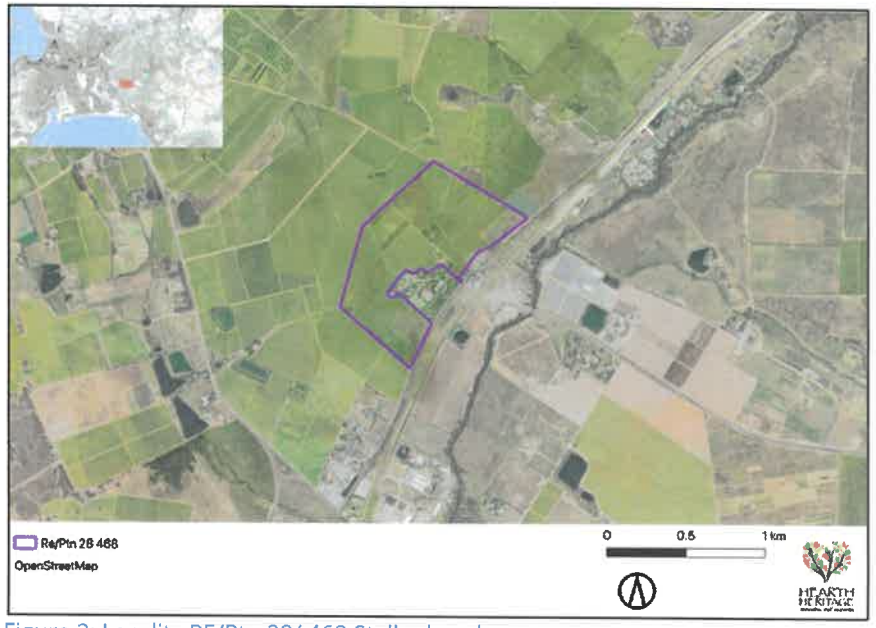


Figure 2: Locality RE/Ptn 28/ 468 Stellenbosch

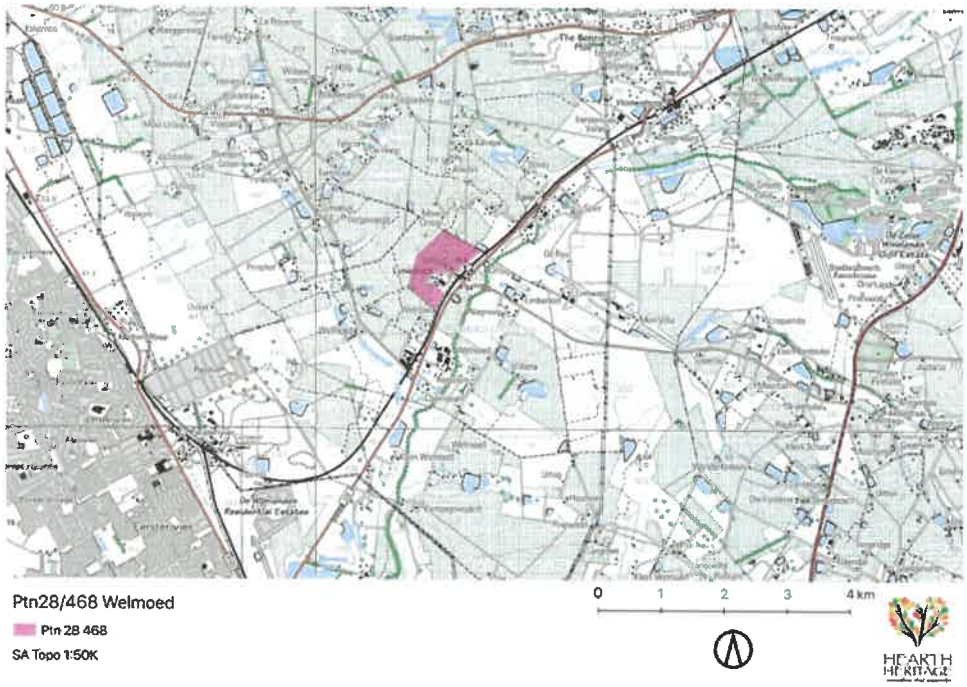


Figure 3: Locality of RE/ Ptn 28 Farm 468, Stellenbosch.

4. Heritage Resources Identified

4.1 Archaeology and historic stuctures

The area proposed for the development has yielded some cultural remains but with varied value and preservation.

Previous archaeological surveys within the Eerste River floodplain have identified large numbers of Early Stone Age artefacts and as such the significance of the ESA within Stellenbosch is well established. The lithic scatter artefacts in the study area are typical of the transformed agricultural landscape of Stellenbosch and have limited value considering that they have been accumulated and modified to their current *ex situ* state. The anticipated negative impact of the proposed development on the archaeological resources is considered low due to the degraded and heavily transformed nature of the landscape from centuries of agricultural use.

The isolated historic ceramics are graded IIIC for their potential to add to the understanding of the Stellenbosch historic landscape context.

The historic structures are common for the Stellenbosch area and have been heavily altered over time, and do not represent any rare or significant heritage. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.

4.2 Palaeontology

The area proposed for development is underlain by sediments of zero to moderate palaeontological sensitivity according to the SAHRIS Palaeosensitivity Map (**Error! Reference source not found.**). The geology in this area consists of mainly granite and deposits of weathering products of granite of the Kuils Rivier-Helderberg Pluton, Cape Granite Suite. The soils here consist of clay of marked accumulation, with possible vertic, melanic or plinthic soils may be present. Moderate sensitivity requires a desktop PIA.

According to the desktop Palaeontology Impact Assessment (Bamford, 2023; Appendix B), "the proposed site lies on the non-fossiliferous granites of the Malmesbury Group and on moderately fossiliferous Quaternary sands and alluvium" and "Although sands do not preserve fossils because they are coarse-grained, well-aerated and transported (for preservation of fossils a stable, anoxic environment is required (Cohen, 1995), the sands might have transported fossils from the source area. In this case, only robust yet fragmentary fossils would be transported so their primary context would be lost. Such fossils are of limited interest to science." And, to date, "No fossils have been reported from the site. Nonetheless, a Fossil Chance Find Protocol should be added to the EMPr. Based on this information it is recommended that no further palaeontological impact assessment is required unless fossils are found by the contractor, environmental officer or other designated responsible person once excavations, drilling or mining activities have commenced. Since the impact will be low, as far as the palaeontology is concerned, the project should be authorised."

4.3 Cultural landscape and visual impact

The Cultural Landscape Study and associated Visual Study of the site have revealed

a context and site of medium heritage significance but with very high scenic qualities, particularly in providing an agricultural backdrop to other heritage sites within the vicinity. It follows that, to preserve heritage significance (especially tangible heritage significance associated with physical elements) these fundamental elements must be identified, protected, and enhanced in the course of the future development and densification of the site.

Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node. The site has consistently been included within the urban edge, in both heritage surveys and planning documentation.

The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley.

5. Recommendations

5.1 Archaeology

The site is regarded to be of low sensitivity from an archaeological heritage perspective and the following recommendations have been made:

1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Guewels and Structures at B and G should be retained in form in any future development.
5. No development within 20m of the concrete boundary marker at LYN149.
6. Archaeological monitoring of all development within 50m of the structures B and G and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them.
9. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
10. The HWC Fossil Finds Protocol is to be implemented.
11. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685).

5.2 Palaeontology

Based on experience and the lack of any previously recorded fossils from the area, it is extremely unlikely that any fossils would be preserved in the overlying soils of the Quaternary. There is a very small chance that transported and fragmentary fossils may occur in the sands and alluvium a Fossil Chance Find Protocol should be added to the EMPr. If fossils are found by the environmental officer, or other responsible person once excavations for foundations and infrastructure have commenced then they should be rescued, Heritage Western Cape notified and if necessary a palaeontologist called to assess and collect a representative sample. The impact on the palaeontological heritage would be low, as far as the palaeontology is concerned, so the project should be authorised.

5.3 Cultural landscape and visual impact

Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node. The analysis of the site has given rise to heritage-based indicators to development. The assessors believe these must be stringently followed to ensure that the heritage significance of the surrounds is preserved and enhanced, but which they believe are not so onerous as to completely limit the development and densification of the site.

1. The landmark nature of the old hotel complex must be enhanced and responded to as a prominent civic node within the wider context.
2. The historic farm barn structures and small "managers house" should be retained and adaptively re-used, ideally for educational purposes.
3. All existing areas of Fynbos and/or natural vegetation must be retained and reinforced on the site.
4. The spring course identified on the c1938 SG Diagram should be explored on site. In addition, the dam along the roadway to the south-east appears in the 1968 aerial photograph, and this area retains a wetland character that should be preserved as an asset of the site.
5. The mature trees on and around the site are higher-order landmark elements within this environment. They help to structure the space and provide some visual screening. Some trees are mature, older than 60 years, and should be retained. A plan for the staggering or replacement of mature planting must be put in place. Existing treelines should be reinforced and extended to screen the development.
6. Additional planning should be introduced on the site to provide additional visual screening and absorption within the foreground environment. The windbreaks in the wider context set up a landscape structure that can be extended into the site. These also create a potential for the extension of a structure for settlement onto the site, that responds to existing landscape elements and patterns.
7. In particular, the southern slopes are visually exposed from the east, but gently sloping and able to be easily connected to the existing village. Planting as visual screening must be used extensively here.
8. The railway station is an important potential civic asset and should be acknowledged as a higher-order element in the proposed development of the site.
9. Street Grid: The street grid should follow the contour and reinterpret the existing pattern of vineyards as much as possible. Although curvilinear streets are generally foreign to the Winelands, they have been used at Lynedoch and are key to the character of that place, where settlement is secondary to the natural, contoured landscape. The street grid should be as efficient and minimal as possible, with only the main routes being paved.
10. New buildings must follow the contour, as the existing buildings within the Lynedoch node currently do.
11. Verges/Pavements: It is preferred that verges and pavements are grassed, hard-packed soil or brick paving, and planted with trees. Brickwork and laterite surfacing should be preferred to tarmac throughout.
12. Boundary Treatments: High and solid walls are not permitted, as well as pre-cast concrete fencing, exposed blockwork, and facebrick walling. Historic boundary elements such as fences and hedges must be preserved and extended as far as possible.
13. Stoeps: Street-facing stoeps are a common feature of the buildings in the area, often with planted gardens in front. New residential development should include these elements.
14. Heights: New buildings must respond to and interpret the character-giving aspects of the site. In this environment, new buildings should predominantly be no more than double storey.
15. Materials, Colour and Architectural Detail: Building materials should be compatible with traditional materials in terms of scale, colour and texture. Historical architectural features that copy an earlier style (or introduce a foreign style) should be avoided. Rather, the underpinning principle should be that new buildings must be sympathetic to the architectural character of the area but should also be of their own time. New buildings should be of a walled architectural type. New structures should be painted a muted colour and be rectilinear in form. Corrugated roofs should be darker colours.
16. Scenic Route Restrictions within 500m of the roadway: The foreground views within the scenic route corridor is considered the most significant, and therefore all scenic routes should have a 500m buffer on either side of the road where specific development guidelines apply. The principle is that nothing will be permitted that detracts from the existing scenic value of the

Landscape Unit that is being traversed by the Scenic Route. Based on the significance of the Scenic Route (its grade) and the significant character of the surrounding landscape, the following guidelines should be considered.

Foreground guidelines:

a. Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.
b. New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road-related interventions affecting its sense of fit in the landscape must be avoided.
c. Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as they detract from the rural character of the Winelands.
d. Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas.
e. Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.
f. The natural character of Fynbos vegetation, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with over-scaled entrance structures.
g. Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before they can be considered (from the list of deviated land-use documented for the Stellenbosch winelands, see CMP document):
    - Farm stalls/restaurants
    - Nurseries/mixed use/garden centres/timber yards
    - Greenhouses, agricultural netting, chicken broilers/Strawberry fields
    - Subdivisions, gated communities, shopping centres, business parks
    - Large scale industrial structures
    - Open Air Markets

It follows that the above forms of development should be avoided within the 500m buffer from the scenic route.

Background guidelines:

h. Avoid development on rocky outcrops or ridgelines, because of their high visibility and the visual sensitivity of the skyline.
i. Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines and hillcrests. Retain the integrity of the distinctive and predominantly agricultural landscape character.
j. Avoid the construction of over-scaled private dwellings and other structures in locations of high visual significance, and on visually-exposed promontories, ridges and ridgelines. Preferred locations are sites that have already been settled (at the Lynedoch node), or sites "tucked into" the landscape.
k. Respect traditional settlement patterns. This includes the backdrop of the natural landscape against which settlement is sites, as well as its spatial structure.
l. Promote urban densification within the historic node to protect the rural landscape as the main communal asset.
m. New interventions within settlements must respect the layout, scale, massing, hierarchy, alignments, access, landscaping and setting of the existing settlement pattern.
n. Prevent the gentrification of rural settlements through "lifestyle rural estates". These uneconomic plots fundamentally erode the agricultural character of the landscape. Rather, maintain larger unified areas of farming to protect larger landscape continuums that protect a unified scenic character.
o. The development of security estates and gated communities must be prevented. Encourage development that follows the pattern of, and builds on the example of, the Lynedoch eco-village. Here, a model for integrated communities with different income levels has been successfully applied and tested.

TABLE OF CONTENTS

EXECUTIVE SUMMARY ii
1. Site description ii
2. Site Location ii
3. Description of the proposed development ii
4. Heritage Resources Identified iii
4.1 Archaeology and historic stuctures iii
4.2 Palaeontology iii
4.3 Cultural landscape and visual impact iii
5. Recommendations iv
5.1 Archaeology iv
5.2 Palaeontology iv
5.3 Cultural landscape and visual impact v

TABLE OF CONTENTS vii

TABLE OF FIGURES viii

1. INTRODUCTION 1
1.1 Background to heritage process 1
1.2 Description of property 1

2. METHODOLOGY 10
2.1 Purpose of HIA 10
2.2 Study Methodology 10
2.3 Constraints and Limitations 10
2.4 Author Declaration of Independence 10

3. HISTORY AND EVOLUTION OF SITE AND CONTEXT 11
3.1. Archaeological significance of the area 11
3.2 Historical context 12
3.3 Site history 14
3.4 Build Chronology 27

4. ENVIRONMENTAL CONTEXT 29

5. IDENTIFICATION OF HERITAGE RESOURCES 29
5.1 Previous Impact Assessments Conducted 29
5.2 Stellenbosch Heritage Surveys 31
5.2.1 Stellenbosch Municipal Heritage Survey: Cultural Landscapes 31
5.2.2. Stellenbosch Municipal Heritage Survey: Heritage Resources 36
5.3. Summary of Specialist Findings 38
5.3.1 Archaeology 38
5.3.2 Palaeontology 40
5.3.3. Cultural Landscape and Visual Impact Assessment 40
5.3.4. Structures within study area 42

6. RESULTS OF PUBLIC CONSULTATION 46

7. HERITAGE DESIGN INDICATORS AND GUIDELINES 46

8. CONCLUSION AND RECOMMENDATIONS 49
8.1 Archaeological recommendations 49
8.2 Palaeontological recommendations 49
8.3 Visual and Cultural Landscape recommendations 49
8.4 Conclusion 50

10. BIBLIOGRAPHY 51

APPENDIX A: ARCHAEOLOGICAL IMPACT ASSESSMENT 53

APPENDIX B: PALAEONTOLOGICAL IMPACT ASSESSMENT 43

APPENDIX C: SMHS LANDSCAPE UNIT C08: DEVELOPMENT CRITERIA 53

APPENDIX D: Stellenbosch Municipal Heritage Survey Information Sheets 55

APPENDIX F: Interested and Affected Parties Comment 60

APPENDIX E: CULTURAL LANDSCAPE AND VISUAL IMPACT ASSESSMENT 66

TABLE OF FIGURES

Figure 1: Satellite image of study site (Google Earth, 9 July 2021 ii
Figure 2: Locality RE/Ptn 28/ 468 Stellenbosch ii
Figure 3: Locality of RE/ Ptn 28 Farm 468, Stellenbosch. iii
Figure 4: Location of RE/Ptn 28/48, Stellenbosch, identified for development. 1
Figure 5: View west looking 'up' at vineyards and historical 'barn' 2
Figure 6: View of site looking west from north-east corner. 2
Figure 7: RE/Ptn28/ 468 Stellenbosch 3
Figure 8: Google aerial view of RE/Ptn28/468 showing orientation of the surrounding vineyards and agricultural infrastructure as well as Baden Powell Dr, Annandal Rd and the Eerste River. 4
Figure 9: View looking north to site from R310 (Baden Powell) with Lynedoch Eco-Village roofscape in midground 5
Figure 10: View towards site from Baden Powell Annandale intersection looking north west with Zetler's service station in foreground. 5
Figure 11: View towards site from R310 looking west 6
Figure 12: NCW farm outbuildings not identified in Stellenbosch Heritage Survey (2016) with structures >60yrs. 6
Figure 13: View of site from westernmost corner looking north-east, east and south-east with Lynedoch village in the centre surrounded by vineyards and Helderberg in the background. 7
Figure 14:View of site from northernmost corner looking south-east towards the Helderberg and Zetlers farm, south and south –west to Macassar 7
Figure 15: View of site from easternmost corner looking south-west along Lynedoch Road, west and north-west 8
Figure 16: Views from R310, Baden Powell Dr and Lynedoch Rd, of railway infrastructure adjacent to south-east boundary of the site. 8
Figure 17: Development Proposal for RE/Ptn28 Farm Welmoed 468, Stellenbosch ..9
Figure 18: Seddon (1967) ESA sites in the Stellenbosch area with ~ RE/Ptn28/468 (purple). 11
Figure 19: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) with inset showing Welmoed and the C17th historic route that is now R310 12
Figure 20: Cape Colony c.1700 (UCT Digital Archive) 13
Figure 21: Development of the Stellenbosch cultural landscape 1657 to 1750 (Todeschini et al, 2018) 14
Figure 22: Cape Quitrent Grants Map, 1880 with ~RE/Ptn28/468 (purple) 14
Figure 23: c.1690 schematic map of early land grants, with Welmoed on the far left (Cape Archives M1/ 273) 15
Figure 24: Guelke map (1987) of early freehold grants at the Cape showing farm Welmoed, 1690 (yellow) and the historic route of the R310/ Baden Powell Dr (green) 16
Figure 25: 1902 Divisional map showing approximate location of RE/Ptn28/ 468 16
Figure 26: Excerpt of Brink map 1892 showing Welmoed. No buildings are identified on RE/ Ptn28. 16
Figure 27: Detail from the 1902 map of Stellensboch by Brink, which indicates the first use of the term "Lyndoch" adjacent to the site (red circle)(KAB Map M4/208) 16
Figure 28: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) showing Welmoed and the C17th historic route that is now R310 17
Figure 29: View of Lynedoch Station, taken from the train on the 19th October 1891 (CLA report - KAB, Jurtz Collection, Photo 216) 17
Figure 30: Aerial photo of Lynedoch before renovation by Sustainability Institute taken c. 1977 18
Figure 31: Drie Geuwels Hotel circa 1999 18
Figure 32: The Lynedoch node, as illustrated in the 2019 SDF for Stellenbosch 19
Figure 33: 1920 SG Diagram with RE/Ptn28/ 468 in purple – two historic houses are noted in the area of Drie Geuwels Hotel and the historic barn. The historic entrance road from the R310 is evident as is the non-perennial stream running down through RE/Ptn28/ 468. Both Baden Powell and Annandale Roads are evident. 20
Figure 34: 1930 SG Diagram for RE/Ptn 28/ 468. 21
Figure 35: 1930 SG Diagram of Welmoed farm showing ~ RE/Ptn 28/ 468 in purple. The Drie Geuwels and two historic buildings are noted as is Lynedoch Station along the railway and the footpath running through RE/Ptn 28/ 468 and onto R310. A windmill is identified where the current concrete dam is located. 22
Figure 36 : 1938 SG Diagram of the site, with buildings indicated, as well as water sources and roadways. (CLA, Abrahamse: 2023; SG Diagram 2912/1938) 23
Figure 37: 1938 aerial photo RE/Ptn28/ 468 24
Figure 38: 1944 aerial photo RE/Ptn 28/ 468 24
Figure 39: 1955 aerial photo RE/Ptn 28/ 25

1000

Figure 40: 1977 aerial photo RE/Ptn 28/ 468 25
Figure 41: 2022 aerial image showing surrounding area and excerpt of structures on on RE/ Ptn 28 of 468. 26
Figure 42: Distillation of key historic spatial patterns across the site (CLA report, Abrahamse, 2023 28
Figure 43: Heritage resources located along the R310 corridor (Clift, 2011) 29
Figure 45: SMHS (2018) showing Green Transition Development Node for Lynedoch site as well as the NCW land parcel (grey) directly opposite the site adjacent to Annandale Rd. 34
Figure 46: SMHS (2018) showing Scenic Routes Conservation System for Lynedoch site with 500m visual buffer zone for foreground views off R310. 35
Figure 47: SMHS (2018) showing RE/Ptn 28/ 468 with relevant heritage resources mapped in the surrounding area ~3km radius (black dot = social). 37
Figure 48: Map of archaeological finds from foot survey conducted 25.7.23 39
Figure 49: SAHRIS Palaeosensitivity Map showing zero (grey) to moderate (green) sensitivity for RE/Ptn 28/ 468. 40
Figure 51: Heritage Indicators from Cultural Landscapes and Visual Impact Study (Abrahamse, 2023) 41
Figure 52: Layout of structures on RE/ Ptn28, Farm 468. 42
Figure 53: South-west façade of structure at A. 42
Figure 54: Lower vineyards looking north to structures at A (left) and B (right). 42
Figure 55: South-east elevation of structure at B (left) and interior (right) 43
Figure 56: Interior of structure at B (left) and north-west elevation of B with ruined 43
Figure 57: Terrace with reservoir at C and structure at D behind the treeline 43
Figure 58: Vineyards looking north-east to Structures B (right) and D (left) 43
Figure 59: Structure at D south east elevation (left) and south west elevation (right) with structure at G in the background. 44
Figure 60: Interior of structure at D showing wooden ceiling (left) and north west façade of building showing significant terrace cutting (right). 44
Figure 61: North-east elevation of structure at D. Remnant of landscapes garden evident. 44
Figure 62: Water management infrastructure at F. 44
Figure 63: North-east elevation of structure at G with Lynedoch Ecovillage residential buildings behind. 45
Figure 64: Barn like structures at B (left) and G (right) orientated along the contour. 45

1001

1. INTRODUCTION

1.1 Background to heritage process

The proposal for Portion 28 is for rezoning and development of medium to high density housing (apartments, townhouses, and single dwelling), with the objective of achieving 2 475 dwelling units, and an educational facility with an area of no more 3ha. The proposed development will change agricultural land to medium - high-density residential development with additional facilities.

This HIA is prepared as a PHASE 1 HIA report to inform HWC of the heritage resources identified and the proposed heritage indicators in order to obtain HWC's preliminary comment to inform the development design which will be for HWC comment in Phase 2.

A NID for the proposed development was submitted to Heritage Western Cape and tabled at the Heritage Officers' Meeting on 4 May 2023 and resulted in the Record of Decision (10 May 2023) request for a Heritage Impact Assessment that included specifically an Archaeological Impact Assessment and a Visual Impact Assessment.

This Phase 1 HIA will be submitted with HWC comment in terms of Section 38(8) of the NHRA, as part of the scoping phase of the EIA process in terms of NEMA. The Phase 2 HIA will be submitted at a later stage, with HWC comment, on final application in terms of the NEMA process.

The Stellenbosch Municipal Heritage Survey (SMHS) (Todeschini and Jansen, 2017, 2018; Todeschini et al, 2018) included this site in its survey, with many of the heritage resources having been recorded and graded. This Phase 1 HIA will draw from the survey and supplement with additional information from a site-specific survey and assessment of the nature of the proposed development.

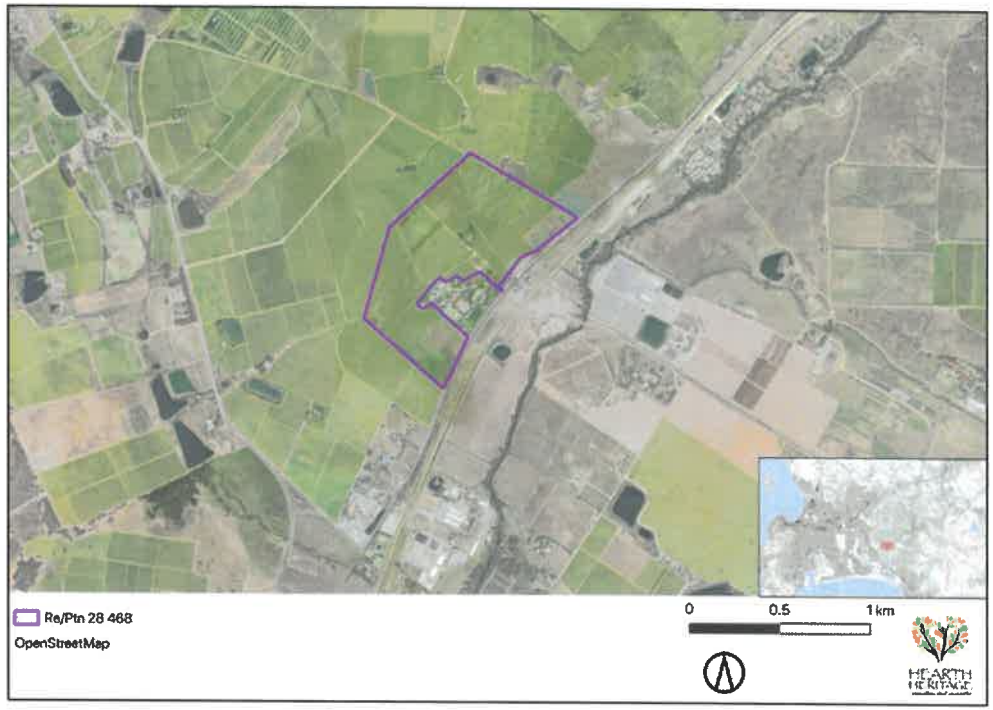


Figure 4: Location of RE/Ptn 28/48, Stellenbosch, identified for development.

1.2 Description of property

RE/Ptn 28 of historic farm Welmoed 468 (45,4ha) is agricultural zoned land within the designated Lynedoch urban edge. The site is located adjacent and to the west of the R310 Baden Powell scenic route and the railway line. The proposed site is flanked by first Lynedoch Road and then the railway line to the south-east which runs parallel to the R310 Baden Powell scenic drive.

The site proposed for development surrounds the Lynedoch Eco-Village and Sustainability Institute on three sides and is proposed to add to this to create a mixed-use development node. The site is currently under old vineyards and open uncultivated land, including wetland areas to the south-east directly adjacent to Lynedoch Road. The surrounding land to the north-west of the site is agricultural land, mostly vineyards.

1002

The site slopes up at increased steepness to the north west with 'bottom' slopes near the road grading a moderate 1:8 with some slopes higher up being extremely steep at 1:4. Olive row hedges line the vineyards along the horizontal edges, creating visual breaks in the slope.

There are some structures located on the central north-west to south-east axis of the site. Some of these are historic and older than 60 years and will require Section 34 applications for any alterations, additions or demolition. It is intended for some of these structures to be retained in the development and to inform the design to retain the historic narrative of the site.

Along the railway line, across from the proposed development site and the Sustainability Institute, is the Lynedoch railway station (currently not in use), a more recent but unused pedestrian railway crossing, the Zetler fuel station and associated commercial development and parking area. There is no direct access from the R310 onto the site, and vehicular access is achieved via Lynedoch Road, which runs parallel to the railway and which is accessed via Vlaeberg road further to the south-west. Pedestrians access the site via an informal footpath across the railway line opposite the entrance to the site.

Along Baden Powell Drive and Annandale Road, in the immediate environs of the site, there has been a lot of agricultural development, such as warehouses and grow tunnels, which has detracted from the scenic quality of Baden Powell Drive. The site has high visibility from Baden Powell Drive as well as Annandale Road with views from the top of the site extending to Macassar Dunes, Jamestown and the Helderberg on a clear day.



Figure 5: View west looking 'up' at vineyards and historical 'barn'



Figure 6: View of site looking west from north-east corner.

1003

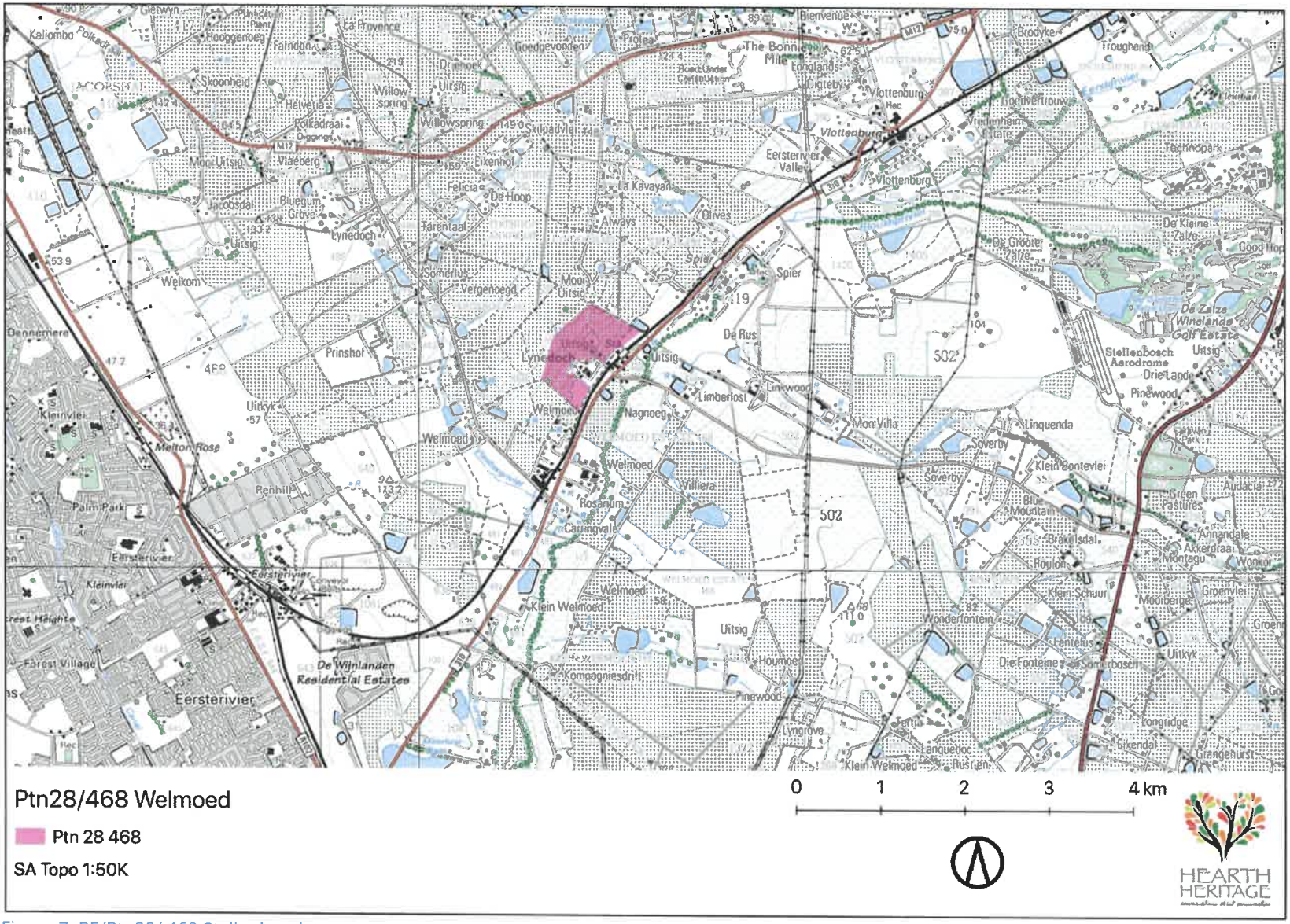


Figure 7: RE/Ptn28/ 468 Stellenbosch

1004



Figure 8: Google aerial view of RE/Ptn28/468 showing orientation of the surrounding vineyards and agricultural infrastructure as well as Baden Powell Dr, Annandal Rd and the Eerste River.

1005



Figure 9: View looking north to site from R310 (Baden Powell) with Lynedoch Eco-Village roofscape in midground.



Figure 10: View towards site from Baden Powell Annandale intersection looking north west with Zetler's service station in foreground.

1006



Figure 11: View towards site from R310 looking west





Figure 12: NCW farm outbuildings not identified in Stellenbosch Heritage Survey (2016) with structures >60yrs.

1007



Figure 13: View of site from westernmost corner looking north-east, east and south-east with Lynedoch village in the centre surrounded by vineyards and Helderberg in the background.



Figure 14:View of site from northernmost corner looking south-east towards the Helderberg and Zetlers farm, south and south –west to Macassar.

1008



Figure 15: View of site from easternmost corner looking south-west along Lynedoch Road, west and north-west.



Figure 16: Views from R310, Baden Powell Dr and Lynedoch Rd, of railway infrastructure adjacent to south-east boundary of the site.

1009

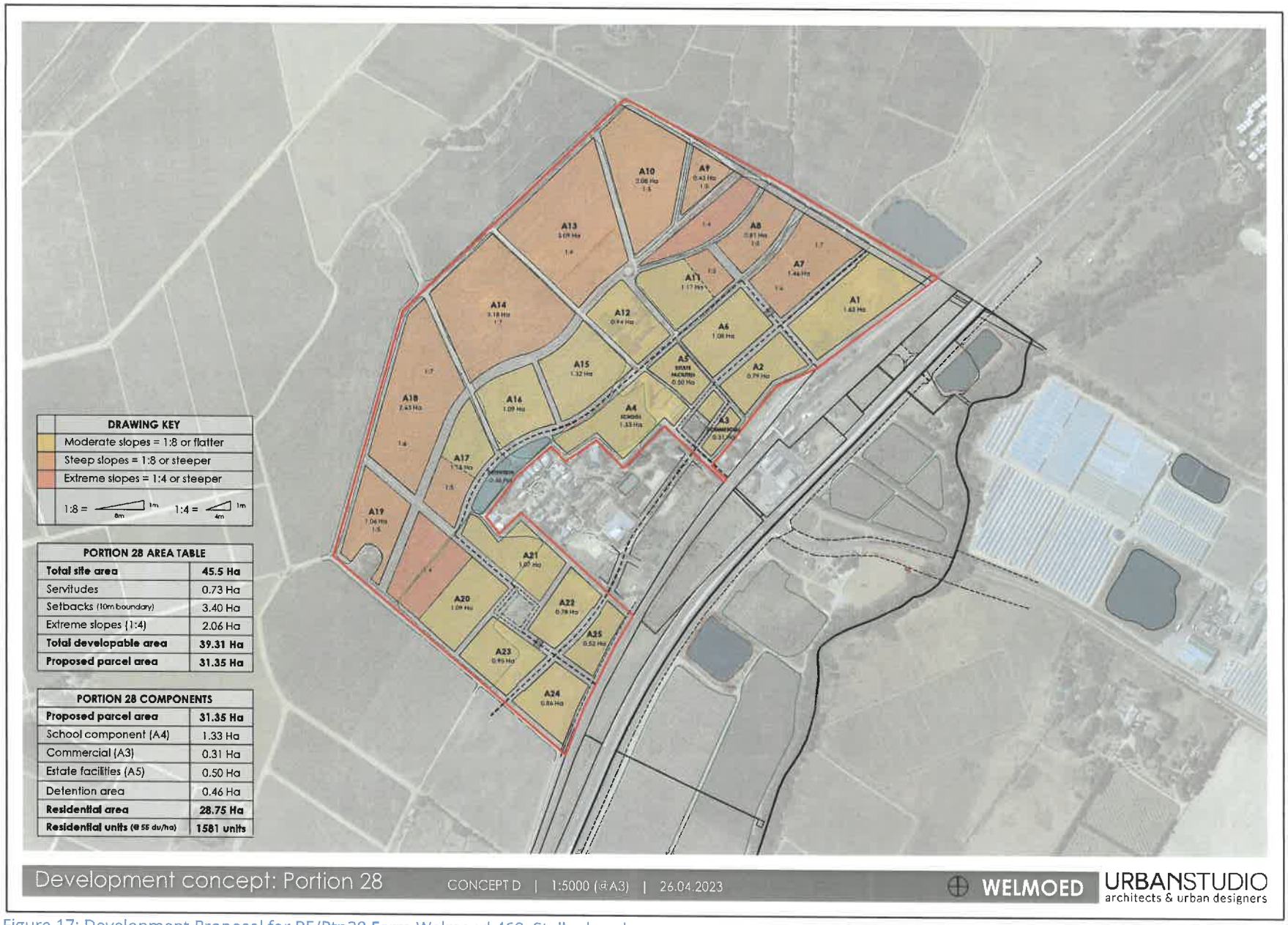


Figure 17: Development Proposal for RE/Ptn28 Farm Welmoed 468, Stellenbosch

1010

2. METHODOLOGY

2.1 Purpose of HIA

This HIA is prepared as a PHASE 1 HIA report, as agreed between the heritage consultant, Emmylou Bailey, and HWC at the HOMs, to fulfill the request from HWC's HOM committee and consists of an integrated HIA: PHASE 1 compiling the information from the AIA by Emmylou Bailey (August 2023) and Heritage VIA prepared by Claire Abrahamse (2023). The Phase 1 HIA serves to inform HWC of the heritage resources identified and the proposed heritage indicators in order to obtain HWC's preliminary comment to inform the development design.

A NID for the proposed development was submitted to Heritage Western Cape and tabled at the Heritage Officers' Meeting on 4 May 2023 and resulted in the Record of Decision (10 May 2023) request for a Heritage Impact Assessment that included specifically an Archaeological Impact Assessment and a Visual Impact Assessment.

This Phase 1 HIA will be submitted with HWC comment in terms of Section 38(8) of the NHRA, as part of the scoping phase of the EIA process in terms of NEMA. The Phase 2 HIA will be submitted at a later stage, with HWC comment, on final application in terms of the NEMA process.

2.2 Study Methodology

AIA and VIA specialist impact assessment reports for the development were reviewed. The specialists had independently conducted site surveys and the information was used to inform this Phase 1HIA. The identified heritage resources were assessed for significance taking into account the information received from the specialists in terms of the grading as set out in Section 3 of the NHRA. An integrated Phase 1 HIA was compiled using the information from the specialist reports with the addition of historical background information and a review of other relevant impact assessments in the broader area. The Stellenbosch Municipal Heritage Survey (SMHI) (Todeschini and Jansen, 2017, 2018; Todeschini et al, 2018) included this site in its survey, with many of the heritage resources having been recorded and graded. The information from the integrated SMHI as well as its individual specialist reports were consulted for this report.

2.3 Constraints and Limitations

Archaeological visibility
The seasonal rain and resultant flooding of the wetland areas as well as dense plant growth on the lower portions of the site adjacent to Lynedoch Road limited the accessibility of this area for foot survey, however this does not impact on the results of this report as no heritage resources were identified for this area that required access. Dense growth between the vineyards also limited archaeological visibility, but enough surface area was exposed to conduct an archaeological survey, especially since surveys of this area have been done previously. The experience of the heritage practitioner and observations made during the study, allow for the relatively accurate prediction of the archaeological and cultural landscape sensitivity of the receiving environment.

General
It is trusted that the information provided by the client for this report is true and fair.

2.4 Author Declaration of Independence

I, Emmylou Bailey, hereby declare that I act as an independent, objective specialist in this assessment and that I do not and will not have any financial interest in the undertaking of the proposed activity, other than remuneration for my work performed according to the National Heritage Resources Act (25 of 1999).



August 2023

3. HISTORY AND EVOLUTION OF SITE AND CONTEXT

3.1. Archaeological significance of the area

Early Stone Age (ESA) implements were first discovered by the French entomologist Dr Louis Peringuey in 1899 at Bosman's Crossing at the foot of the Papagaaiberg alongside the Eerste River in Stellenbosch (Peringuey 1902, 1911; Seddon 1966). The artefacts, exposed in the railway cutting, are associated with the younger gravels of the course alluvial fan on which much of Stellenbosch is situated, and are dated to the earlier part of the Middle Pleistocene, between 700 000 and 300 000 years ago (Deacon & Goosen 1997). Among these tools was an artefact type of great antiquity recognized as an early handaxe. For many years after this, the ESA of South Africa was referred to as the `Stellenbosch Culture' until the term was re-defined in the 1960s (Goodwin & Van Riet Lowe 1929). A large sandstone boulder marks the location of the Bosman's Crossing Provincial Heritage Site (PHS), which was declared a National Monument in 1962.

ESA Acheulian sites, which are characterised by the presence of specific types of tools such as handaxes, choppers and cleavers, have been recorded throughout the country, and are especially associated with river terraces and streams, mountain slopes, and in degraded and transformed areas such as slope washes, cuttings, excavations, and in vineyards and old fields, where they are often brought to the surface by ploughing. In his 1967 review of the ESA from Stellenbosch, Seddon listed a total of 22 known ESA sites in and around Stellenbosch. They were: Gleneagles Hotel (2), Olives Farm Lynedoch, Spier, Vlottenburg winery, Louishoogte site, Blaauklip vegetable garden and golf course, Vredenburg, Bosman's Crossing, General Box Factory, Suikerbosrand, Altavona, Blake's Quarry, Smits' Quarry, Schoongezicht, Rustenberg, Lorraine, Rozendal, Coetzenburg, Glen Conner and Old Nectar (Figure 18).

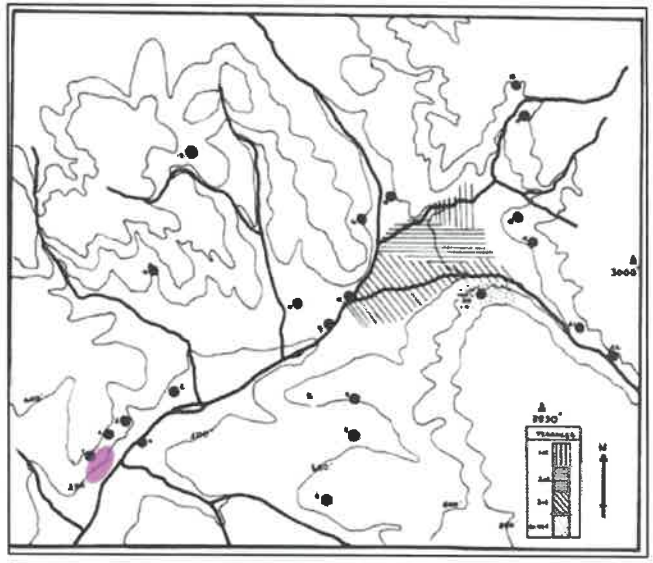


Figure 18: Seddon (1967) ESA sites in the Stellenbosch area with ~ RE/Ptn28/468 (purple).

Further ESA artefacts have been recorded on a number of farms in the Stellenbosch area, at Meerust, Hartlands and De Wijnlanden (Kaplan 2002, Webley, 2016), and on several farms to the east of the R310, at Croyden (Kaplan 2005, 2004) and Faure (Kaplan 2006). Large numbers of tools including handaxes, cleavers, cores, and flakes were also documented in old agricultural lands and vineyards during an investigation of the De Zalze Golf Estate (Kaplan 2009), about 1km north east of the proposed development site, while a rich Acheulian site occurs on the Farm Blaauklippen, on the upper slopes of the Helderberg to the east of the R44 (Deacon and Goosen 1997). ESA flakes and angular chunks have also found on the lower slopes of the Papagaaiberg near the Stellenbosch Cemetery (Kaplan 2010), while ESA tools were recorded alongside Adam Tas Road, and in Devon Road, Stellenbosch during a Heritage Impact Assessment (HIA) for the proposed Plankenbrug sewer pipeline (Kaplan 2015a), and at Vlottenburg Hamlet inside the urban edge (Kaplan 2015b). More recently, relatively large numbers of ESA tools, including a number of handaxes were recorded on the Farm, overlooking the Annandale Road, close to the banks/floodplain of the Bonterivier, where quartzite river cobbles would have been readily available to early ESA hominins as a source material for making tools (Kaplan 2018).

1012

ESA and MSA tools were found scattered on the surface of the farm Solms-Delta situated near the confluence of the Dwars and Berg rivers. Similarly, they are found in fields and orchards in Franschhoek. Large flakes and cores, some with bifacial flaking, were found on Klapmutskop. While these particular artefacts were not in a formal archaeological context, their presence even on the surface gives testimony to the presence of our human ancestors on this landscape for millennia (Malan, 2018).

The people occupying the Western Cape before 2000 years ago were all hunter-gatherers, but after that time large-scale organisational and subsistence changes began, with the gradual introduction of pottery-making and domesticated sheep to the local economy. Presently it is considered likely that sheep were introduced to Southern Africa through diffusion and trade rather than by a migrating people, as was often thought in the past, and that pottery was present slightly earlier than sheep (Orton 2005).

Small groups of hunter-gatherers followed the seasonal round in this landscape, collecting plants and catching wild birds and animals. They found shelter in caves and rock formations and constructed windbreaks and waterproof *skerms* (screens) in more open areas. Their stone tool assemblages are characterised by the simultaneous occurrence of three particular retouched stone tool types: segments, backed bladelets and backed scrapers.

3.2 Historical context[1]

The area now occupied by the Stellenbosch district was inhabited by hunter-gatherers for thousands of years. However, by the time the first Europeans visited the area, Khoekhoe herders (living in groups of up to 100 people), who were supporting themselves through pastoralist subsistence methods, were mostly found inhabiting the district (Todeschini, Jansen 2018: 13). The Khoekhoen's tendency to amass large herds of livestock (such as longhorned cattle, fat-tailed sheep and goats), as well as oxen for pack animals and riding, resulted in a series of wide trails (possibly following old animal tracks or former narrow paths) being created in the landscape (and crossing streams and rivers). Kraals were also established to give a degree of protection to large herds of livestock from wild animals and raids (Ibid: 13). The herders have left evidence of their presence in the shards of their unique pottery, associated with stone and bone tools, which can still be found. Stellenbosch Museum archaeologist Hennie Vos noticed several fragments in the dust of a road on the farm Meerlust in 2004.

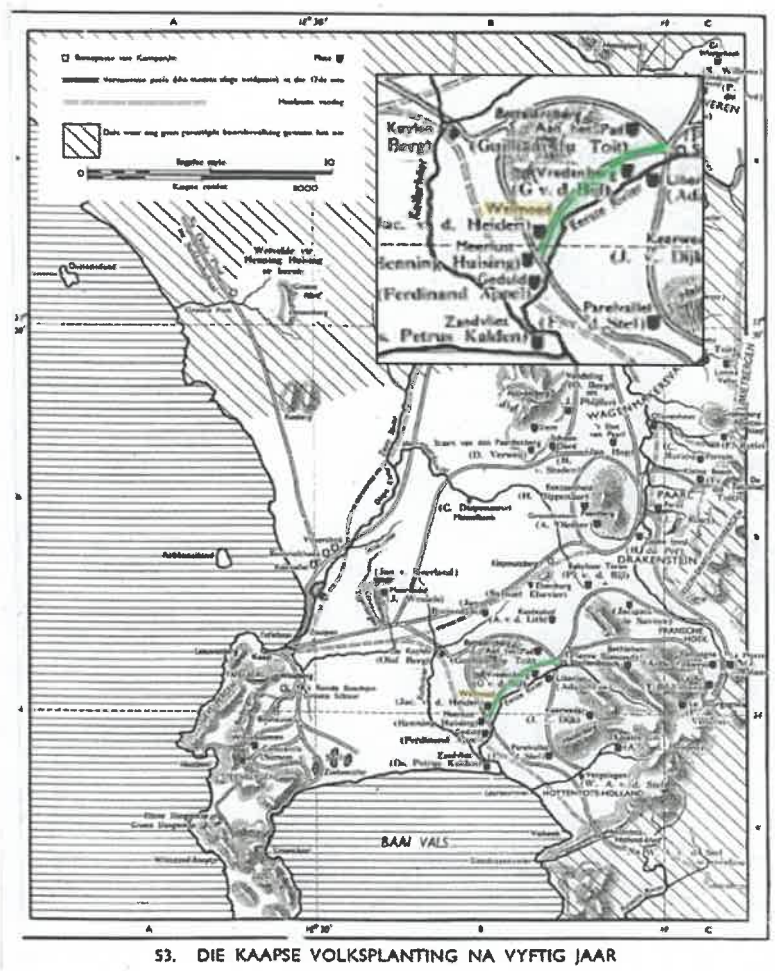


Figure 19: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) with inset showing Welmoed and the C17th historic route that is now R310

[1] Todeschini et al, 2018. and Malan, 2018.

For the new colonial settlers the fifty-year period before 1700 was a time of learning how to live on the land and to construct buildings with whatever means were available. The VOC supplied them with tools, muskets, powder and ammunition, provisions for a few months, wood to build shelters and a team of oxen to break the soil. They were able to exploit the game and timber from the forests and vleis, but the poor soils forced them into working long backbreaking hours to increase the productivity of a fixed quantity of land. A demand for labour was created and this was met by the VOC's importation of slaves. Slaves were the central and vital component of the 18th century colonial economy. Khoekhoen descendants were incorporated into the farm labour pool, as a result of loss of independent economic means and through coercion, with little more freedom of choice than slaves. Some managed to retain an independent life by keeping beyond the reach of VOC guns and horses, but were increasingly pushed into marginal environments.

The later 18th century was a period of great agricultural prosperity and expansion, especially in the wine industry. It was during this time that most of the larger, grander historical farm werfs were established, either newly built or altered/rebuilt to reflect the status and prosperity of the land owners.

Historically, commonage provided a place for town residents to keep their transport animals, milk cows, animals for slaughter and butcher's stock. Stock being moved between grazing lands could depasture on the commonage. Access to commonage, free-flowing water and natural mountain slopes were held as extremely significant rights by Cape communities. It was on the commonage where old traditions were (and are) performed, family and communal gatherings take place, and freedom and solace may be found.

Burials also took place beyond the boundaries of farms. Initiation sites are another category of heritage resource that requires privacy and solitude. As many of these places have been kept secret from property owners and authorities, they are extremely vulnerable to accidental damage or destruction.

During the 18th and 19th centuries, the region was well known for its mixed farming; grain fields, grazing lands and vineyards but with an increasing emphasis on wine production. Up until about the 1860s wine was one of the most important sources of income for the Cape Colony and the Drakenstein became a major wine production area. In the late 19th century the wine industry at the Cape collapsed as a result of Phylloxera. By the 1890s, 80% of the vineyards of Drakenstein had been destroyed despite all sorts of attempts to control the disease. It was only later that the 'winelands' returned, and under centralised control.

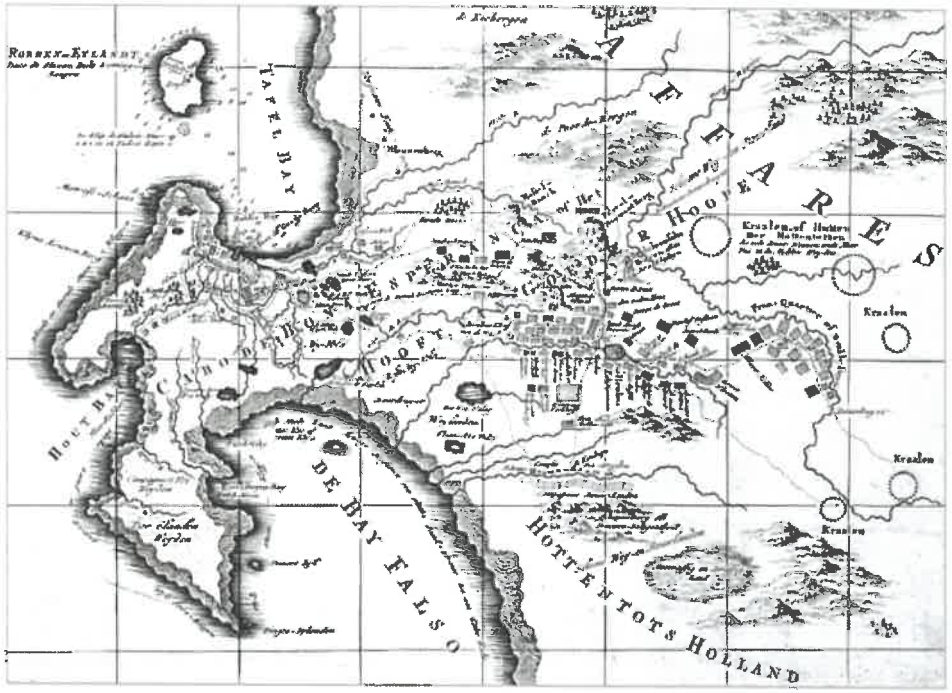


Figure 20: Cape Colony c.1700 (UCT Digital Archive)

1014

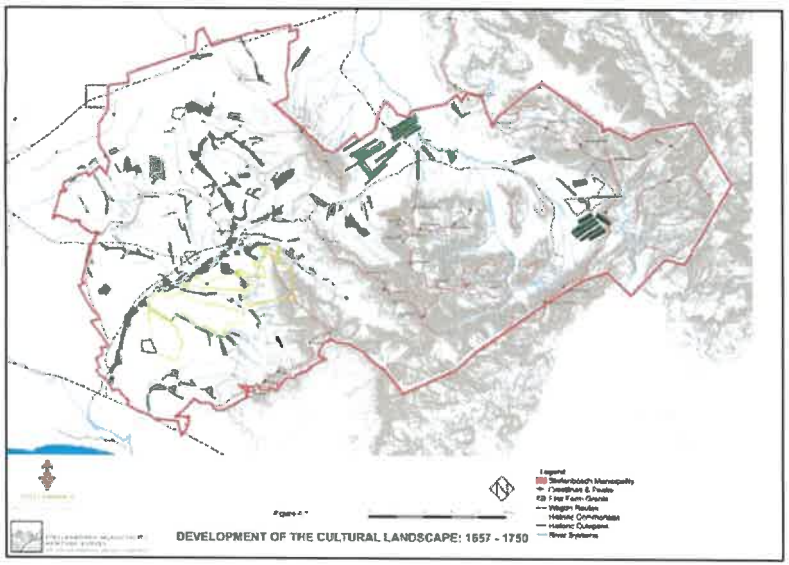


Figure 21: Development of the Stellenbosch cultural landscape 1657 to 1750 (Todeschini et al, 2018)

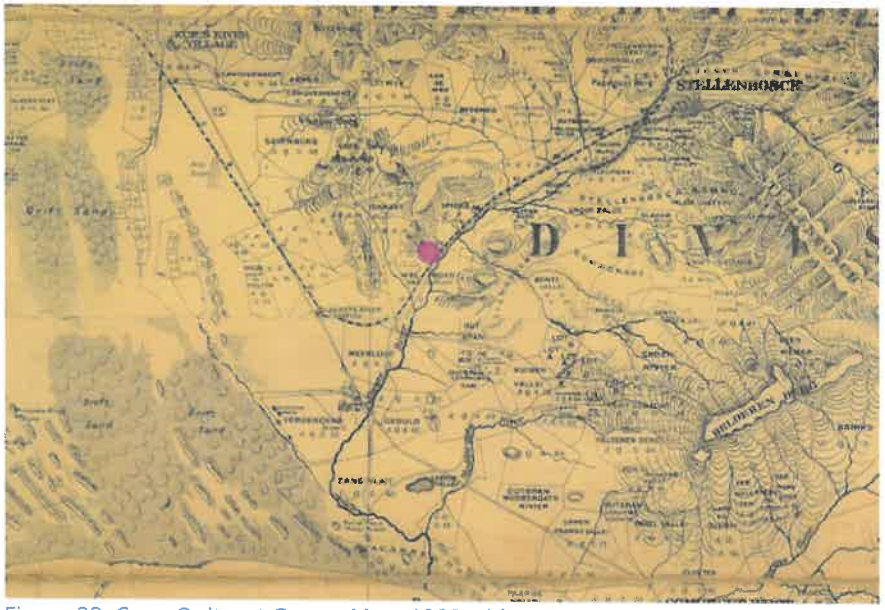


Figure 22: Cape Quitrent Grants Map, 1880 with ~RE/Ptn28/468 (purple)

After WW2, commercial enterprises and commercial farming transformed land use and saw the demise of traditional Cape colonial family network farming practices. Mechanisation resulted in a decline in the attachment of the farmer to his land, his workers, his animals and their communal co-existence. New linkages were established between the new class of commercial farmers and the growing stratum of intellectuals that Victoria College in Stellenbosch was producing.

Driving livestock from Franschhoek to seasonal pastures on the West Coast came to an end. The old pastures, on the middle mountain slopes, were replaced with forestry. Agricultural Boards supported White farmers and regulated production and markets. KWV (1918) and SFW (1935) centralised wine-making and exports and SAD (1938) did the same for dried fruit. Several Co-Operative cellars were formed in the 1940s.

The extensive building and development after WW2 escorted South African wine cellaring into a new era: cold fermentation, better pumps, and monumental vaults of wines and brandies. In 1971, the first South African wine route was opened in Stellenbosch, the brainchild of Frans Malan of the Simonsig Estate and Niel Joubert of Spier. Dairy farming was consolidated into mega-businesses, vineyards and wineries replaced grain crops and orchards, and market gardens were usurped by infill suburban or social housing. A Cape wine estate became a prestigious investment (also for tax relief) for local and overseas magnates, and big injections of capital were necessary to sustain agriculture and the rural economy. Buildings and infrastructure were replaced and modernised and properties were subdivided. Small-scale fruit and vegetable traders continued their operations in and around the villages during the 1950s before being restrained by apartheid laws and other obstacles. The last 80 years have seen massive changes in the development of the subject cultural landscapes with much agricultural land being lost.

3.3 Site history

The subject site and its environs have always comprised highly fertile agricultural land, most especially for grazing livestock. Malan (2018) writes that:

> In his 1967 review of the ESA [Early Stone Age] from Stellenbosch, Seddon listed a total of 22 known ESA sites in and around Stellenbosch, although conceding that the "only place where numerous artefacts are to be found in

1015

situ is opposite the monument already mentioned; at the Bosman's Crossing site". They were: Gleneagles Hotel (2), Olives Farm, Lynedoch, Spier, Vlottenberg winery, Louishoogte site, Blaauklip vegentable garden and golf course, Vredenberg, Bosman's Crossing, General Box Factory, Suikerbosrand, Altavona, Blake's Quarry, Simts' Quarry, Schoongezicht, Rustenberg, Lorraine, Rozendal, Coetzenberg, GlenConner and Old Nectar" (2018: 7).

The subject site incorporates both the Gleneagles Hotel (now part of the Sustainability Institute) and Lynedoch, so these gentle, east-facing slopes were occupied by pre-colonial people. However, following colonisation at the Cape by the Dutch, and their gradual expansion into the interior, the slopes of Lynedoch appear to have been of less importance than the land within the valley bottom. Vos writes that Commander van der Stel ventured into this part of the peninsula in 1679, in search of arable land for the cultivation of grain to supplement that being produced closer to the fort at Cape Town (1998: 1). Within 4 years, 30 families had settled along the Eerste River to farm the land, with the encouragement that they were allowed to claim as much land as they could cultivate within 3 years (Guelke, 1974: 117).

Among the first grants along the Eerste River were the farms Vergenoegd, Meerlust, Klein Welmoed, Welmoed, Spier, Vlottenberg and Vredenburgh. The land that would become Lynedoch was part of the farm Welmoed

Farm Welmoed is one of the earliest freehold land grants along the Eerste River dating to 1690. In 1690 it was granted to Henning Huysing and in 1696 to Huysing's friend, Jacob van der Heyden, who was a "man of means" (Vos, 1998). From 1725 to 1759, the farm was owned by Andries Schutte, Heyden's son-in-law. Jan de Villiers, son of a Huguenot, Pierre de Villiers, took ownership of Welmoed in 1759 until 1796 when he passed away. In 1797 the farm was acquired by Pieter Gerhard van der Byl, and stayed in the family's ownership for many generations, and until the end of the C19th (van der Bijl, 2000: 86). It must be noted that, before the Van der Byl's, the owners of the farm Welmoed were buried in the DR Church cemetery in Stellenbosch. By 1800s the church became too small for the growing congregation and cemetery space became unavailable, which, together with the increased move to ownership and self automony, led to the development of farm family graveyards (Vos, 1998).

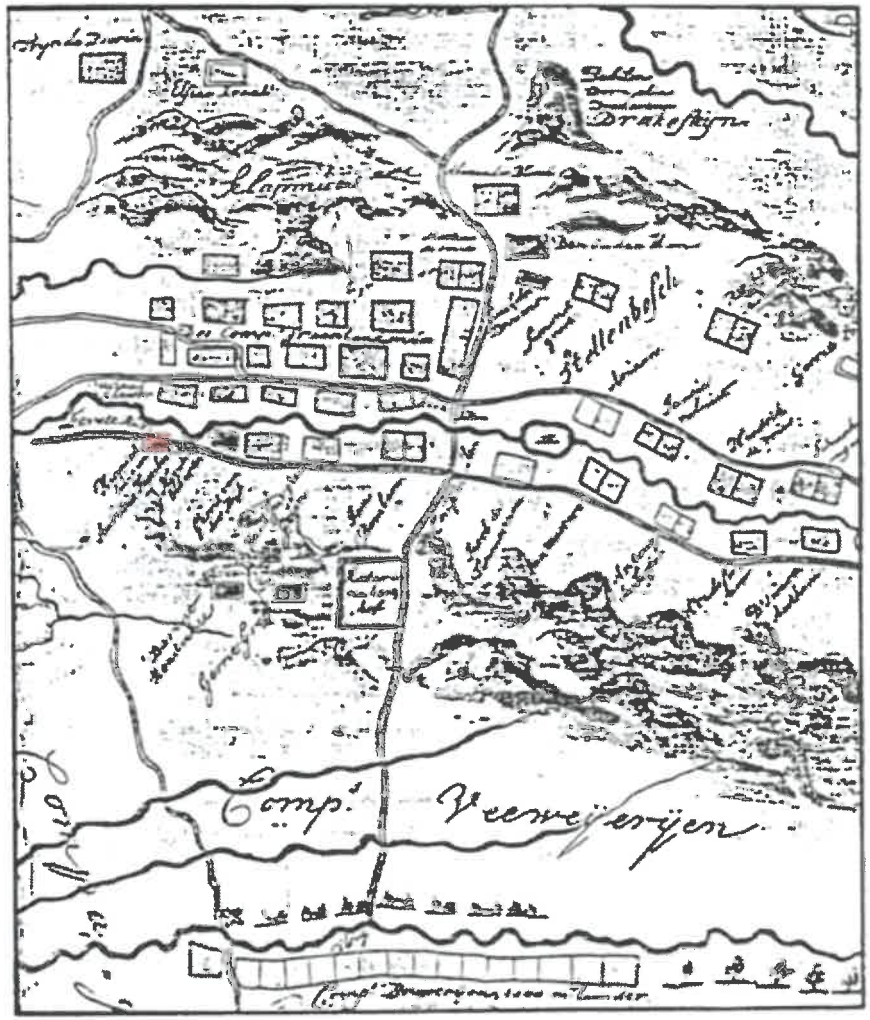


Figure 23: c.1690 schematic map of early land grants, with Welmoed on the far left (Cape Archives M1/ 273)

1016

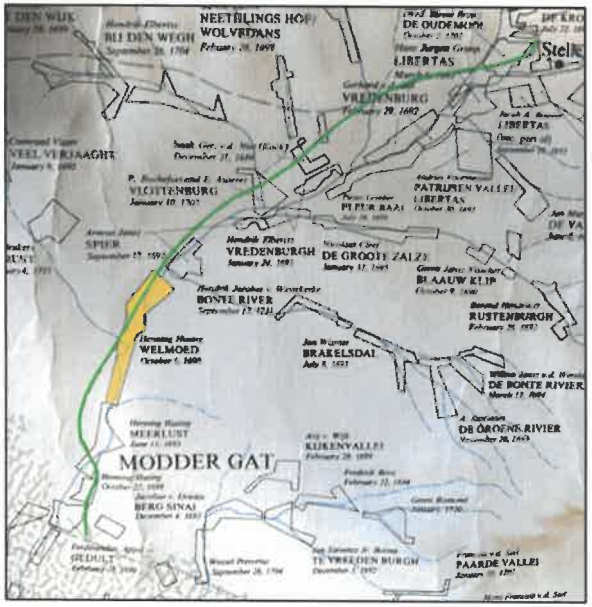


Figure 24: Guelke map (1987) of early freehold grants at the Cape showing farm Welmoed, 1690 (yellow) and the historic route of the R310/ Baden Powell Dr (green).

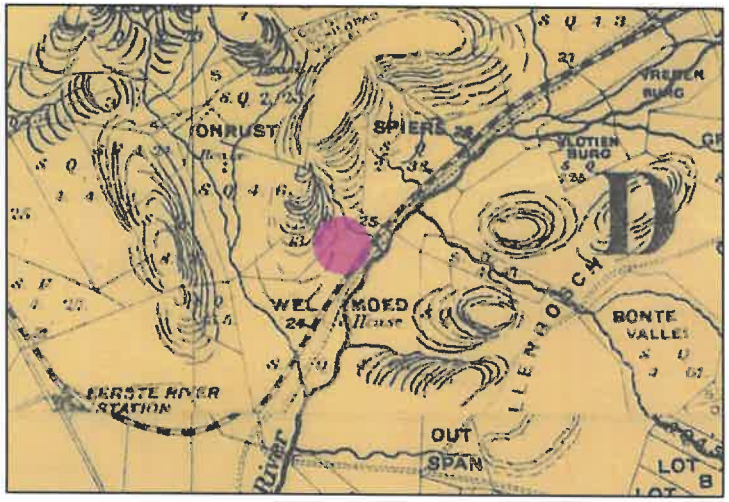


Figure 25: 1902 Divisional map showing approximate location of RE/Ptn28/ 468.



Figure 26: Excerpt of Brink map 1892 showing Welmoed. No buildings are identified on RE/ Ptn28.

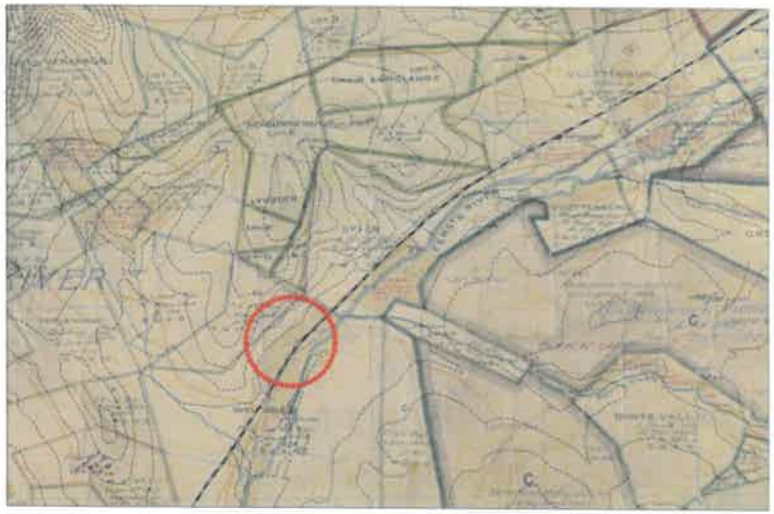


Figure 27: Detail from the 1902 map of Stellensboch by Brink, which indicates the first use of the term "Lyndoch" adjacent to the site (red circle)(KAB Map M4/208)

1017



Figure 28: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) showing Welmoed and the C17th historic route that is now R310

The R310, Baden Powell Drive, running adjacent to the study area, is a significant historic and scenic route, which has linked the Stellenbosch area to the Cape since precolonial times. It is evident on the first maps of the Cape made by the Dutch VOC administrators (Figure 28).

The establishment of a railway station was a key moment in the establishment of settlement at Lynedoch. Photographs taken from the train form part of the Juritz Collection at the Cape Archives on the 19th October 1891, including at Lynedoch Station, are a rare 19th Century record of the landscape.



Figure 29: View of Lynedoch Station, taken from the train on the 19th October 1891 (CLA report - KAB, Jurtz Collection, Photo 216)

Rudolph Kramer, an extremely wealthy Jewish gentleman, owned the United Tobacco Company of SA and had large financial interests in The Castle Wine & Brandy Company. He purchased the farm Welmoed in 1917 and built and lived in the new house. Now known as the Drie Geuwels Hotel, in the 1930s it was known as Glen Eagles Hotel (Figure 34). Drie Geuwels Hotel is a grand old Cape Revival house with a high degree of architectural significance. This building falls outside the study area. The Stellenbosch Municipal Heritage inventory (2018) graded the Drie Geuwels IIIA as a rare local example[2].

Records at the Cape Archives indicate that in 1951, the new owner, Mr. F. Varney, applied to the Stellenbosch Council for a rezoning of the land to allow him to obtain a Liquor License for the hotel. This was approved in 1954 (KAB, 4/STB, 4/1/26: T24/108).

[2] https://www.stellenboschheritage.co.za/property/drie-gewels-hotel

1018

In 1968, the tree canopy has been thinned out and more agricultural buildings added to the north-west of the hotel, but the settlement remains a hamlet much as it did in 1938 (Figure 10). It is important to note the small dam to the south-east of the hotel in this aerial photograph – the land here is still very wet and has characteristics of the wetland.

In 1999 the Sustainability Institute and Lynedoch Village was formed by Eve Annecke and Mark Swilling as a place to create an ecologically restorative community. The 6ha of land was purchased with financial assistance from Spier's Enthoven family with the shared interest in the vision to uplift the local community. At the time, the old historic Drie Geuwels Hotel was in a dilapidated condition with various associated structures in states of disrepair[3].

The Lyndoch Ecovillage, started in 2004, is pioneering approaches to creating socially diverse ecological communities. A mixed community of over 15 families from diverse racial and social economic groups has been built around a child-centred learning precinct. The village contains homes built entirely from alternative materials, with an internal waste management system, an on-site water and sewerage treatment system and extensive recycling. It is intended to be a financially and economically viable community requiring no external funding to sustain itself. Today there are 32 families living at the eco-village[4]. The Lynedoch Eco-Village and Sustainability Institute fall outside the proposed development site.

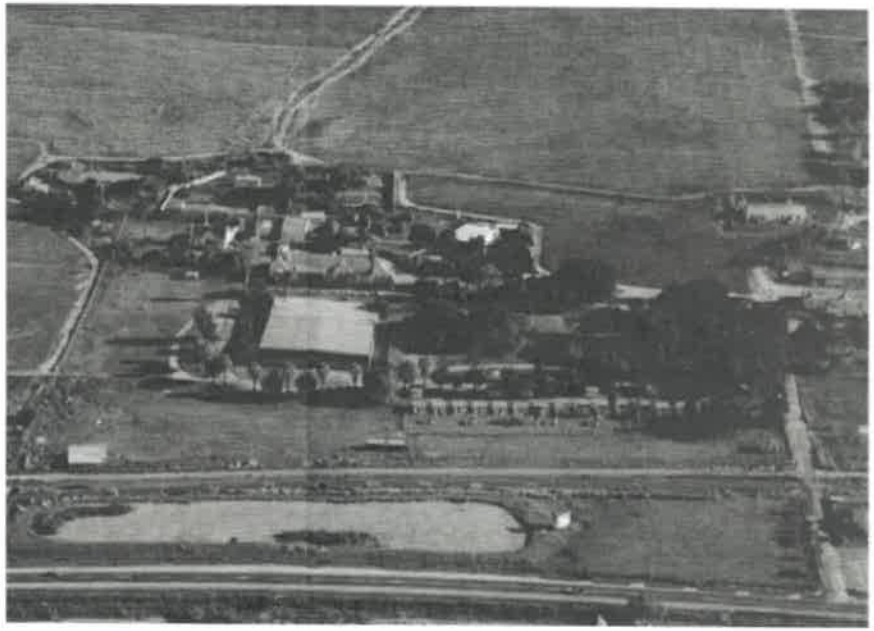


Figure 30: Aerial photo of Lynedoch before renovation by Sustainability Institute taken c. 1977.



Figure 31: Drie Geuwels Hotel circa 1999.

3 https://www.sustainabilityinstitute.net/wp-content/uploads/2020/03/SI-20YRS-Full-Doc-small-spreads.pdf

Several hamlets/projects are proposed for consideration as development nodes along the R310 (as well as housing for farm employees). The Stellenbosch Municipality SDF, approved in May 2017, includes Lynedoch. The 2019 Stellenbosch SDF entrenched the urban edge around Lynedoch, into which the subject site falls. However, the associated diagram ( ) clearly indicates that the envisioned infill development is quite contained, essentially creating an interlinking footprint of urban expansion to the north of the Sustainability Institute, which does not extend closer towards Spier than the Lynedoch Station. This seems to indicate that a similar model of development should be expanded at Lynedoch. Both the SDF and the comment of the Stellenbosch Municipality Heritage Survey consultancy group indicate that a gated village or security village type of development would be undesirable at this location.

The agricultural use of the land, dating back to the earliest settlers, is ongoing, however the insensitive recent intrusions, such as industrialised farming activities and associated agri-industrial structures cluttering the historic landscape, is threatening the significant historic pattern of settlement distinct to the Eerste River Corridor.



Figure 32: The Lynedoch node, as illustrated in the 2019 SDF for Stellenbosch.

1020

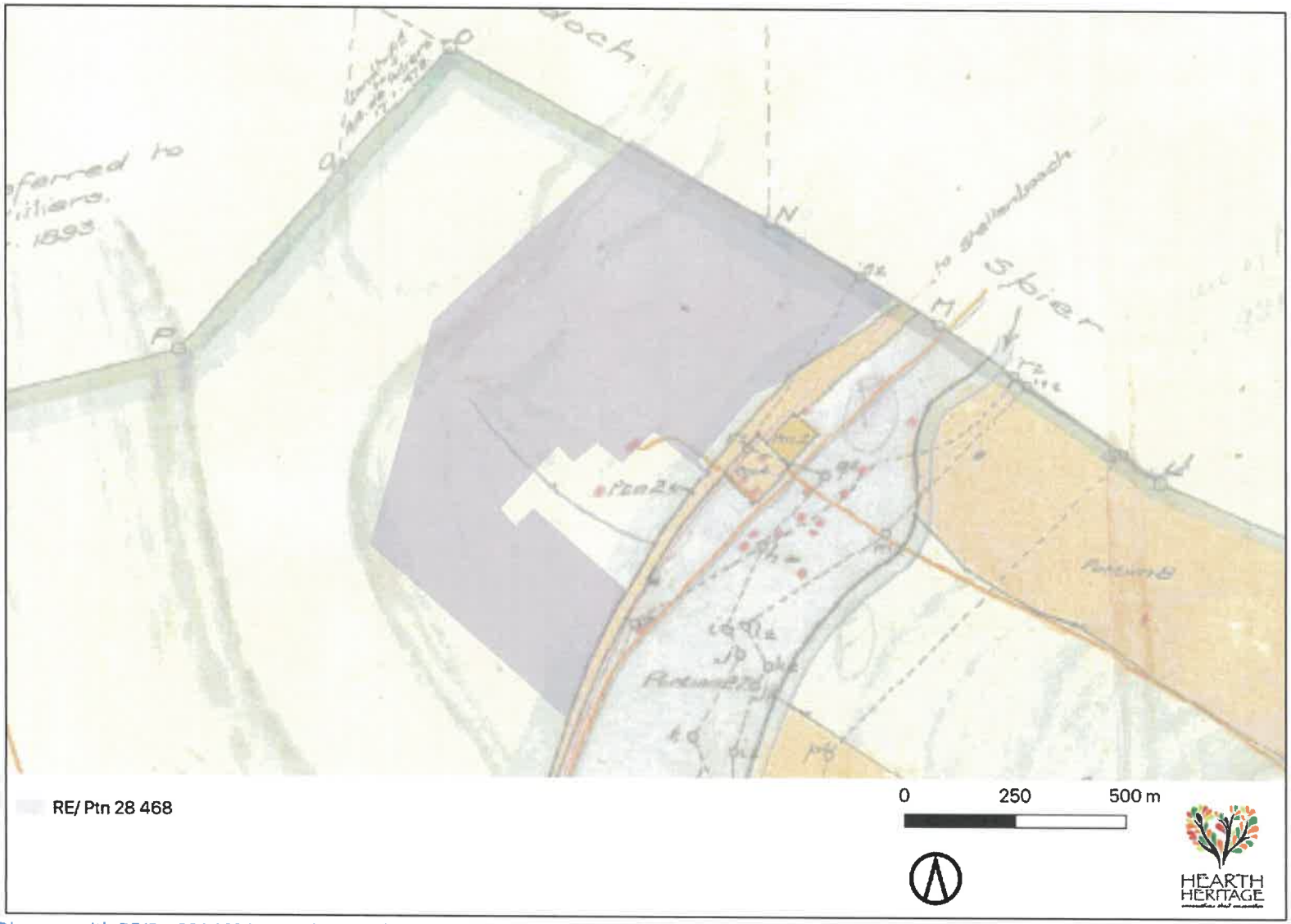


Figure 33: 1920 SG Diagram with RE/Ptn28/ 468 in purple – two historic houses are noted in the area of Drie Geuwels Hotel and the historic barn. The historic entrance road from the R310 is evident as is the non-perennial stream running down through RE/Ptn28/ 468. Both Baden Powell and Annandale Roads are evident.

1021

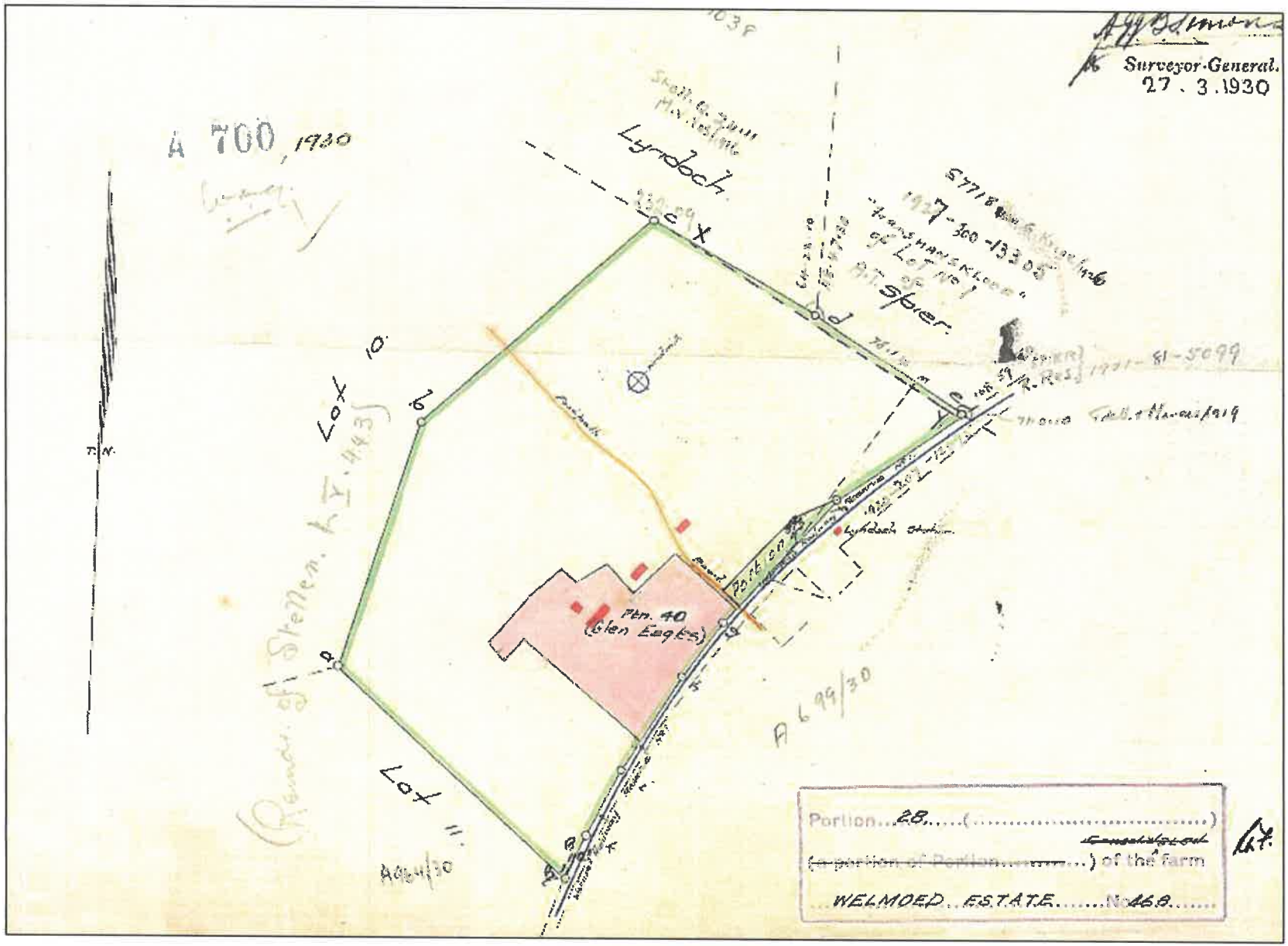


Figure 34: 1930 SG Diagram for RE/Ptn 28/ 468.

1022



Figure 35: 1930 SG Diagram of Welmoed farm showing ~ RE/Ptn 28/ 468 in purple. The Drie Geuwels and two historic buildings are noted as is Lynedoch Station along the railway and the footpath running through RE/Ptn 28/ 468 and onto R310. A windmill is identified where the current concrete dam is located.

1023

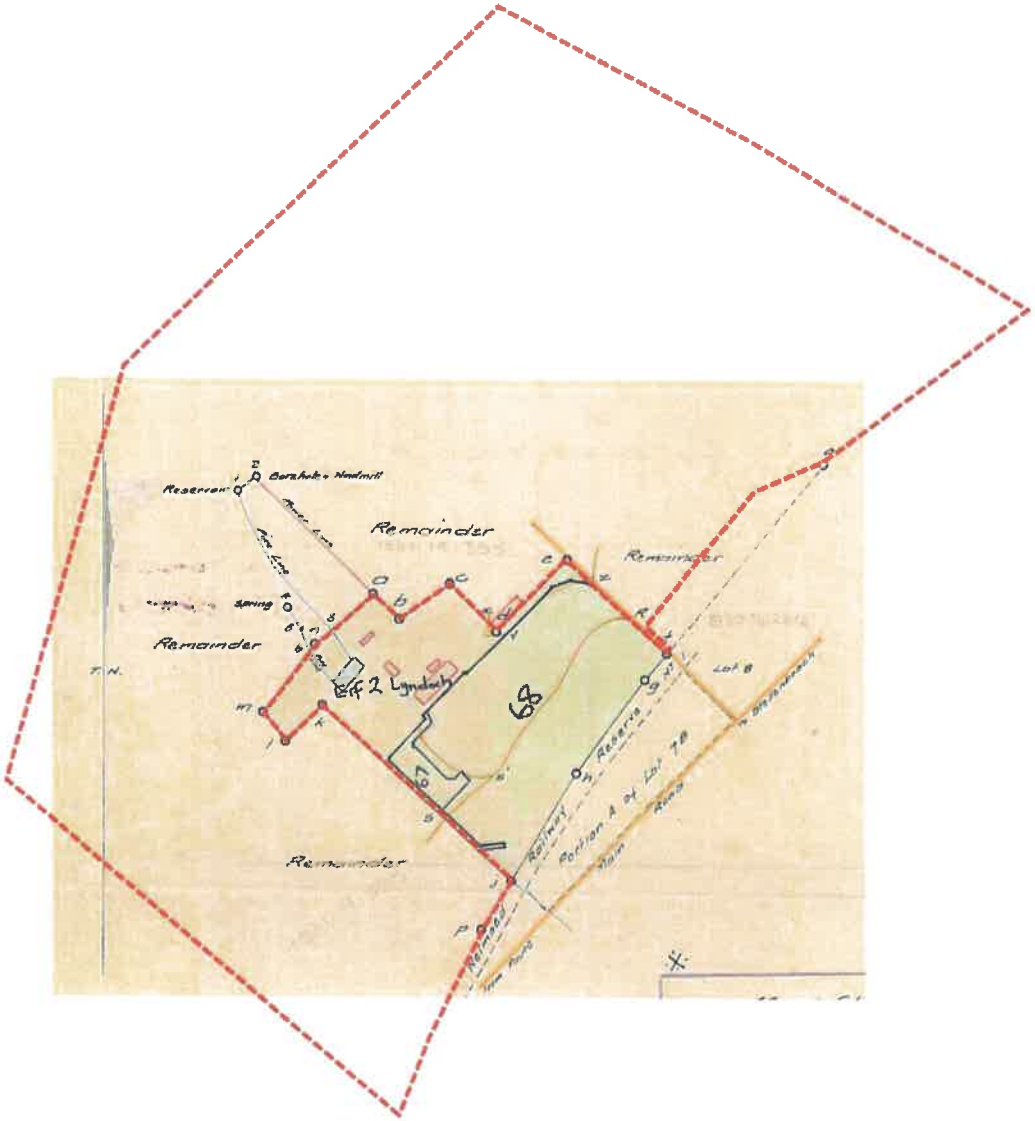


Figure 36 : 1938 SG Diagram of the site, with buildings indicated, as well as water sources and roadways. (CLA, Abrahamse: 2023; SG Diagram 2912/1938)

1024

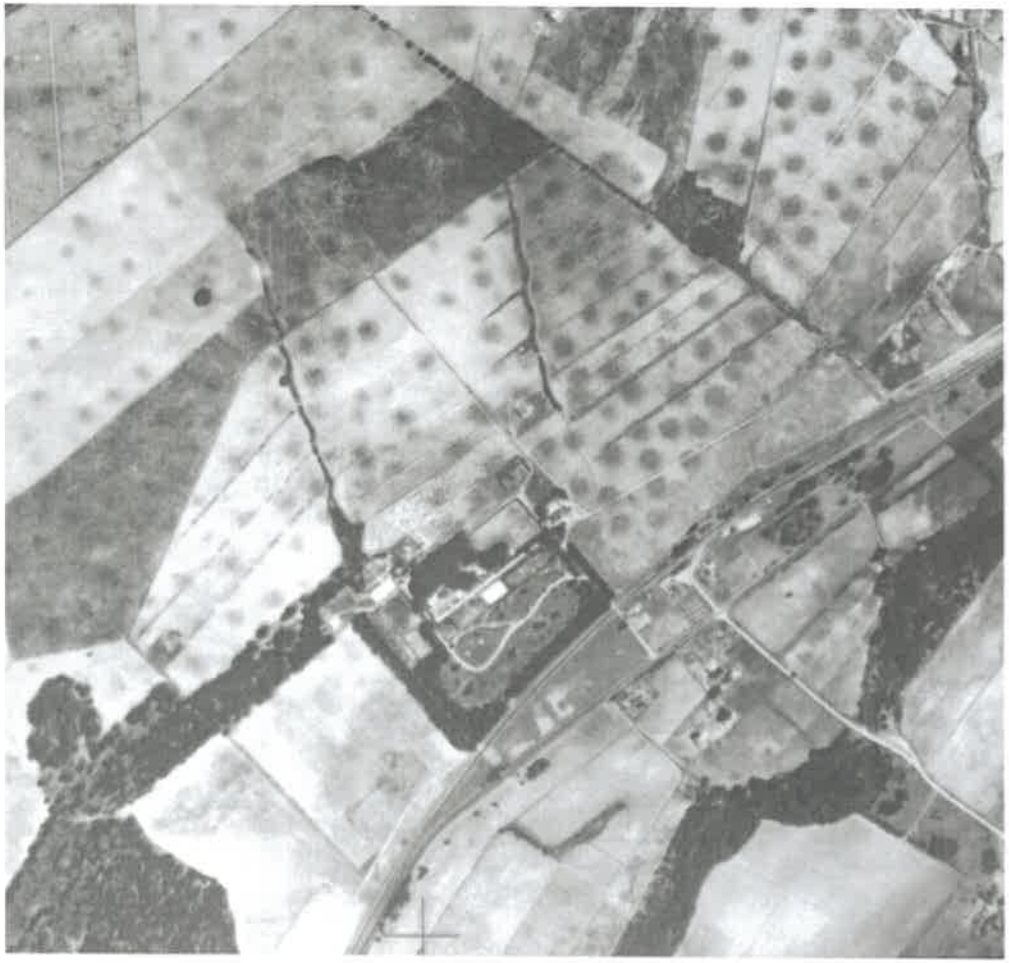


Figure 37: 1938 aerial photo RE/Ptn28/ 468

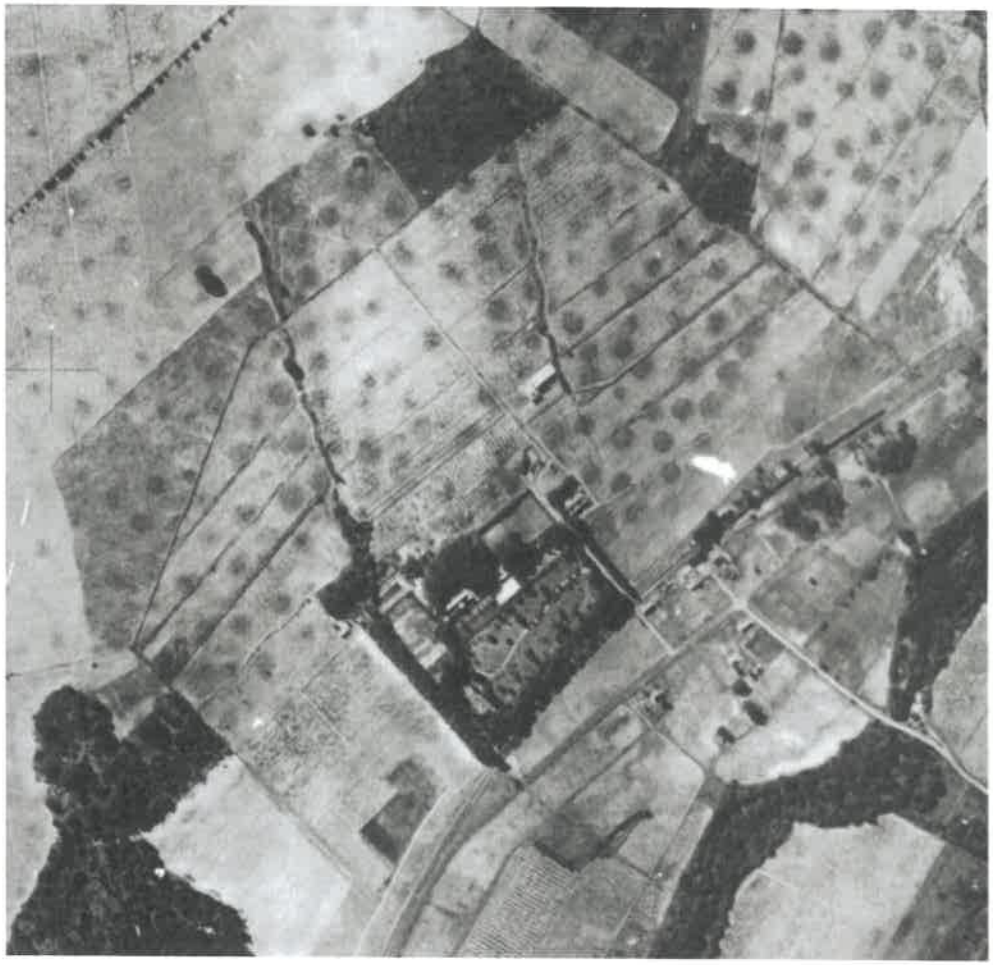


Figure 38: 1944 aerial photo RE/Ptn 28/ 468

1025

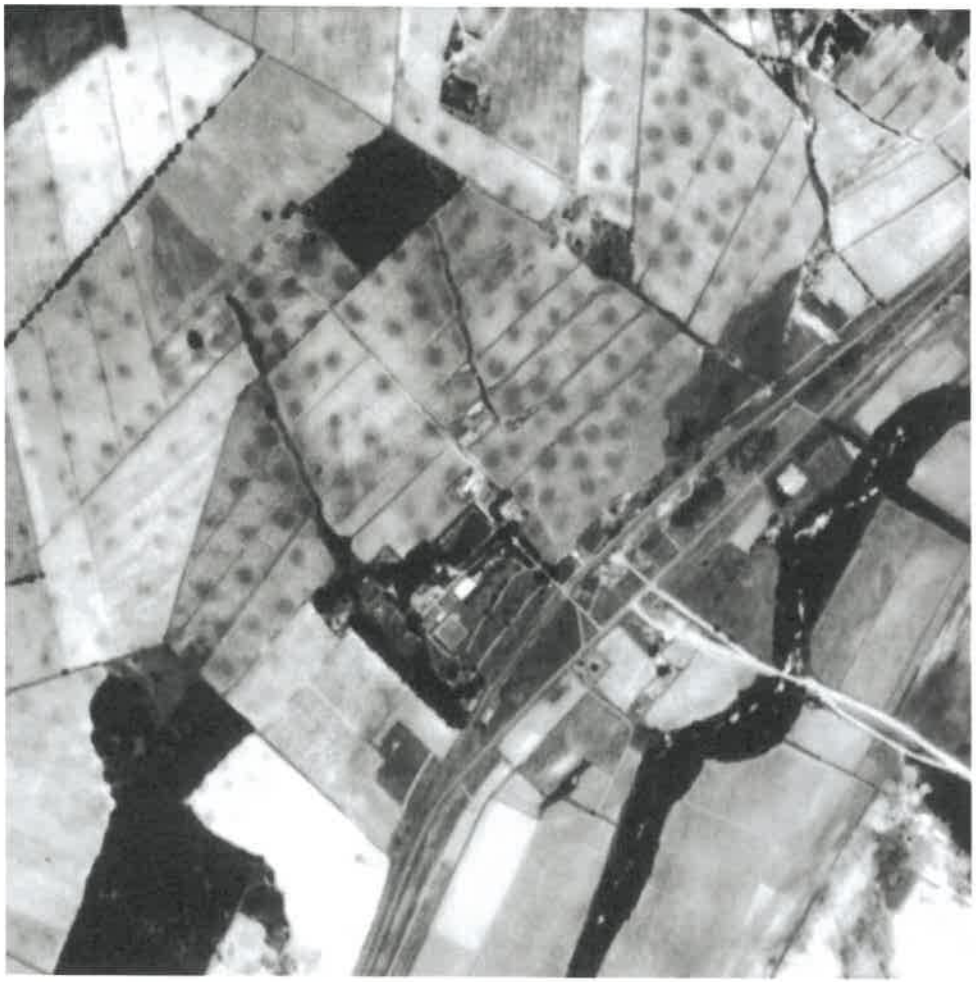


Figure 39: 1955 aerial photo RE/Ptn 28/

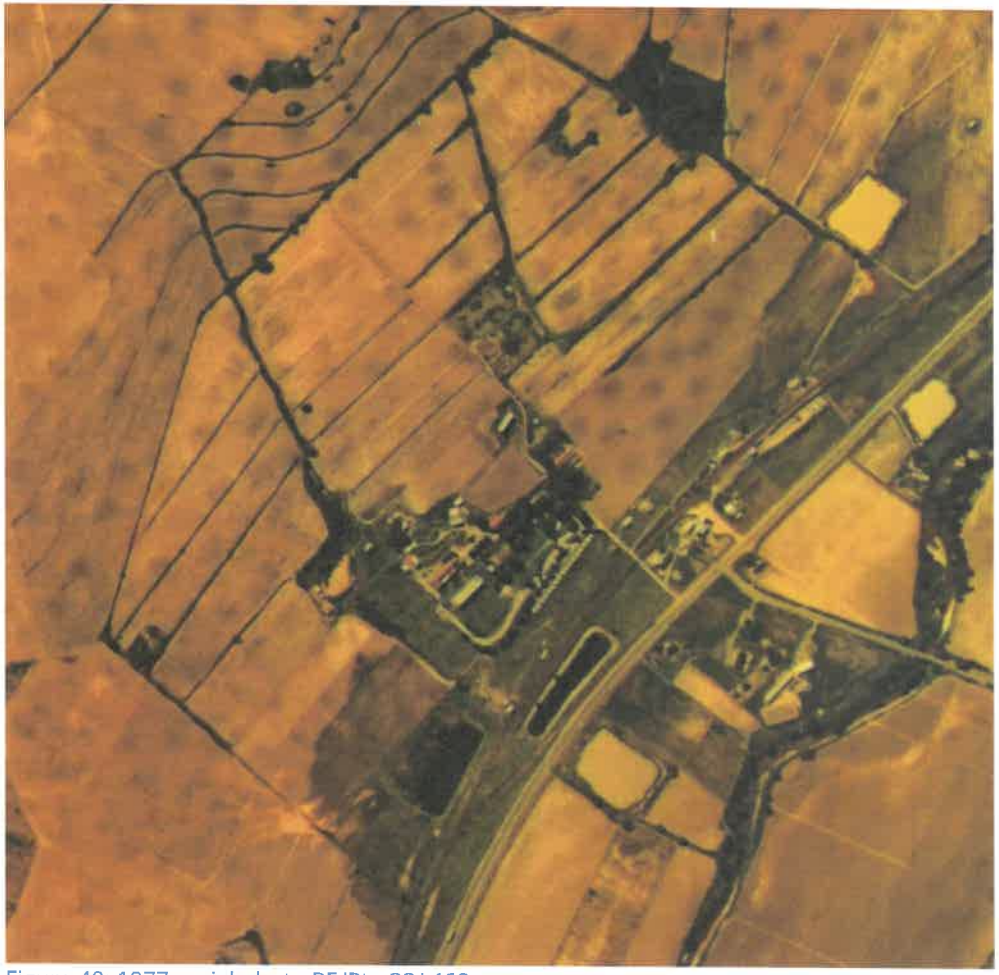


Figure 40: 1977 aerial photo RE/Ptn 28/ 468

1026



Figure 41: 2022 aerial image showing surrounding area and excerpt of structures on on RE/ Ptn 28 of 468.

1027

3.4 Build Chronology

Archaeological resources (over 100yrs):

Pre-1920
Identified in 1920 SG Diagram

- G - Barn-like structure
- Drie Geuwels within Lynedoch precinct (not surveyed – Graded IIIA by SMHS, 2018).

1920-1930
Identified in 1930 SG Diagram

- B - Rectangular structure in linear alignment with structure G along the same contour – later a wine cellar
- F - "Windmill" located where there is currently a cement dam.
- Footpath across Ptn28/ 468.
- Small structure within Lynedoch precinct (not surveyed).
- Lynedoch railway station (outside study area)

Historic resources (over 60yrs):

1930-1938
Identified in 1938 aerial photograph.

- C – possible small structure at location of the cement dam, most likely related to water management.
- D – evidence of earthworks
- E – Small rectangular structure
- F – small structure at location of "windmill".
- Orchards in the fields adjacent to location of D.

1938 – 1944
Identified in 1944 aerial photographs

- C – dam structure
- D – possible structure with different orientation to current building
- E – large rectangular addition to north-east façade.

1944 - 1955
Identified in 1953 aerial photographs

- D – large rectangular structure in position and orientation of current barn
- E – terraced gardens have been laid out to the south east of the building
- Orchards no longer evident, only vineyards and open fields.
- Hipped roof structure on the south-east boundary near the Lynedoch station building (not within study area).

1955-1977
Identified in 1977 aerial photograph

- A - Modern residential building c. 1953-1977
- B – extention to south east façade of barn structure
- E – structures are no longer evident on the aerial photo
- Hipped roof structure on south-east boundary no longer evident.

1977 - 2023
Identified in 2023 aerial photograph

- E – New hipped roof residential structure

1028

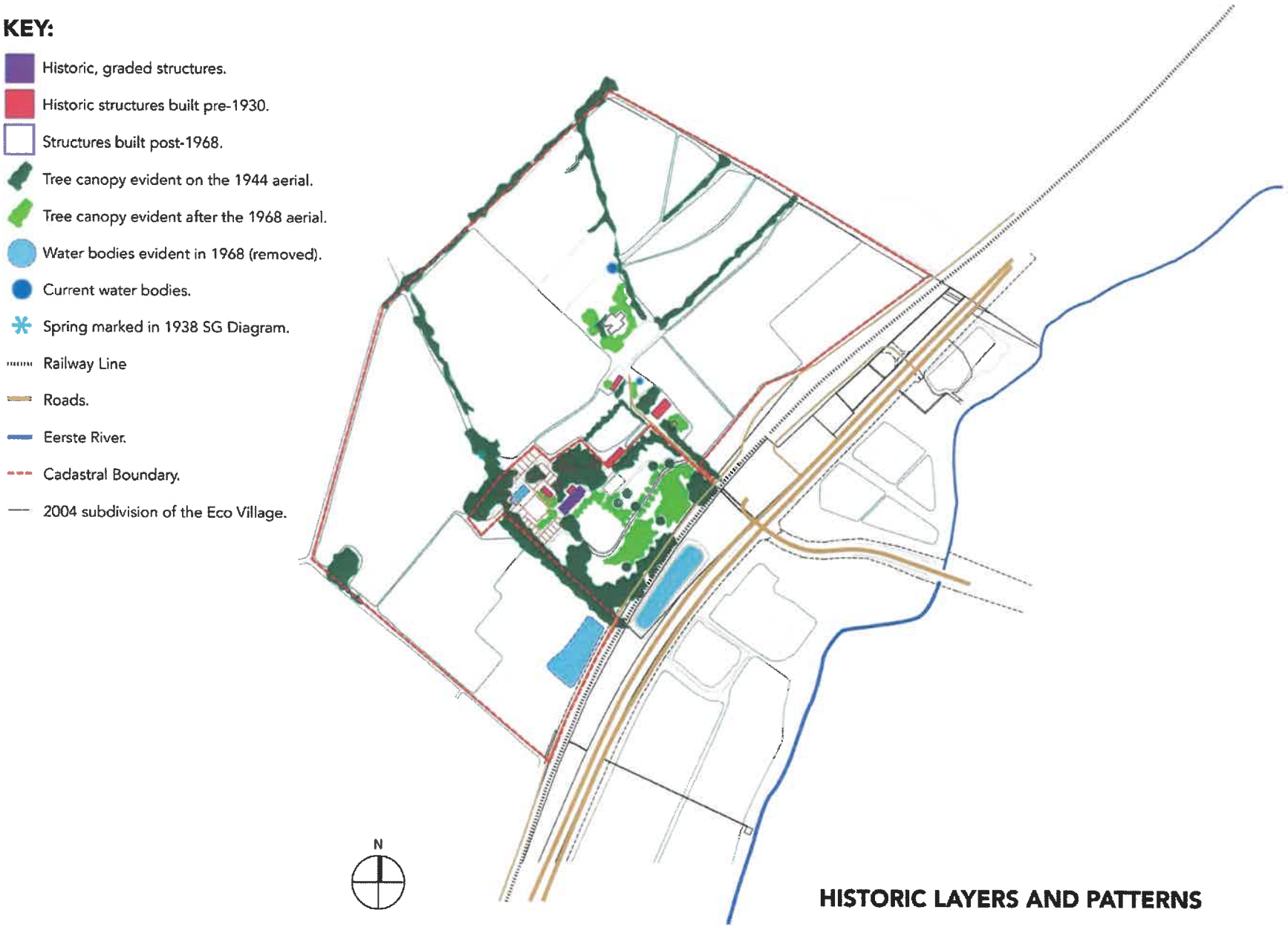


Figure 42: Distillation of key historic spatial patterns across the site (CLA report, Abrahamse, 2023

1029

4. ENVIRONMENTAL CONTEXT

The site and surrounding area is naturally covered in Swartland Granite Renosterveld and located in the West Coast Renosterveld Bioregion within the Fynbos biome. This vegetation unit is critically endangered with almost 80% already transformed due to prime quality of the land for agriculture and also urban sprawl. The grassland phases of this vegetation unit as well as the rocky outcrops are particularly rich in geophytes.

A non-perennial stream runs down across the site, and has been identified on historic maps (Figure 93), substantiating its significance. This stream ends in a natural seasonal wetland at the lower reaches of the site to the south west of the Lynedoch development. Historically this stream would have been one of the feeder tributaries to the perennial Jonkershoekrivier which runs parallel to the railway and R310 and becomes the historically significant Eertserivier further downstream.

5. IDENTIFICATION OF HERITAGE RESOURCES

5.1 Previous Impact Assessments Conducted

The area has previously been extensively assessed through Heritage and Archaeological Impact Assessments, resulting in a number of known heritage resources within this area. In general, this landscape is one of heritage significance with known resources from this area including historical archaeological resources, built structures of significance as well as Early, Middle and Later Stone Age resources.

Clift (2011) did an extensive HIA of the R310 Stellenbosch, where the heritage resources along Baden Powell Drive were identified and assessed.

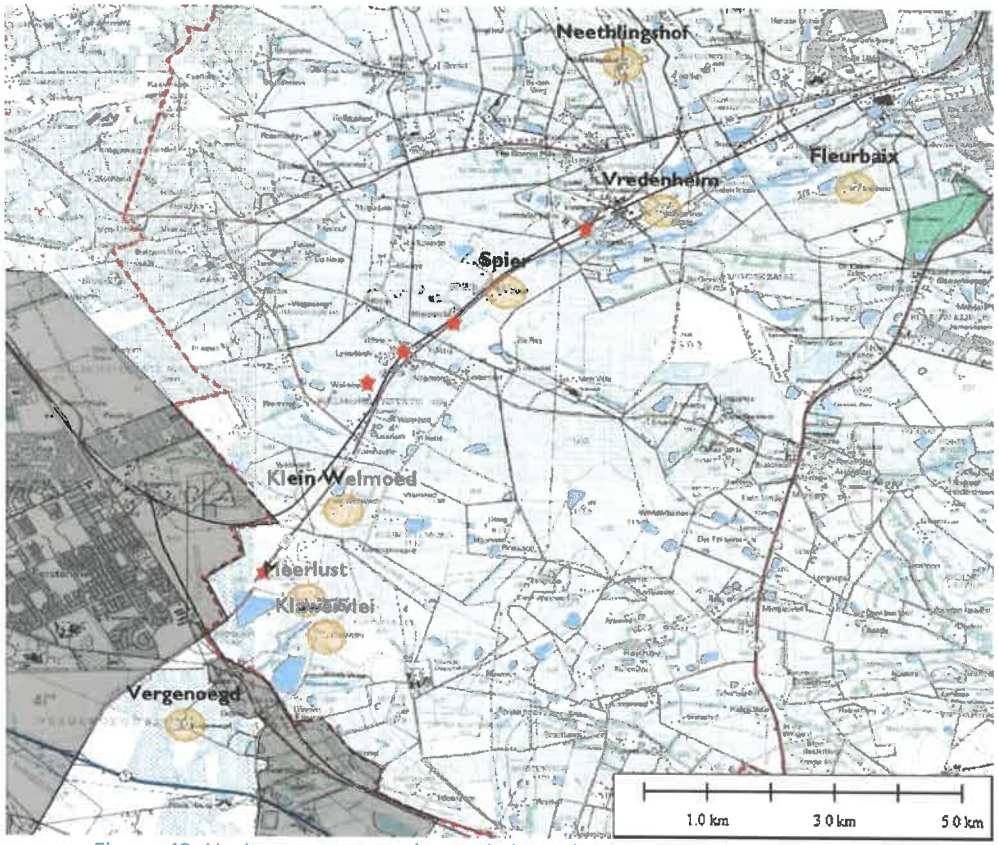


Figure 43: Heritage resources located along the R310 corridor (Clift, 2011)

Clift found that, The Eerste River valley cultural landscape is a continuing and evolving cultural landscape: multilayered and reflecting millennia of human occupation and centuries of endeavor. Clift proposed a IIIA or IIIB grading for the the Eerste River valley cultural landscape with significance in terms of its aesthetic, historical and architectural values.

1030

Table 1: Summary of heritage resources along R310 (Clift, 2011)

Heritage resource	Proposed Grading	Description/Comment
Cultural landscape:		
Eerste River/R310 corridor	Grade 3A/3B	For the most part a rural agricultural landscape; extremely vulnerable to unmanaged urban sprawl
Faure	Grade 3B	A small rural settlement associated with an Anglican Church (design attributed to Sophia Grey) and adjoining cemetery; historic association with the farm Gedult, later the Fox and Hounds Inn
Archaeology:		
Stone Age	Grade 3C	Occurrences are low and sparse; mostly in disturbed contexts
Built environment:		
Vergenoegd	Grade 3A	Well preserved (renovated) farmstead with intact surrounding farmlands; PHS, Set back from the R310
Spier	Grade 3B	Renovated historical core obscured by multitude of additions and add-ons; original werf set back from the R310. Historic furrow (late 19th/early 20th century) parallel to the road.
Meerlust	Grade 3A	Well preserved (renovated) farmstead with intact surrounding farmlands; werf complex includes a cemetery and the dovecot (PHS); present avenue of palms and oaks are modern; De Wijnlanden are visually intrusive
Klein Welmoed	Grade 3A	Well preserved, but uncelebrated historic farmstead; well setback from R310; gateposts suggest the alignment of earlier wagon route to the east of the present R310
Vredenheim	Grade 3A	Well preserved (renovated) farmstead; PHS; modern entry gates, set back from the R310
Vlottenburg/Van Ryn Distillery/	Grade 3B	Well preserved turn of the 20th century distillery; associated Brandy Museum; railway line separates complex from R310
Stellenbosch Hills Winery	Grade 3C	Representative of 20th century industrialisation of the wine industry; nature of the complex mitigates the impact of the road widening
Annandale cottages	Ungraded	Older than 60 years; cottages associated with single oak tree; both cottages occupied on a temporary basis by seasonal workers; Southern cottage to be demolished; northern cottage remains
Welmoed cottages	Ungraded	Older than 60 years; set back from R310 situated close to railway line

In the conclusion and recommendation for archaeological heritage resources, the Clift (2011) report notes that the incidence of archaeological material is mostly restricted to widely dispersed ESA and MSA artefacts, with occasional 19th century ceramics.

Further it notes that, "The only place where there might be a problem would be on the downslope of the inner track between Vlaeberg Road and Lynedoch Station. Since the archaeological material was exposed by water run-off, it is possible more material could lie immediately beneath the surface. It is recommended that work in this area be monitored by a professional archaeologist to verify and record the presence of additional archaeological material. It would appear that in the proposed road upgrade there will be very little damage to the prehistoric heritage of this area. It is recommended that should the inner track paralleling the R310 between Vlaeberg Road and Lynedoch be upgraded that an archaeologist monitor this section of the road once it is exposed."

Malan (2012) assessed Ptn 128 of Farm Welmoed Estate No 468, Stellenbosch for an HIA. Her assessment was focused on the Welmoed farm werf and buildings. In her assessment she supported the findings of Clift's (2011) heritage assessment and reiterated the significance of the R310 cultural landscape. Webley and Halkett's (2012) AIA prepared for the Malan HIA, found no evidence of any pre-colonial archaeological remains on site and some C18th historic structural remains.

Orton's (2014) HIA for the proposed upgrade to the R44 between Somerset West and Stellenbosch, indicated that the survey yielded low density scatters of ESA with very low significance and only a single historical artefact was found.

Deacon (1997) did an extensive arcaheological survey of De Zalze Golf Estate and noted the presence of Acheulian artefacts including cores, handaxes, cleavers and flakes that were not *in situ* and considered part of a widespread landscape scale artefact scatter. Further the report notes historic buildings of conservation-worthy status situated on the western part of the property.

Lavin's (2020) HIA for a proposed vineyard development on Rem Portion 10 of Farm 502, Stellenbosch (part of Spier Wine Estate) identified a small number of ESA and one MSA lithics, mostly concentrated on the northern portion of the site. All the sites were associated with soil test pits indicating that such tools are present below the surface among the orange/ yellow coloured clays and near surface gravel deposits. The source material is most likely cobbles derived from old river gravels or terraces. Further, Lavin's HIA identified the cultural landscape as significant, and taking from the SMHS, the elements of significance for this landscape are the

commonage, intact Renosterveld, the identified archaeological sites and the historic structures associated with early land grants and the relationship of all these elements within the Eerste River.

A full survey of the area was conducted for the Stellenbosch Municipal Heritage Survey (2018). The survey identified various heritage resources including archaeological, architectural, historical and cultural landscapes. The heritage resources identified in the survey have been included in the relevant sections of this HIA Phase 1 report.

5.2 Stellenbosch Heritage Surveys

A substantial amount of heritage identification, survey and inventory work has been conducted in the rural and urban areas of the Stellenbosch Municipality including the Stellenbosch Rural Area Plan (Postlethwayt 2016) and The Stellenbosch Municipal Heritage Survey - Phases 1 to 4 (SMHS, Jansen et al 2019). These reports provide detail on the evolution of the cultural landscape of Stellenbosch.

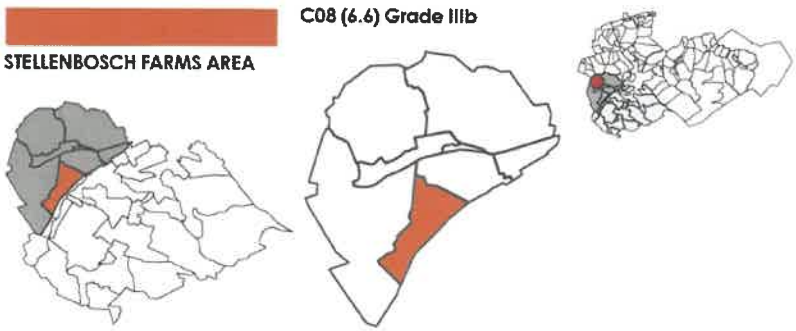
5.2.1 Stellenbosch Municipal Heritage Survey: Cultural Landscapes

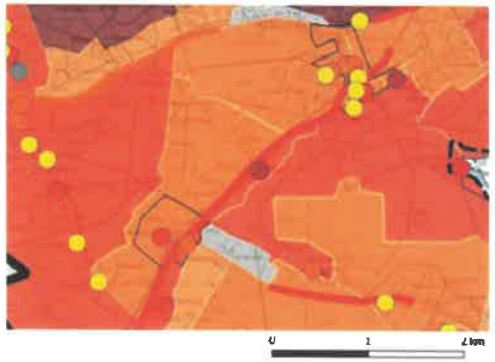
Landscape Area

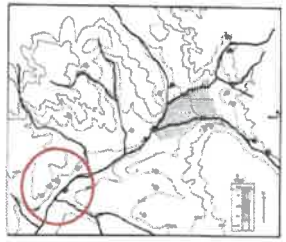
The Stellenbosch Municipal Heritage Survey (SMHS) used the geomorphology of the Stellenbosch area to identify areas of distinct landscape character. Based on this methodology, the area proposed for development falls within the Eerste River Valley Landscape. The SMHS then further notes that the character of these landscapes is made up of further distinct "character areas". According to the SMHS, the area proposed for development falls within the Eerste River Stellenbosch Farms Area, located between the rolling Bottelary Hills to the west and Baden Powell Drive to the east. In their description of this character area, Jansen et al (2019) note that the main structural element that determines the character of the area is the rolling hills with tree-rich hilltops.

Landscape Character

In the SMHS, the Eerste River Stellenbosch Farms area is further divided into distinct Landscape Character Units that have been assessed in terms of their heritage significance. The area proposed for development falls within the C08 Landscape Character Unit, which has been given a grading of IIIB. This Landscape Character Unit, and accompanying recommendations in terms of development criteria, are articulated in detail in the Landscape Unit Sheet in Appendix D. The SMHS described Landscape Unit C08 as follows:







ESA sites recorded (Seddon 1967)

C07 Fine grained scattered, yet ordered landscape

The Land unit features gradual south-east facing slopes with a single drainage line just off the northern boundary leading into the Eerste River. The contrast with the flat floodplains of the Eerste River elevates the scenic quality. It is visible from Baden Powell Drive as well as the Annandale road with expansive views back towards the Stellenbosch mountain range. Characteristically rural in character with a textured balance in its coloured patchwork of vineyards interlaced with vegetated edges and small pockets of settlement. Most of this pocket has high soil suitability for vineyards. The railway line forms the southern boundary to this land unit. Early Stone Age tools found were found on the slopes of this land unit, and a first freehold farm is found on a large stretch of the south-eastern boundary.

The Sustainability Institute's Eco Village (with school and wetland) is a good example of integration of mixed income and use. The hamlet is situated around the Drie Gewels Hotel, one of the finest examples of Cape Revival houses within the winelands. In the 1980's it hosted music concerts associated with the Voelvry movement (a genre of anti-apartheid Afrikaans music). The site has a degree of architectural, landmark, historical, artistic and contextual significance next to the R310. The Eco Village is situated in close proximity to Lynedoch railway station, which has a very invasive and bulky concrete pedestrian bridge over the road, and a giant strawberry is the landmark for a filling station and store.

The edge of the rolling hills adds value to the to the scenic route as one enters the Cape Winelands from the N2. Its typology is of a very fine grain with a scattered, yet ordered feel. Taking into account the history and associations of this landscape unit, any form of development especially needs to challenge the current tendencies (gated exclusion) and to pioneer an integrated society.



Lynedoch Eco Village

Figure 44: Stellenbosch Municipal Heritage Survey (2019): Information sheet on Landscape Unit C08

1033

Scenic value

The SMHS further assessed each Landscape Character Unit in relation to its scenic value. This Landscape Character Unit was determined to be of medium visibility due to its proximity to significant scenic routes including the R310 (Grade IIIA) and Annandale Road (Grade IIIA) and identified as a Landscape Unit of exceptional scenic quality with over 70% visibility coverage from Grade II scenic routes in the respective valleys. The Landscape Unit of the site is also identified as featuring a Green Transition Development Node Conservation System.

It is noted in the SMHS that, where a landscape unit with a coverage of 70% or more intersects with the Green Transition Conservation System, it heightens the importance of those landscape units for their open quality, and any development proposal should undergo a visual impact assessment.

Further, the general guidelines applicable to the foreground are also applicable to exceptional scenic landscapes in terms of their visibility:

The foreground views within the scenic route corridor is considered the most significant and therefore all scenic routes should have a 500m buffer on either side of the road where specific development guidelines apply. The principle is that nothing will be permitted that detracts from the existing scenic value of the Landscape Unit that is being traversed by the Scenic Route. Based on the significance of the Scenic Route (grade) and the significant character of the surrounding landscape, the following guidelines should be considered.

- Respect the landscape setting and gateway qualities of important scenic routes and mountain passes, particularly those with a wilderness or rural setting.
- Formally protect scenic routes of heritage significance through the provisions of the municipal zoning schemes (e.g. Scenic Overlay Zones and City of Cape Town's proclaimed scenic routes, such as Boyes Drive).
- Use by-laws to establish 500m visual buffer zones with setbacks and height restrictions along scenic routes.
- Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.
- New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road-related interventions affecting its sense of fit in the landscape must be avoided.
- Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as it detracts from the rural character of the Winelands.
- Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas not in keeping with wilderness mountain areas.
- Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.
- The natural character of the Fynbos vegetation in the public realm, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with overscaled entrance structures.
- Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before it can be considered (from the list of deviated land-use documented for the Stellenbosch winelands, see CMP document):
    - Farm stalls/restaurants
    - Nurseries/mixed use/garden centres/timber yards
    - Greenhouses, agricultural netting, chicken broilers/Strawberry fields
    - Subdivisions, gated communities, shopping centres, business parks
    - Large scale industrial structures
    - Open air markets

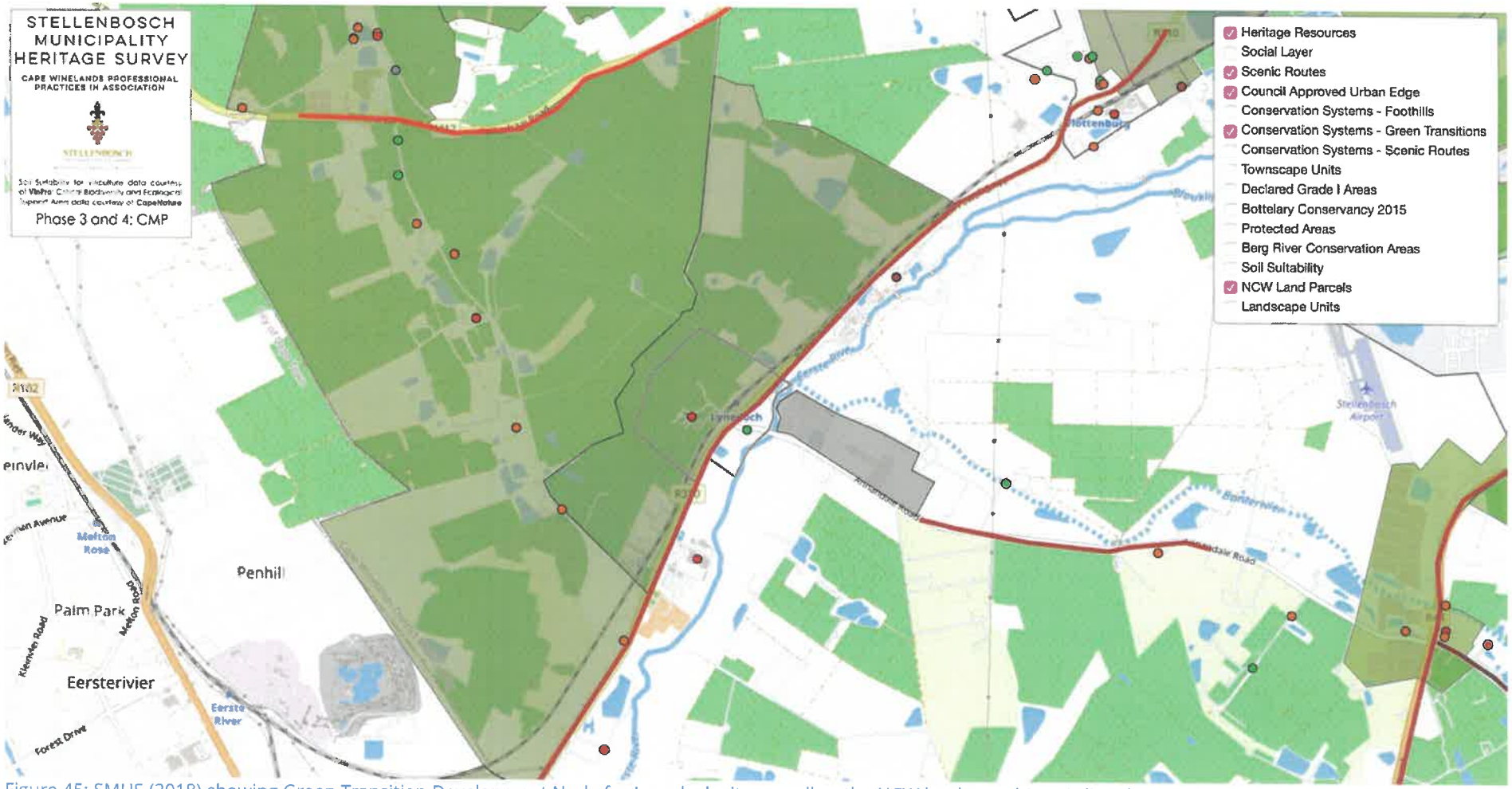


Figure 45: SMHS (2018) showing Green Transition Development Node for Lynedoch site as well as the NCW land parcel (grey) directly opposite the site adjacent to Annandale Rd.

1035

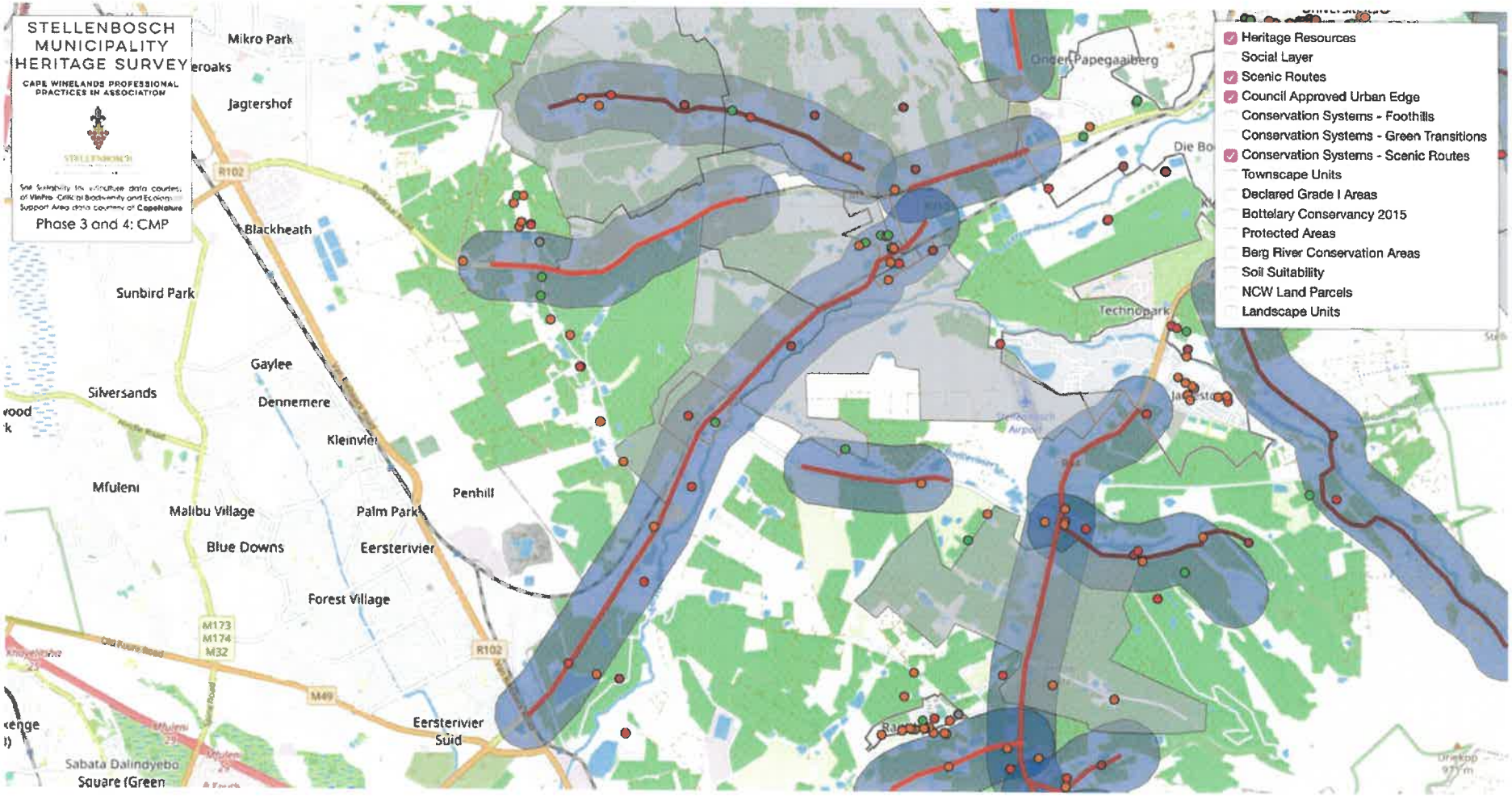


Figure 46: SMHS (2018) showing Scenic Routes Conservation System for Lynedoch site with 500m visual buffer zone for foreground views off R310.

1036

5.2.2. Stellenbosch Municipal Heritage Survey: Heritage Resources

The SMHS (2018) identified further specific heritage resources in the surrounding area of the proposed development site. These include,

Grade II
- Spier (II)

Grade IIIA:
- Welmoed (Appendix D)
- Drie Geuwels (Appendix D)
- 1569, Vlaeberg Road
- Annandale Scenic Route (Appendix D)

Grade IIIB:
- Polkadraai School Building
- Blue Gum Farm
- Mon Villa (Eureka)
- Polkadraai Road Scenic Route
- Annandale Church Building (Appendix D)

Grade IIIC:
- Farm on Vlaeberg Road
- Werf on Vlaeberg Road
- Wimbledon Shed
- Somerlust Farm
- Cottage, R310

Social
- Vlaeberg Houses

NCW
- Strawberry Farm on Annandale Road C20 (Appendix D)

SMHS information sheets on the heritage resources that have a direct impact on the study area are included in Appendices D and E.

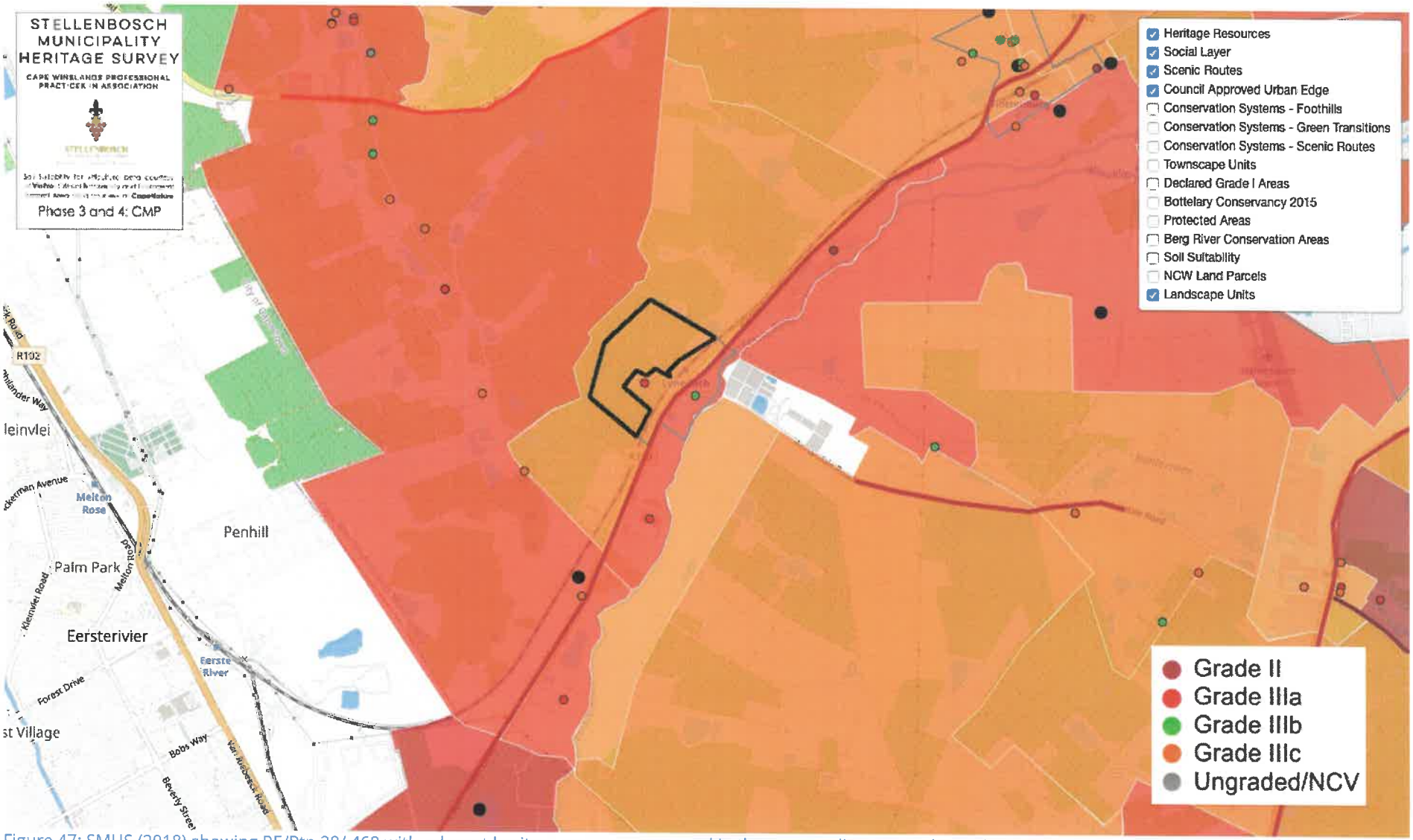


Figure 47: SMHS (2018) showing RE/Ptn 28/ 468 with relevant heritage resources mapped in the surrounding area ~3km radius (black dot = social).

1038

5.3. Summary of Specialist Findings

5.3.1 Archaeology

The inspection was conducted independently and on foot on 25 July 2023 by Emmylou Bailey. The seasonal rain and resultant flooding of the wetland areas as well as dense plant growth on the lower portions of the site adjacent to Lynedoch Road limited the accessibility of this area for foot survey, however this does not impact on the results of this report as no heritage resources were identified for this area that required access. Dense growth between the vineyards also limited archaeological visibility, but enough surface area was exposed to conduct an archaeological survey, especially since surveys of this area have been done previously.

The area proposed for the development has yielded some cultural remains but with varied value and preservation.

Previous archaeological surveys within the Eerste River floodplain have identified large numbers of Early Stone Age artefacts and as such the significance of the ESA within Stellenbosch is well established. The lithic scatter artefacts in the study area are typical of the transformed agricultural landscape of Stellenbosch and have limited value considering that they have been accumulated and modified to their current *ex situ* state. The anticipated negative impact of the proposed development on the archaeological resources is considered low due to the degraded and heavily transformed nature of the landscape from centuries of agricultural use.

The isolated historic ceramics are graded IIIC for their potential to add to the understanding of the Stellenbosch historic landscape context.

The historic structures are common for the Stellenbosch area and have been heavily altered over time, and do not represent any rare or significant heritage. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.

Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them.

It is the conclusion of the Archaeological Impact Assessment report that the proposed development, with recommendations, will not negatively impact on the archaeological heritage resources of the site and should be allowed to proceed.



Figure 48: Map of archaeological finds from foot survey conducted 25.7.23

1040

5.3.2 Palaeontology

The area proposed for development is underlain by sediments of zero (grey) to moderate (green) palaeontological sensitivity according to the SAHRIS Palaeosensitivity Map. Moderate sensitivity requires a desktop PIA study.
According to the desktop Palaeontology Impact Assessment (Bamford, 2023; Appendix B), "the proposed site lies on the non-fossiliferous granites of the Malmesbury Group and on moderately fossiliferous Quaternary sands and alluvium" and "Although sands do not preserve fossils because they are coarse-grained, well-aerated and transported (for preservation of fossils a stable, anoxic environment is required (Cohen, 1995), the sands might have transported fossils from the source area. In this case, only robust yet fragmentary fossils would be transported so their primary context would be lost. Such fossils are of limited interest to science." And, to date, "No fossils have been reported from the site. Nonetheless, a Fossil Chance Find Protocol should be added to the EMPr. Based on this information it is recommended that no further palaeontological impact assessment is required unless fossils are found by the contractor, environmental officer or other designated responsible person once excavations, drilling or mining activities have commenced. Since the impact will be low, as far as the palaeontology is concerned, the project should be authorised."



Figure 49: SAHRIS Palaeosensitivity Map showing zero (grey) to moderate (green) sensitivity for RE/Ptn 28/ 468.

5.3.3. Cultural Landscape and Visual Impact Assessment

The Cultural Landscape Study and associated Visual Study of the site have revealed a context and site of medium heritage significance but with very high scenic qualities, particularly in providing an agricultural backdrop to other heritage sites within the vicinity. It follows that, to preserve heritage significance (especially tangible heritage significance associated with physical elements) these fundamental elements must be identified, protected, and enhanced in the course of the future development and densification of the site.

Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node. The site has consistently been included within the urban edge, in both heritage surveys and planning documentation.

The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley.

1041

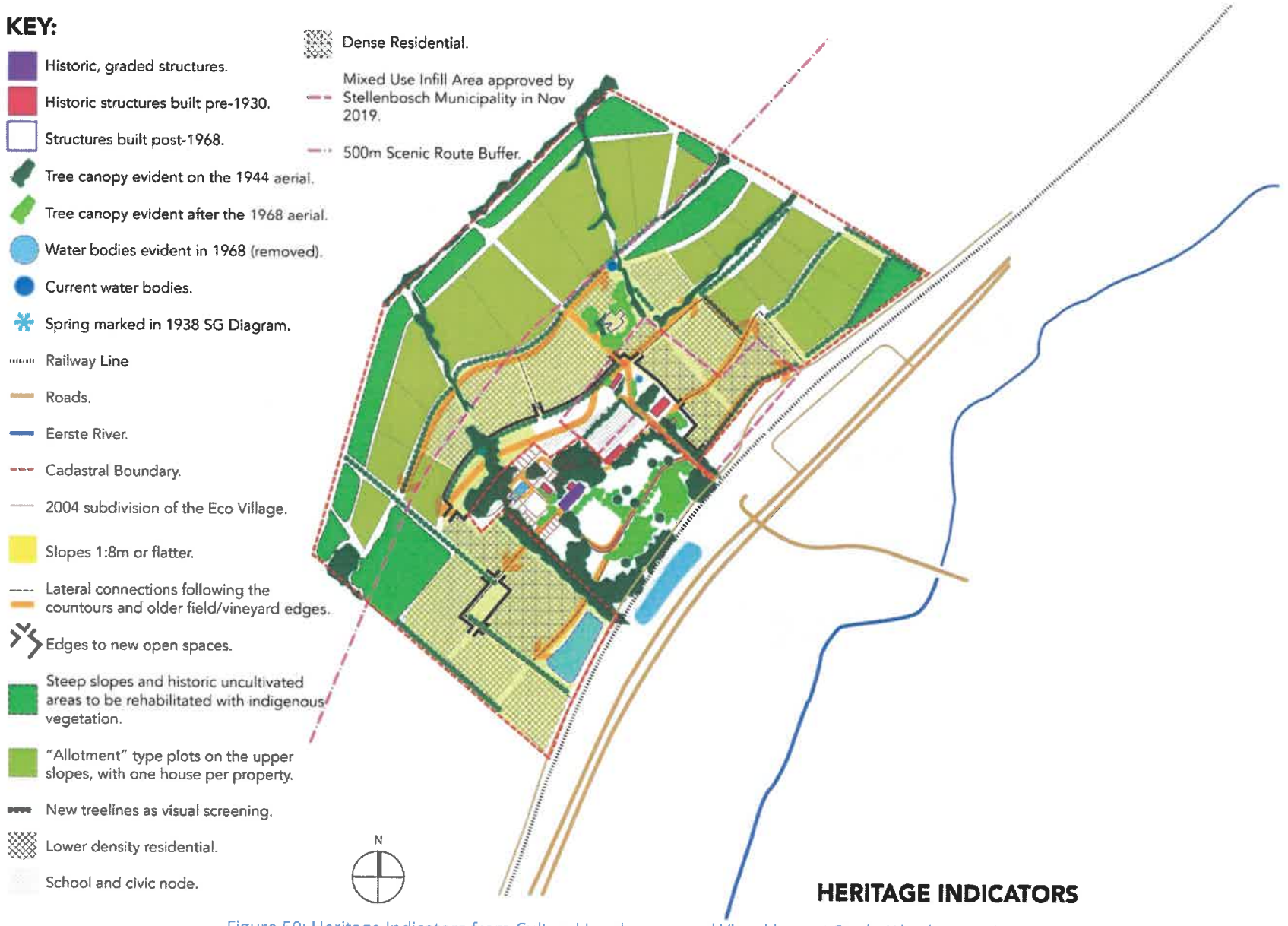


Figure 50: Heritage Indicators from Cultural Landscapes and Visual Impact Study (Abrahamse, 2023)

1042

5.3.4. Structures within study area

A few altered historic and modern structures are clustered around the central historic path that runs across RE/Ptn28 Farm 468. The 1920s SG Diagram shows structures in the location of the Drie Guewels Hotel as well as the barn (Structure G) (Figure 93). It is likely that the historic structures on RE/ Ptn 28/ 468 as well as the historic buildings within Lynedoch precinct were constructed and altered in the period of Kramer's ownership of the property as most are indicated on the 1930 SG Diagram (Figure 33). None of the structures on RE/Ptn28/468 were identified in the Stellenbosch Municipal Heritage Survey (2018).

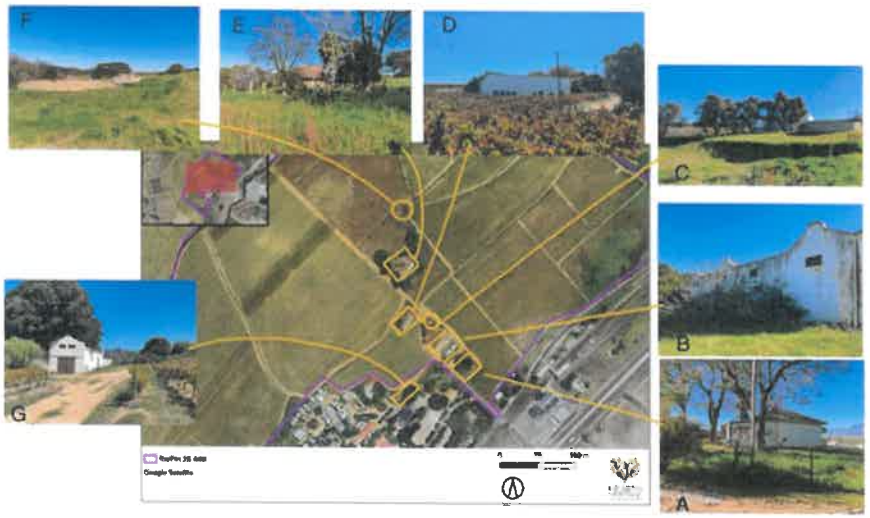


Figure 51: Layout of structures on RE/ Ptn28, Farm 468.

A

- Hipped roof residential building built c. 1955-1977
- Currently occupied.
- Possibly >60yrs
- No cultural material was found relative to the structure.
- NCW



Figure 52: South-west façade of structure at A.



Figure 53: Lower vineyards looking north to structures at A (left) and B (right).

1043

B

- Wine cellar built between 1920-1930. The building has been altered and additions made over time to accommodate function. Currently the building is in a dilapidated state and not maintained well. No cultural material was found relative to the structure.
- The Drie Geuwels Hotel (within Lynedoch precinct) and barn like structures B and G create a linear build typology along the contour and were likely all built by Kramer.
- Suggested Grade IIIB due to its relationship to Drie Guewels.
-





Figure 54: South-east elevation of structure at B (left) and interior (right)





Figure 55: Interior of structure at B (left) and north-west elevation of B with ruined

C

- Terrace with a concrete dam/ reservoir
- No cultural material was found relative to the structure.
- >60yrs
- NCW



Figure 56: Terrace with reservoir at C and structure at D behind the treeline.



Figure 57: Vineyards looking north-east to Structures B (right) and D (left)

1044

D

- Double volume barn like structure with wooden internal rafters and floor boards for second floor. The building is in a dilapidated state and is currently being used to store animal feed. No cultural material was found relative to the structure.
- >60yrs
- NCW



Figure 58: Structure at D south east elevation (left) and south west elevation (right) with structure at G in the background.



Figure 59: Interior of structure at D showing wooden ceiling (left) and north west façade of building showing significant terrace cutting (right).

E

- Hipped roof face brick residential building built after 1977 located on terraced landscape.
- Currently occupied.
- No cultural material was found relative to the structure.
- NCW



Figure 60: North-east elevation of structure at D. Remnant of landscapes garden evident.

F

- Water management infrastructure including cement reservoir and modern Jojo tanks.
- Originally marked as "windmill" on 1930 SG Diagram.
- No cultural material was found relative to the structure.
- NCW



Figure 61: Water management infrastructure at F.

1045

G

- >100yrs
- Barn style structure built before 1920 and related to Drie Geuwels hotel structure. The building has been altered and additions made over time to accommodate function. No cultural material was found relative to the structure.
- The Drie Geuwels Hotel (within Lynedoch precinct) and barn like structures B and G create a linear build typology along the contour and were likely all built by Kramer.
- Suggested Grade IIIC due to its relationship to Drie Guewels.



Figure 62: North-east elevation of structure at G with Lynedoch Ecovillage residential buildings behind.



Figure 63: Barn like structures at B (left) and G (right) orientated along the contour.

1046

6. RESULTS OF PUBLIC CONSULTATION

HWC requires that any relevant registered conservation body, as well as the local authority, be included in the public participation process for this project. According to the HWC website (accessed July 2023), there are 2 registered conservation bodies for this area, Stellenbosch Interest Group and the Stellenbosch Heritage Foundation. The Stellenbosch Municipality. and Sustainability Institute have also been consulted for comment. In addition, please note that this HIA will form part of the public consultation required in terms of NEMA. The public participation process will be managed by the environmental assessment practitioner.

Comments from the interested and affected parties are included in Appendix F.

7. HERITAGE DESIGN INDICATORS AND GUIDELINES

Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node. The analysis of the site has given rise to heritage-based indicators to development. The assessors believe these must be stringently followed to ensure that the heritage significance of the surrounds is preserved and enhanced, but which they believe are not so onerous as to completely limit the development and densification of the site.

1. The landmark nature of the old hotel complex must be enhanced and responded to as a prominent civic node within the wider context.
2. The historic farm barn structures and small "managers house" should be retained and adaptively re-used, ideally for educational purposes.
3. All existing areas of Fynbos and/or natural vegetation must be retained and reinforced on the site.
4. The spring course identified on the c1938 SG Diagram should be explored on site. In addition, the dam along the roadway to the south-east appears in the 1968 aerial photograph, and this area retains a wetland character that should be preserved as an asset of the site.
5. The mature trees on and around the site are higher-order landmark elements within this environment. They help to structure the space and provide some visual screening. Some trees are mature, older than 60 years, and should be retained. A plan for the staggering or replacement of mature planting must be put in place. Existing treelines should be reinforced and extended to screen the development.
6. Additional planning should be introduced on the site to provide additional visual screening and absorption within the foreground environment. The windbreaks in the wider context set up a landscape structure that can be extended into the site. These also create a potential for the extension of a structure for settlement onto the site, that responds to existing landscape elements and patterns.
7. In particular, the southern slopes are visually exposed from the east, but gently sloping and able to be easily connected to the existing village. Planting as visual screening must be used extensively here.
8. The railway station is an important potential civic asset and should be acknowledged as a higher-order element in the proposed development of the site.
9. Street Grid: The street grid should follow the contour and reinterpret the existing pattern of vineyards as much as possible. Although curvilinear streets are generally foreign to the Winelands, they have been used at Lynedoch and are key to the character of that place, where settlement is secondary to the natural, contoured landscape. The street grid should be as efficient and minimal as possible, with only the main routes being paved.
10. New buildings must follow the contour, as the existing buildings within the Lynedoch node currently do.
11. Verges/Pavements: It is preferred that verges and pavements are grassed, hard-packed soil or brick paving, and planted with trees. Brickwork and laterite surfacing should be preferred to tarmac throughout.
12. Boundary Treatments: High and solid walls are not permitted, as well

as pre-cast concrete fencing, exposed blockwork, and facebrick walling. Historic boundary elements such as fences and hedges must be preserved and extended as far as possible.

13. Stoeps: Street-facing stoeps are a common feature of the buildings in the area, often with planted gardens in front. New residential development should include these elements.
14. Heights: New buildings must respond to and interpret the character-giving aspects of the site. In this environment, new buildings should predominantly be no more than double storey.
15. Materials, Colour and Architectural Detail: Building materials should be compatible with traditional materials in terms of scale, colour and texture. Historical architectural features that copy an earlier style (or introduce a foreign style) should be avoided. Rather, the underpinning principle should be that new buildings must be sympathetic to the architectural character of the area but should also be of their own time. New buildings should be of a walled architectural type. New structures should be painted a muted colour and be rectilinear in form. Corrugated roofs should be darker colours.
16. Scenic Route Restrictions within 500m of the roadway: The foreground views within the scenic route corridor is considered the most significant, and therefore all scenic routes should have a 500m buffer on either side of the road where specific development guidelines apply. The principle is that nothing will be permitted that detracts from the existing scenic value of the Landscape Unit that is being traversed by the Scenic Route. Based on the significance of the Scenic Route (its grade) and the significant character of the surrounding landscape, the following guidelines should be considered.

Foreground guidelines:

a. Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.
b. New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road-related interventions affecting its sense of fit in the landscape must be avoided.
c. Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as they detract from the rural character of the Winelands.
d. Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas.
e. Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.
f. The natural character of Fynbos vegetation, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with over-scaled entrance structures.
g. Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before they can be considered (from the list of deviated land-use documented for the Stellenbosch winelands, see CMP document):
    - Farm stalls/restaurants
    - Nurseries/mixed use/garden centres/timber yards
    - Greenhouses, agricultural netting, chicken broilers/Strawberry fields
    - Subdivisions, gated communities, shopping centres, business parks
    - Large scale industrial structures
    - Open Air Markets

It follows that the above forms of development should be avoided within the 500m buffer from the scenic route.

Background guidelines:

h. Avoid development on rocky outcrops or ridgelines, because of their high visibility and the visual sensitivity of the skyline.

i. Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines and hillcrests. Retain the integrity of the distinctive and predominantly agricultural landscape character.
j. Avoid the construction of over-scaled private dwellings and other structures in locations of high visual significance, and on visually-exposed promontories, ridges and ridgelines. Preferred locations are sites that have already been settled (at the Lynedoch node), or sites "tucked into" the landscape.
k. Respect traditional settlement patterns. This includes the backdrop of the natural landscape against which settlement is sites, as well as its spatial structure.
l. Promote urban densification within the historic node to protect the rural landscape as the main communal asset.
m. New interventions within settlements must respect the layout, scale, massing, hierarchy, alignments, access, landscaping and setting of the existing settlement pattern.
n. Prevent the gentrification of rural settlements through "lifestyle rural estates". These uneconomic plots fundamentally erode the agricultural character of the landscape. Rather, maintain larger unified areas of farming to protect larger landscape continuums that protect a unified scenic character.
o. The development of security estates and gated communities must be prevented. Encourage development that follows the pattern of, and builds on the example of, the Lynedoch eco-village. Here, a model for integrated communities with different income levels has been successfully applied and tested.

8. CONCLUSION AND RECOMMENDATIONS

8.1 Archaeological recommendations

1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Guewels and Structures at B and G should be retained in form in any future development.
5. No development within 20m of the concrete boundary marker at LYN149.
6. Archaeological monitoring of all development within 50m of the structures B and G and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them.
9. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
10. The HWC Fossil Finds Protocol is to be implemented.
11. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685)..

It is the conclusion of the Archaeological Impact Assessment report that the proposed development, with recommendations, will not negatively impact on the archaeological heritage resources of the site and should be allowed to proceed.

8.2 Palaeontological recommendations

Based on experience and the lack of any previously recorded fossils from the area, it is extremely unlikely that any fossils would be preserved in the overlying soils of the Quaternary. There is a very small chance that transported and fragmentary fossils may occur in the sands and alluvium a Fossil Chance Find Protocol should be added to the EMPr. If fossils are found by the environmental officer, or other responsible person once excavations for foundations and infrastructure have commenced then they should be rescued, Heritage Western Cape notified and if necessary a palaeontologist called to assess and collect a representative sample. The impact on the palaeontological heritage would be low, as far as the palaeontology is concerned, so the project should be authorised.

8.3 Visual and Cultural Landscape recommendations

It is recommended that the heritage-based design indicators be integrated into the design proposal as far as possible, to achieve the "education focused... compact, pedestrian oriented, child friendly community" that was envisioned for this site in the 2019 Stellenbosch Municipality Spatial Development Framework.

A list of heritage design indicators and guidelines can be found in Section 7. HERITAGE DESIGN INDICATORS AND GUIDELINES of this HIA (Lynedoch Cultural Landscape and Visual Impact Study, by Abrahamse, 2023 (Appendix C).

1050

8.4 Conclusion

It is the finding of this HIA report that an appropriate residential and educational development that considers the recommendations, heritage indicators and guidelines contained in this report, will benefit the area and uplift the R310 scenic drive. The site has been consistently included within the urban edge, in both heritage surveys and planning documentation and sensitive and appropriate development will encourage local economy without further damage to the rural aesthetic of the cultural landscape. The success of the Sustainability Institute's model should be taken as guidance and a village node, with similar aesthetic and impact should be encouraged and will improve the experience of this historically and scenically significant cultural landscape.

1051

10. BIBLIOGRAPHY

- Bailey, E. 2020. AIA Donkerhoek, RE Far, 956, Simondium, Drakenstein.
- Boeseken, A. J. 1948. *Geskiedenis-Atlas vir Suid-Afrika*. Kaapstad: Nasionale Pers.
- Clift, H. 2011. HIA: Upgrade of R310 (MR168 and TR2/1) and Quarterlink on TR2/1
- Deacon, H.J. and Goosen, R.J. 1997. Phase 1 Archaeological investigation De Zalze Golf and Agricultural Estate. Report prepared for De Zalze Development (Pty) Ltd. Department of Archaeology, University of Stellenbosch.
- Fransen, H. 2004. *The Old Buildings of the Cape*. Cape Town: Jonathan Ball.
- Goodwin, A.J.H. & Van Riet Lowe, C. 1929. The Stone Age Cultures of South Africa. Annals of the South African Museum. 27.
- Guelke, L. 1987. The Southwestern Cape Colony 1657–1750, Freehold Land Grants. *Department of Geography Publication Series, Occasional Paper No.5*, University of Waterloo, Canada.
- Harris, S. 2000. Who's Where in Cape Architecture. VASSA.
- Kaplan, 2018. Archaeological Impact Assessment, proposed new municipal cemetery Louw's Bos North and Louw's Bos South, Remainder Farm 502, Stellenbosch, Western Cape. Report prepared for CKR Rumboll & Partners. ACRM, Cape Town
- Kaplan, J. 2015a. Kaplan, J. 2015. Heritage Impact Assessment, proposed, Plankenbrug Sewer Outfall Pipeline, Stellenbosch. Report prepared for Withers Environmental Consultants. ACRM Cape Town
- Kaplan, J. 2015b. Archaeological Impact Assessment, the proposed Vlottenburg Settlement near Stellenbosch. Report prepared for Withers Environmental Consultants. ACRM Cape Town
- Kaplan, J. 2012. Heritage Impact Assessment, the proposed Adam Tas Anaerobic Waste Water Treatment Facility on Erf 2684, Stellenbosch. Report prepared for Resource Management Services. ACRM Cape Town
- Kaplan, J. 2010. Archaeological Impact Assessment proposed establishment of a new cemetery on the Onder Papagaaiberg (Farm 183) Stellenbosch, Western Cape. Report prepared for Cape Lowlands Environmental Services. ACRM Riebeek West
- Kaplan, J. 2009. Archaeological Impact Assessment De Zalze Winelands Golf Estate, Southern Extension. Erf 4 de Zalze and Portion 10 of Farm 502 Stellenbosch. Report prepared for DJ Environmental Consultants. ACRM Riebeek West
- Kaplan, J. 2006. Archaeological Heritage Impact Assessment pre-feasibility study Faure Farms Faure (Helderberg). Report prepared for Chand Environmental Consultants. ACRM Riebeek West.
- Kaplan, J. 2005. Archaeological report Croyden Olive Estate. Report prepared for Ecosense Consulting Environmentalists and Ecologists. ACRM Riebeek West
- Kaplan, J. 2004. Archaeological scoping for the proposed Croyden Vineyard Estate Farm 654 Croyden. Report prepared for Ecosense Consulting Environmentalists and Ecologists. ACRM Riebeek West
- Kaplan, J. 2002. Phase 1 Archaeological Impact Assessment proposed development De Wijnlanden Residential Estate. Report prepared for Greenfield Consultants. ACRM Riebeek West
- Lavin, J. 2019/ 2020. HIA for Proposed vineyard development on Rem Ptn 10 Farm 502, Stellenbosch.
- Malan, A. 2018. "An Archaeological , Archival, Oral and spatial History" compiled for the Stellenbosch Heritage Survey and Management Plan.
- Malan, L. and Albertyn, E. 2012. HIA: Ptn 128 of the Farm Welmoed Estate No 468. Stellenbosch.
- Péringuey, L. 1902. Stone Implements from Paarl and Stellenbosch. Transactions of the South African Philosophical Society 11(4).
- Péringuey, L. 1911. The Stone Ages of South Africa as represented in the collection of the South African Museum. Annals of the South African Museum 8:180-201
- Pinto, H., Smuts, K. & Hart, T. nd. Archaeological Impact Assessment of Historic Wine Cellar, Solms Delta Farm 1460, Groot Drakenstein. Report for Prof. Mark Solms.
- Randle, T. 2014. Heritage Significance of Farm 461 (Spier), Stellenbosch Division. Report for Spier Estate.
- Randle, T. 2016. Draft Scoping Report for Heritage Inventory of tangible resources in the Stellenbosch Municipality. Report for Cape Winelands Professional Practices in Association (Pty) Ltd.

- Seddon, D. 1966. Some Early Stone Age surface sites around Stellenbosch, S.W. Cape. South African Archaeological Bulletin 22:57-59.
- Smuts, K. 2012. Report on research excavation of the stables building at Solms Delta Farm, Groot Drakenstein, Western Cape. Report for Heritage Western Cape.
- Smuts, K. 2012. An archaeology of the eighteenth and nineteenth century Cape wine economy from the perspective of Solms Delta and Babylonstoren. MPhil., Archaeology Department, University of Cape Town.
- Webley, L. and Halkett, D. 2012. AIA for Ptn 128 of the Farm Welmoed Estate No. 468, Stellenbosch.
- Vos, H. 1998. Welmoed Farm, Stellenbosch: Investigation of the C19th graveyard of the Van der Bijl family.

WEB RESOURCES

- https://www.sustainabilityinstitute.net/lynedoch-valley/
- https://www.stellenboschheritage.co.za/stellenbosch-resources/stellenbosch-heritage/graded-stellenbosch-heritage

MAPPING

- Leonard Guelke's 1987 map of "The Southwestern Cape Colony, 1657 - 1750, Freehold Grants", Department of Geography, University of Waterloo.
- Topocadastral imagery from the National Geo-Spatial Information Department, Mowbray. Surveyor General's 1900 Divisional Map of Stellenbosch, National Geo- Spatial Information Department, Mowbray.
- Surveyor General's map of The South Western Districts: Sheets 1 & 13, Cape and Malmesbury (1880 - 1900), National Geo-Spatial Information Department, Mowbray.
- Aerial photography for the area, National Geo-Spatial Information Department, Mowbray.
- Cape Farm Mapper
- Google Earth

APPENDIX A: ARCHAEOLOGICAL IMPACT ASSESSMENT

1054

ARCHAEOLOGICAL IMPACT ASSESSMENT

RE/ PORTION 28, WELMOED FARM 468, STELLENBOSCH

HWC CASE REFERENCE: HWC23040509AM0411

August 2023

Prepared by

HEARTH HERITAGE
conversations about conservation

Emmylou Rabe Bailey
Disakloof Farm
Hout Bay, 7806

Submitted to
Virdus Works (Pty) Ltd
77 Buitekring, Dalsig,
Stellenbosch
7600

1055

EXECUTIVE SUMMARY

Site name

RE/ Ptn 28 of historic farm Welmoed 468, Stellenbosch

Site description

RE/Ptn 28 of historic farm Welmoed 468, Stellenbosch (45,4ha), is agricultural zoned land under old vineyards and rested lands surrounding Lynedoch Eco-Village and the Sustainability Institute, adjacent and to the west of the R310 Baden Powell scenic route and the railway line.

Site location

Off Lynedoch Road, Stellenbosch: S -33.981101° E 18.768424

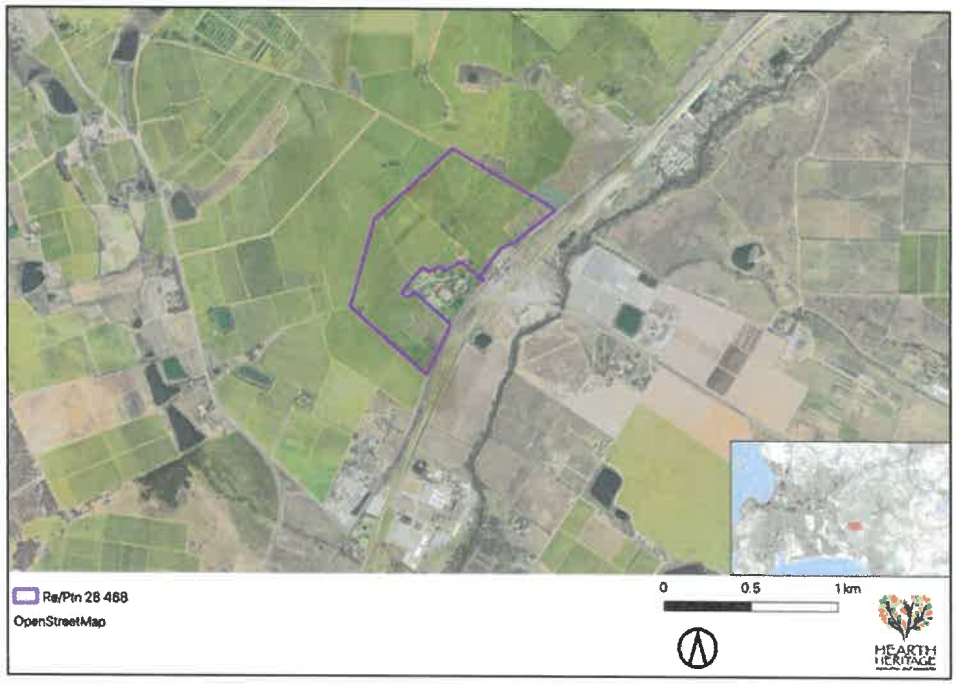


Figure 64: RE/Ptn 28 Farm Welmoed 468 Locality

The area proposed for the development has yielded some cultural remains but with varied value and preservation.

Previous archaeological surveys within the Eerste River floodplain have identified large numbers of Early Stone Age artefacts and as such the significance of the ESA within Stellenbosch is well established. The lithic scatter artefacts in the study area are typical of the transformed agricultural landscape of Stellenbosch and have limited value considering that they have been accumulated and modified to their current *ex situ* state. The anticipated negative impact of the proposed development on the archaeological resources is considered low due to the degraded and heavily transformed nature of the landscape from centuries of agricultural use.

The isolated historic ceramics are graded IIIC for their potential to add to the understanding of the Stellenbosch historic landscape context.

The historic structures are common for the Stellenbosch area and have been heavily altered over time, and do not represent any rare or significant heritage. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.

Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them

It is the conclusion of this Archaeological Impact Assessment report that the proposed development, with recommendations, will not negatively impact on the archaeological heritage resources of the site and should be allowed to proceed.

RECOMMENDATIONS

1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Guewels and Structures at B and G should be retained in form in any future development.
5. No development within 20m of the concrete boundary marker at LYN149.
6. Archaeological monitoring of all development within 50m of the structures B and G and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them.
9. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
10. The HWC Fossil Finds Protocol is to be implemented.
11. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685).

SHORT CV OF SPECIALIST and DECLARATION OF INDEPENDENCE

Emmylou Bailey, director of Hearth Heritage consultancy (est 2009), has over 15 years of experience in the heritage field, in the public and private sectors. Emmylou holds an MA in Archaeology and Heritage Conservation from the University of Leicester, UK (2008), specialising in the assessment, conservation and management of archaeological heritage resources and cultural landscapes. Her BA(Hons) in Environmental Science and Archaeology was interdisciplinary research which focused on heritage assessment, conservation and management of the Luyolo Cultural Landscape in Simonstown, Cape Town (UCT, 2002). Emmylou is an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners (APHP) and registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist. She is an Expert Member on the ICOMOS International Committees for Cultural Landscapes (ISCCL) and Archaeological Heritage Management (ICAHM).

I, Emmylou Bailey, hereby declare that I act as an independent specialist in this assessment and that I do not and will not have any financial interest in the undertaking of the proposed activity, other than remuneration for my work performed according to the National Heritage Resources Act (25 of 1999) and/ or NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act. I have disclosed, to the applicant any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document in terms of NEMA, EIA regs (2010) and/ or NHRA (25 of 1999).



E Bailey
August 2023

CONTENTS

EXECUTIVE SUMMARY ii
Site name ii
Site description ii
Site location ii
RECOMMENDATIONS iii

SHORT CV OF SPECIALIST and DECLARATION OF INDEPENDENCE ii

CONTENTS iii

LIST OF FIGURES iii

LIST OF TABLES v

1. INTRODUCTION 1
1.1 Site name 1
1.2 Site description 1
1.3 Site location 1
1.4 Development proposal 1
1.5 Description of site and surrounds 4

2. METHODOLOGY 10
2.1 Purpose of archaeological study 10
2.2 Methodology 10
2.3 Limitations and assumptions 10

3. DESKTOP STUDY 11
3.1 Previous Impact Assessments 11
3.2 Archaeological context 12
3.2 Historical context 14
3.3 Site history 17

4. IDENTIFICATION OF HERITAGE RESOURCES 28
4.1 Archaeological background 28
4.2 Field Assessment 28
4.2.1 Agricultural land 28
4.2.2 Structures 30
4.2.3 Archaeological Resources 34
4.3 Selected photographic record of artefact observations 38

6. CONCLUSION 40

7. RECOMMENDATIONS 40

8. BIBLIOGRAPHY 41

LIST OF FIGURES

Figure 1: RE/Ptn 28 Farm Welmoed 468 Locality ii
Figure 2: RE/Ptn 28 Farm Welmoed 468 Locality 1
Figure 3: RE/Ptn 28/ 468 Locality. 2
Figure 4:Development Proposal for RE/Ptn28 Farm Welmoed 468, Stellenbosch 3
Figure 5: Aerial image showing study area RE/Ptn28 468 4
Figure 6: Aerial image of study area indicating layout of structures on site 5
Figure 7: View looking north to site from R310 (Baden Powell) with Lynedoch Eco-Village roofscape in midground. 6
Figure 8: View towards site from Baden Powell Annandale intersection looking north west with Zetler's service station in foreground. 6
Figure 9: View towards site from R310 looking west 7
Figure 10: Structures >60yrs not identified in Stellenbosch Heritage Survey (2016): Left = structure C, right = structures B in foreground and G in background. 7
Figure 11: View of site from westernmost corner looking north-east, east and south-east with Lynedoch village in the centre surrounded by vineyards and Helderberg in the background 8
Figure 12:View of site from northernmost corner looking south-east towards the Helderberg and Zetlers farm, south and south –west to Macassar. 8
Figure 13: View of site from easternmost corner looking south-west along Lynedoch Road, west and north-west. 9
Figure 14: Views from R310, Baden Powell Dr and Lynedoch Rd, of railway infrastructure adjacent to south-east boundary of the site. 9
Figure 15: Heritage resources located along the R310 corridor (Clift, 2011). 11

Figure 16: Example of type of handaxe recovered by Peringuey (1911) from Bosman's Crossing.....13
Figure 17: Seddon (1967) ESA sites in the Stellenbosch area with ~ RE/Ptn28/468 (purple).....13
Figure 17: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) with inset showing Welmoed and the C17th historic route that is now R31015
Figure 18: Cape Colony c.1700 (UCT Digital Archive).....16
Figure 19: Development of the Stellenbosch cultural landscape 1657 to 1750 (Todeschini et al, 2018).....16
Figure 20: Cape Quitrent Grants Map, 1880 with ~RE/Ptn28/468 (purple).....16
Figure 21: c.1690 schematic map of early land grants, with Welmoed on the far left (Cape Archives M1/ 273).....17
Figure 22: Guelke map (1987) of early freehold grants at the Cape showing farm Welmoed, 1690 (yellow) and the historic route of the R310/ Baden Powell Dr (green).....17
Figure 23: 1902 Divisional map showing approximate location of RE/Ptn28/ 468.....17
Figure 24: Excerpt of Brink map 1892 showing Welmoed. No buildings are identified on RE/ Ptn28.....18
Figure 25: Aerial photo of Lynedoch before renovation by Sustainability Institute taken c. 1977.....19
Figure 26: Drie Geuwels Hotel circa 1999.....19
Figure 27: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) showing Welmoed and the C17th historic route that is now R310.....19
Figure 28: 1920 SG Diagram of Farm 468, Stellenbosch, with insert showing close up of RE/Ptn 28/ 468 structures.....21
Figure 29: 1920 SG Diagram with RE/Ptn28/ 468 in purple – two historic houses are noted in the area of Drie Geuwels Hotel and the historic barn. The historic entrance road from the R310 is evident as is the non-perennial stream running down through RE/Ptn28/ 468. Both Baden Powell and Annandale Roads are evident.....22
Figure 30: 1930 SG Diagram for RE/Ptn 28/ 468.....23
Figure 31: 1930 SG Diagram of Welmoed farm over Google aerial image showing ~ RE/Ptn 28/ 468 in purple. The Drie Geuwels and two historic buildings (B and G) are noted as is Lynedoch Station along the railway and the footpath running through RE/Ptn 28/ 468 and onto R310. A windmill is identified where the current concrete dam is located.....24
Figure 32: 1938 aerial photo.....25
Figure 33: 1944 aerial photo.....25
Figure 34: 1953 aerial photo.....26
Figure 35: Figure 36: 1977 aerial photo.....26
Figure 38: Photo of study area showing thick grass lower down with vineyards on slopes.....29
Figure 39: Looking NE over Lynedoch to Stellenbosch and Jonkershoek Mountains (left); Water collection after rainfall (right).....29
Figure 40: Looking S over Lynedoch to Helderberg and Macassar (left) and view of seasonal wetland in eastern corner of the site (right).....29
Figure 41: Looking N from NW crn of site (left); View SE over neglected vineyards (right).....29
Figure 42: Layout of identified structures on study are.....30
Figure 43: South-west façade of structure at A.....42
Figure 44: Lower vineyards looking north to structures at A (left) and B (right).....42
Figure 45: South-east elevation of structure at B (left) and interior (right).....43
Figure 46: Interior of structure at B (left) and north-west elevation of B with ruined foundation in front(right).....31
Figure 47: Terrace with reservoir at C and structure at D behind the treeline.....43
Figure 48: Vineyards looking north-east to Structures B (right) and D (left) ..43
Figure 49: Structure at D south east elevation (left) and south west elevation (right) with structure at G in the background.....44
Figure 50: Interior of structure at D showing wooden ceiling (left) and north west façade of building showing significant terrace cutting (right).....44
Figure 51: North-east elevation of structure at D. Remnant of landscapes garden evident.....44
Figure 52: Water management infrastructure at F.....44
Figure 53: North-east elevation of structure at G with Lynedoch Ecovillage residential buildings behind.....45
Figure 54: Barn like structures at B (left) and G (right) orientated along the contour.....45
Figure 55: Survey tracks.....36
Figure 56: Survey finds.....37

Figure 57: Artefact observations L to R: LYN139; LYN149; LYN140; LYN148 38
Figure 58: Artefact observations L to R: LYN150; LYN158; LYN159; LYN160 .38
Figure 59: Artfefact observations L to R: LYN179; LYN169; LYN189; LYN198 39
Figure 60: Artfeact observations L to R: LYN180; LYN188; LYN168; LYN170.39

LIST OF TABLES

Table 1: Summary of heritage resources along R310 (Clift, 2011) 12
Table 1: Observations noted during field survey 25.7.23 34

1061

1. INTRODUCTION

1.1 Site name

RE/ Ptn 28 of historic farm Welmoed 468, Stellenbosch

1.2 Site description

RE/Ptn 28 of historic farm Welmoed 468, Stellenbosch (45,4ha), is agricultural zoned land under old vineyards and rested lands surrounding Lynedoch Eco-Village and the Sustainability Institute, adjacent and to the west of the R310 Baden Powell scenic route and the railway line.

1.3 Site location

Off Lynedoch Road, Stellenbosch: S -33.981101° E 18.768424

1.4 Development proposal

The proposed development will change agricultural land to medium to high-density residential development with additional facilities. Although identified as such on the 2017 SDF, RE/ Portion 28 (45,4ha) currently lies outside the urban edge. The focus for RE/ Portion 28 is for rezoning and development of medium to high density housing (apartments, townhouses, and single dwelling), with the objective of achieving 2 475 dwelling units, and an educational facility with an area of no more 3ha.



Figure 65: RE/Ptn 28 Farm Welmoed 468 Locality

1062

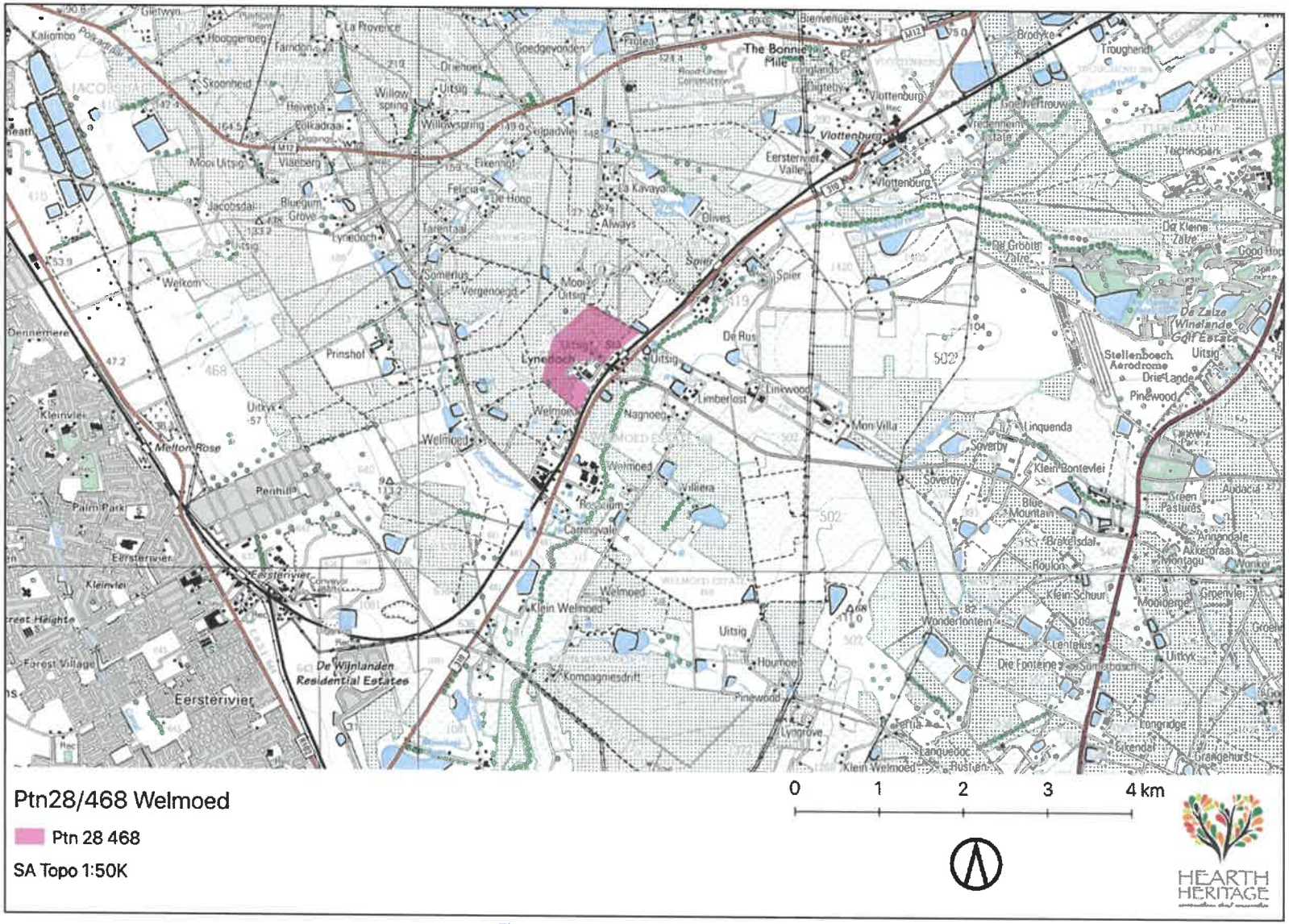


Figure 66: RE/Ptn 28/ 468 Locality.

1063

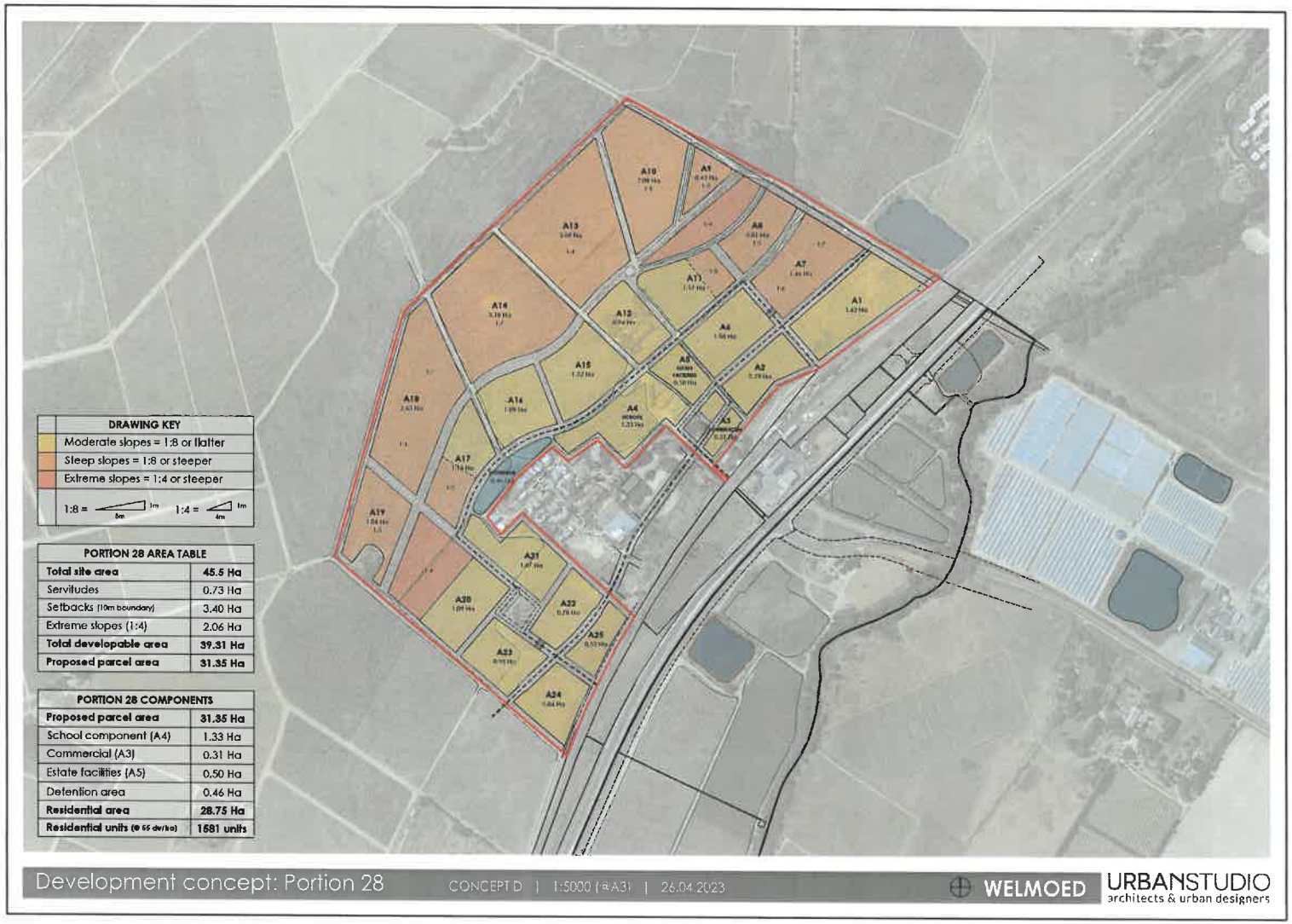


Figure 67:Development Proposal for RE/Ptn28 Farm Welmoed 468, Stellenbosch

1064

1.5 Description of site and surrounds

RE/Ptn 28 of historic farm Welmoed 468 (45,4ha) is agricultural zoned land within the designated Lynedoch urban edge (Stellenbosch SDF, 2017). The site is located adjacent and to the west of the R310 Baden Powell scenic route and the railway line. The proposed site is flanked by first Lynedoch Road and then the railway line to the south-east which runs parallel to the R310 Baden Powell scenic drive.

The site proposed for development surrounds the Lynedoch Eco-Village and Sustainability Institute on three sides and is proposed to add to this to create a mixed-use development node. The site is currently under old vineyards and open uncultivated land, including wetland areas to the south-east directly adjacent to Lynedoch Road. The surrounding land to the north-west of the site is agricultural land, mostly vineyards.

The site slopes up at increased steepness to the north west with 'bottom' slopes near the road grading a moderate 1:8 with some slopes higher up being extremely steep at 1:4. Olive row hedges line the vineyards along the horizontal edges, creating visual breaks in the slope.

There are some structures located on the central north-west to south-east axis of the site. Some of these are historic and older than 60 years and will require Section 34 applications for any alterations, additions or demolition. It is intended for some of these structures to be retained in the development and to inform the design to retain the historic narrative of the site. None of these structures were identified in the Stellenbosch Municipal Heritage Survey (2018).

Along the railway line, across from the proposed development site and the Sustainability Institute, is the Lynedoch railway station (currently not in use), a more recent but unused pedestrian railway crossing, the Zetler fuel station and associated commercial development and parking area. There is no direct access from the R310 onto the site, and vehicular access is achieved via Lynedoch Road, which runs parallel to the railway and which is accessed via Vlaeberg road further to the south-west. Pedestrians access the site via an informal footpath across the railway line opposite the entrance to the site.



Figure 68: Aerial image showing study area RE/Ptn28 468

Along Baden Powell Drive and Annandale Road, in the immediate environs of the site, there has been a lot of agricultural development, such as warehouses and grow tunnels, which has detracted from the scenic quality of Baden Powell Drive. The site has high visibility from Baden Powell Drive as well as Annandale Road with views from the top of the site extending to Macassar Dunes, Jamestown and the Helderberg on a clear day.

1065

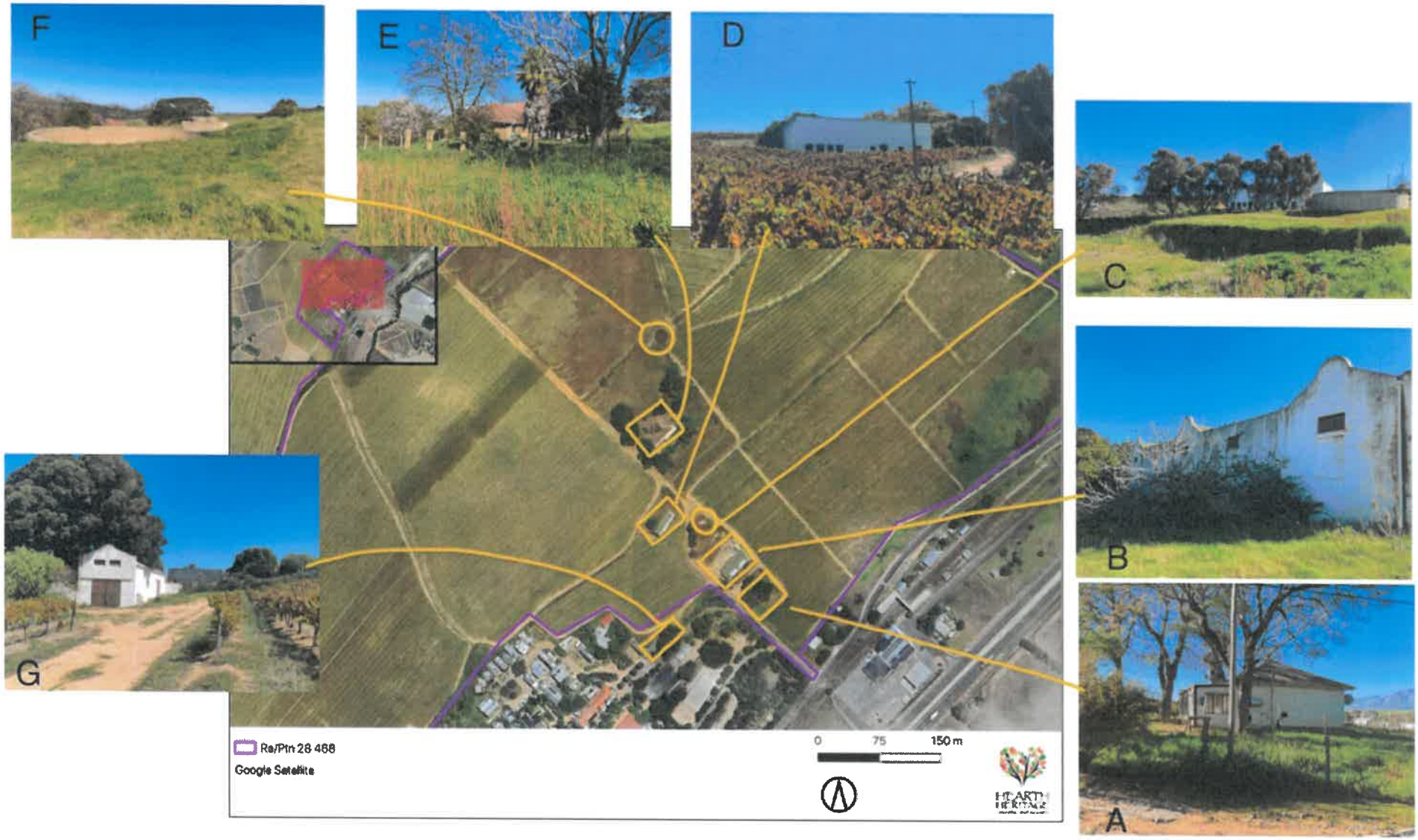


Figure 69: Aerial image of study area indicating layout of structures on site

1066



Figure 70: View looking north to site from R310 (Baden Powell) with Lynedoch Eco-Village roofscape in midground.



Figure 71: View towards site from Baden Powell Annandale intersection looking north west with Zetler's service station in foreground.

1067



Figure 72: View towards site from R310 looking west





Figure 73: Structures >60yrs not identified in Stellenbosch Heritage Survey (2016): Left = structure C, right = structures B in foreground and G in background.

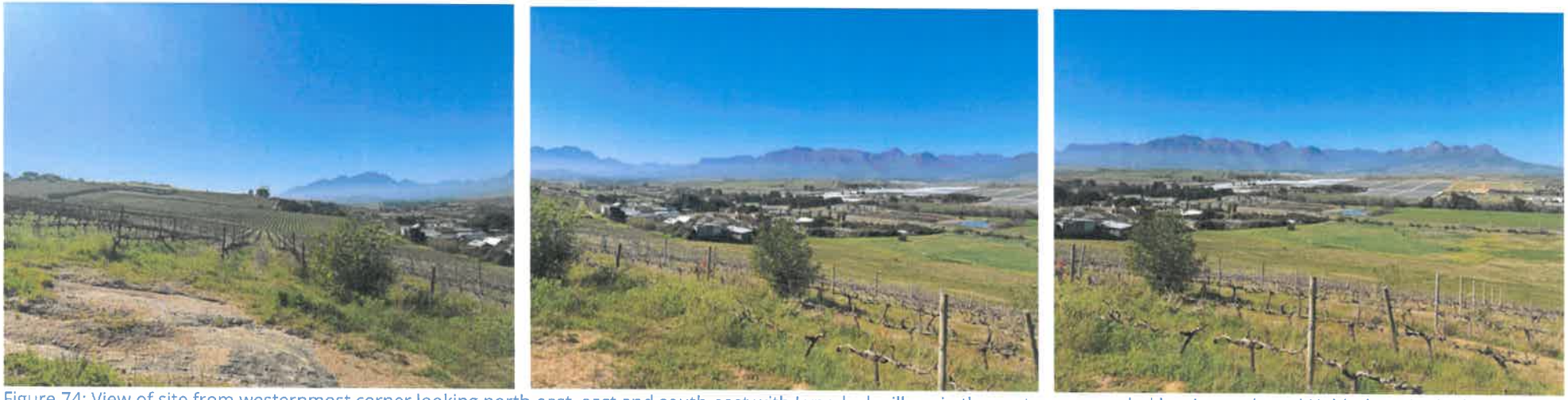


Figure 74: View of site from westernmost corner looking north-east, east and south-east with Lynedoch village in the centre surrounded by vineyards and Helderberg in the background.



Figure 75:View of site from northernmost corner looking south-east towards the Helderberg and Zetlers farm, south and south –west to Macassar.

1069



Figure 76: View of site from easternmost corner looking south-west along Lynedoch Road, west and north-west.



Figure 77: Views from R310, Baden Powell Dr and Lynedoch Rd, of railway infrastructure adjacent to south-east boundary of the site.

1070

2. METHODOLOGY

2.1 Purpose of archaeological study

The purpose of this archaeological impact assessment report is to satisfy the requirements of Section 38(1), and therefore Section 38(3), of the NHRA (25 of 1999) in terms of impacts to archaeological resources.

2.2 Methodology

Hearth Heritage was requested to undertake an AIA as a specialist study to inform the Phase 1 Heritage Impact Assessment. This archaeological report, therefore, included the following methodology:

- Desktop survey of the historical development of RE/Ptn28/468 including historic maps and surveys, aerial imagery and SG Diagrams.
- Desktop study of previous academic and assessment reports in the surrounding area including Stellenbosch Municipal Heritage Survey (2018) and associated material.
- A foot survey of the site was conducted by archaeologist Emmylou Rabe Bailey on 25 July 2023. Photographs of the context and finds were taken and tracks and finds recorded using a GPS.
- Inspection and overview of the historic built fabric. Photographs of context and structures were taken.
- Identification of archaeological resources likely to be impacted by the proposed development.
- Identified resources were assessed to evaluate their heritage significance in terms of NHRA (25 of 1999) Section 3 grading system.
- Analysis and overlay of existing plans and surveys, aerial photographs and SG diagrams.

2.3 Limitations and assumptions

The seasonal rain and resultant flooding of the wetland areas as well as dense plant growth on the lower portions of the site adjacent to Lynedoch Road limited the accessibility of this area for foot survey, however this does not impact on the results of this report as no heritage resources were identified for this area that required access. Dense growth between the vineyards also limited archaeological visibility, but enough surface area was exposed to conduct an archaeological survey, especially since surveys of this area have been done previously. The experience of the heritage practitioner and observations made during the study, allow for the relatively accurate prediction of the archaeological and cultural landscape sensitivity of the receiving environment.

.

The significance of the sites, places and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

It should be noted that archaeological deposits often occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and it would be required that the heritage consultants are notified for an investigation and evaluation of the find(s) to take place.

No formal public consultation was undertaken as this will be included in the HIA process.

3. DESKTOP STUDY

The desktop study was conducted through the review of the Stellenbosch Municipal Heritage Survey (2018) and reports submitted for HIAs and EIAs in and around the Stellenbosch area. These were obtained from the South African Heritage Resource Agency's (SAHRA) online data resource SAHRIS (www.sahris.org.za), Heritage Western Cape database and Hearth Heritage database. An online review of published journal articles was also undertaken, however the area has not been subject to much by way of academic studies. Mapping of a selection of study sites and identified heritage resources for the surrounding area as well as the palaeo-sensitivity map was done using the Stellenbosch Municipal Heritage Survey, 2018 (SMHS - http://stellenboschheritage.co.za/smhs/map) and SAHRIS.

3.1 Previous Impact Assessments

The area has previously been extensively assessed through Heritage and Archaeological Impact Assessments, resulting in a number of known heritage resources within this area. In general, this landscape is one of heritage significance with known resources from this area including historical archaeological resources, built structures of significance as well as Early, Middle and Later Stone Age resources.

A full survey of the area was conducted for the Stellenbosch Municipal Heritage Survey (2018).

Clift (2011) did an extensive HIA of the R310 Stellenbosch, where the heritage resources along Baden Powell Drive were identified and assessed.

Clift found that, The Eerste River valley cultural landscape is a continuing and evolving cultural landscape: multilayered and reflecting millennia of human occupation and centuries of endeavor. Clift proposed a IIIA or IIIB grading for the the Eerste River valley cultural landscape with significance in terms of its aesthetic, historical and architectural values.

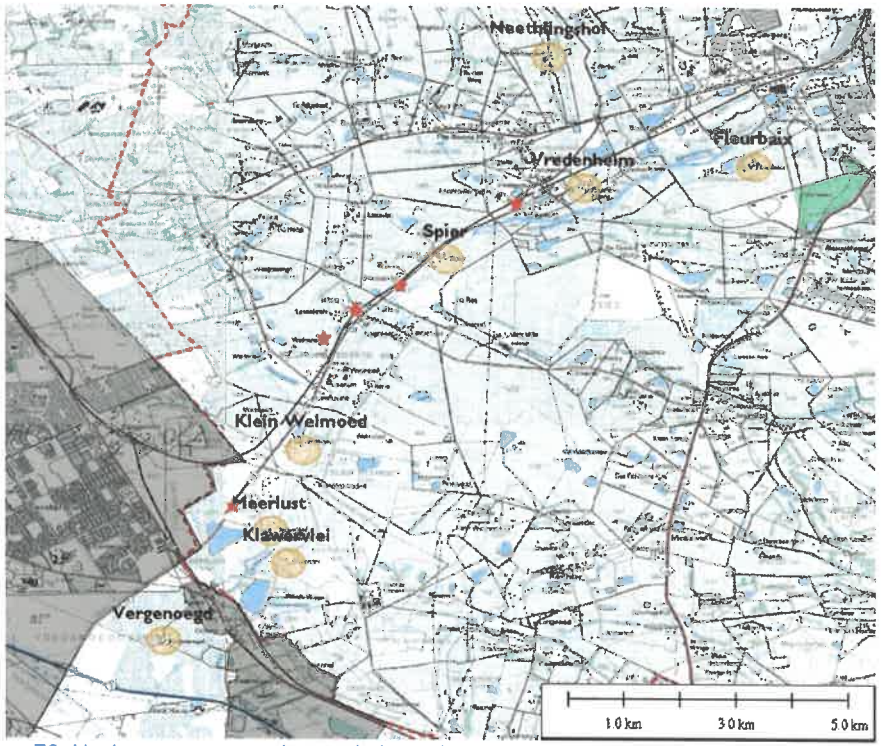


Figure 78: Heritage resources located along the R310 corridor (Clift, 2011)

In the conclusion and recommendation for archaeological heritage resources, the Clift (2011) report notes that the incidence of archaeological material is mostly restricted to widely dispersed ESA and MSA artefacts, with occasional 19th century ceramics.

Further it notes that, "The only place where there might be a problem would be on the downslope of the inner track between Vlaeberg Road and Lynedoch Station. Since the archaeological material was exposed by water run-off, it is possible more material could lie immediately beneath the surface. It is recommended that work in this area be monitored by a professional archaeologist to verify and record the presence of additional archaeological material. It would appear that in the proposed road upgrade there will be very little damage to the prehistoric heritage of this area. It is recommended that should the inner track paralleling the R310

between Vlaeberg Road and Lynedoch be upgraded that an archaeologist monitor this section of the road once it is exposed."

Table 2: Summary of heirtaeg resources along R310 (Clift, 2011)

Heritage resource	Proposed Grading	Description/Comment
Cultural landscape:		
Eerste River/R310 corridor	Grade 3A/3B	For the most part a rural agricultural landscape; extremely vulnerable to unmanaged urban sprawl
Faure	Grade 3B	A small rural settlement associated with an Anglican Church (design attributed to Sophia Grey) and adjoining cemetery; historic association with the farm Geduit, later the Fox and Hounds Inn
Archaeology:		
Stone Age	Grade 3C	Occurrences are low and sparse; mostly in disturbed contexts
Built environment:		
Vergenoegd	Grade 3A	Well preserved (renovated) farmstead with intact surrounding farmlands; PHS, Set back from the R310
Spier	Grade 3B	Renovated historical core obscured by multitude of additions and add-ons; original werf set back from the R310. Historic furrow (late 19th/early 20th century) parallel to the road.
Meerlust	Grade 3A	Well preserved (renovated) farmstead with intact surrounding farmlands; werf complex includes a cemetery and the dovecot (PHS); present avenue of palms and oaks are modern; De Wijnlanden are visually intrusive
Klein Welmoed	Grade 3A	Well preserved, but uncelebrated historic farmstead; well setback from R310; gateposts suggest the alignment of earlier wagon route to the east of the present R310
Vredenheim	Grade 3A	Well preserved (renovated) farmstead; PHS; modern entry gates, set back from the R310
Vlottenburg/Van Ryn Distillery	Grade 3B	Well preserved turn of the 20th century distillery; associated Brandy Museum; railway line separates complex from R310
Stellenbosch Hills Winery	Grade 3C	Representative of 20th century industrialisation of the wine industry; nature of the complex mitigates the impact of the road widening
Annandale cottages	Ungraded	Older than 60 years; cottages associated with single oak tree; both cottages occupied on a temporary basis by seasonal workers; Southern cottage to be demolished; northern cottage remains
Welmoed cottages	Ungraded	Older than 60 years; set back from R310 situated close to railway line

Malan (2012) assessed Ptn 128 of Farm Welmoed Estate No 468, Stellenbosch for an HIA. Her assessment was focused on the Welmoed farm werf and buildings. In her assessment she supported the findings of Clift's (2011) heritage assessment and reiterated the significance of the R310 cultural landscape. Webley and Halkett's (2012) AIA prepared for the Malan HIA, found no evidence of any pre-colonial archaeological remains on site and some C18th historic structural remains.

Orton's (2014) HIA for the proposed upgrade to the R44 between Somerset West and Stellenbosch, indicated that the survey yielded low density scatters of ESA with very low significance and only a single historical artefact was found.

Deacon (1997) did an extensive archaeological survey of De Zalze Golf Estate and noted the presence of Acheulian artefacts including cores, handaxes, cleavers and flakes that were not *in situ* and considered part of a widespread landscape scale artefact scatter. Further the report notes historic buildings of conservation-worthy status situated on the western part of the property.

Lavin's (2020) HIA for a proposed vineyard development on Rem Portion 10 of Farm 502, Stellenbosch (part of Spier Wine Estate) identified a small number of ESA and one MSA lithics, mostly concentrated on the northern portion of the site. All the sites were associated with soil test pits indicating that such tools are present below the surface among the orange/ yellow coloured clays and near surface gravel deposits. The source material is most likely cobbles derived from old river gravels or terraces. Further, Lavin's HIA identified the cultural landscape as significant, and taking from the SMHS, the elements of significance for this landscape are the commonage, intact Renosterveld, the identified archaeological sites and the historic structures associated with early land grants and the relationship of all these elements within the Eerste River.

3.2 Archaeological context[5]

Early Stone Age (ESA) implements were first discovered by the French entomologist Dr Louis Peringuey in 1899 at Bosman's Crossing at the foot of the Papagaaiberg alongside the Eerste River in Stellenbosch (Peringuey 1902, 1911; Seddon 1966).

[5] Lavin, 2020 and Malan, 2018.

The artefacts, exposed in the railway cutting, are associated with the younger gravels of the course alluvial fan on which much of Stellenbosch is situated, and are dated to the earlier part of the Middle Pleistocene, between 700 000 and 300 000 years ago (Deacon & Goosen 1997). Among these tools was an artefact type of great antiquity recognized as an early handaxe. For many years after this, the ESA of South Africa was referred to as the `Stellenbosch Culture' until the term was re-defined in the 1960s (Goodwin & Van Riet Lowe 1929). A large sandstone boulder marks the location of the Bosman's Crossing Provincial Heritage Site (PHS), which was declared a National Monument in 1962.



Figure 79: Example of type of handaxe recovered by Peringuey (1911) from Bosman's Crossing.

ESA Acheulian sites, which are characterised by the presence of specific types of tools such as handaxes, choppers and cleavers, have been recorded throughout the country, and are especially associated with river terraces and streams, mountain slopes, and in degraded and transformed areas such as slope washes, cuttings, excavations, and in vineyards and old fields, where they are often brought to the surface by ploughing. In his 1967 review of the ESA from Stellenbosch, Seddon listed a total of 22 known ESA sites in and around Stellenbosch. They were: Gleneagles Hotel (2), Olives Farm Lynedoch, Spier, Vlottenburg winery, Louishoogte site, Blaauklip vegetable garden and golf course, Vredenburg, Bosman's Crossing, General Box Factory, Suikerbosrand, Altavona, Blake's Quarry, Smits' Quarry, Schoongezicht, Rustenberg, Lorraine, Rozendal, Coetzenburg, Glen Conner and Old Nectar (Figure 80).

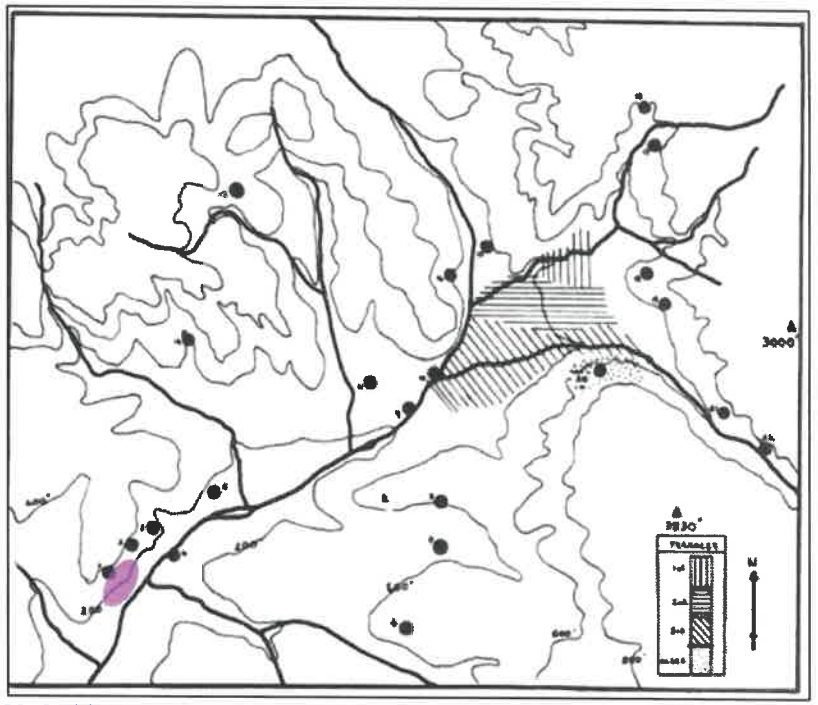


Figure 80: Seddon (1967) ESA sites in the Stellenbosch area with ~ RE/Ptn28/468 (purple).

Further ESA artefacts have been recorded on a number of farms in the Stellenbosch area, at Meerust, Hartlands and De Wijnlanden (Kaplan 2002, Webley, 2016), and on several farms to the east of the R310, at Croyden (Kaplan 2005, 2004) and Faure (Kaplan 2006). Large numbers of tools including handaxes, cleavers, cores, and flakes were also documented in old agricultural lands and vineyards during an investigation of the De Zalze Golf Estate (Kaplan 2009), about 1km north east of the proposed development site, while a rich Acheulian site occurs on the Farm Blaauklippen, on the upper slopes of the Helderberg to the east of the R44 (Deacon and Goosen 1997). ESA flakes and angular chunks have also found on the lower slopes of the Papagaaiberg near the Stellenbosch Cemetery (Kaplan 2010), while ESA tools were recorded alongside Adam Tas Road, and in Devon Road, Stellenbosch during a Heritage Impact Assessment (HIA) for the proposed Plankenbrug sewer pipeline (Kaplan 2015a), and at Vlottenburg Hamlet inside the urban edge (Kaplan 2015b). More recently, relatively large numbers of ESA tools, including a number of handaxes were recorded on the Farm, overlooking the

Annandale Road, close to the banks/floodplain of the Bonterivier, where quartzite river cobbles would have been readily available to early ESA hominins as a source material for making tools (Kaplan 2018).

ESA and MSA tools were found scattered on the surface of the farm Solms-Delta situated near the confluence of the Dwars and Berg rivers. Similarly, they are found in fields and orchards in Franschhoek. Large flakes and cores, some with bifacial flaking, were found on Klapmutskop. While these particular artefacts were not in a formal archaeological context, their presence even on the surface gives testimony to the presence of our human ancestors on this landscape for millennia (Malan, 2018).

The people occupying the Western Cape before 2000 years ago were all hunter-gatherers, but after that time large-scale organisational and subsistence changes began, with the gradual introduction of pottery-making and domesticated sheep to the local economy. Presently it is considered likely that sheep were introduced to Southern Africa through diffusion and trade rather than by a migrating people, as was often thought in the past, and that pottery was present slightly earlier than sheep (Orton 2005).

Small groups of hunter-gatherers followed the seasonal round in this landscape, collecting plants and catching wild birds and animals. They found shelter in caves and rock formations and constructed windbreaks and waterproof *skerms* (screens) in more open areas. Their stone tool assemblages are characterised by the simultaneous occurrence of three particular retouched stone tool types: segments, backed bladelets and backed scrapers.

3.2 Historical context[6]

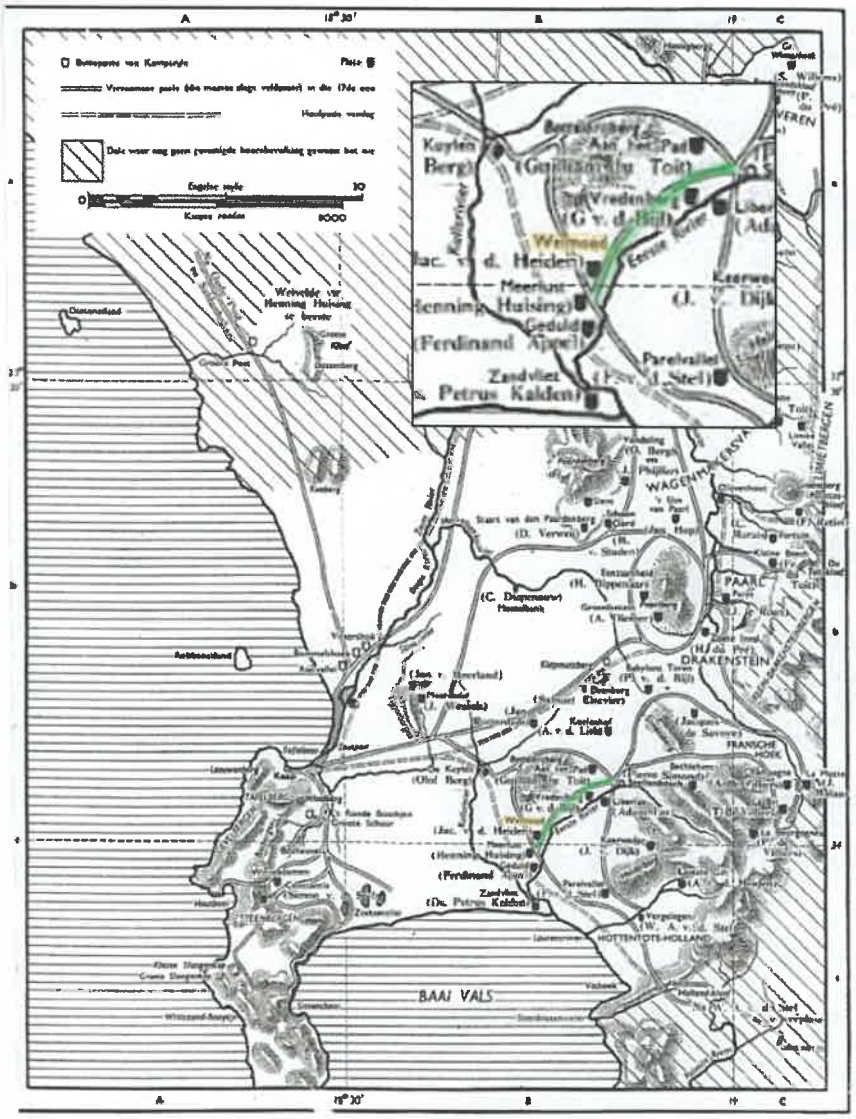
The area now occupied by the Stellenbosch district was inhabited by hunter-gatherers for thousands of years. However, by the time the first Europeans visited the area, Khoekhoe herders (living in groups of up to 100 people), who were supporting themselves through pastoralist subsistence methods, were mostly found inhabiting the district (Todeschini, Jansen 2018: 13). The Khoekhoen's tendency to amass large herds of livestock (such as longhorned cattle, fat-tailed sheep and goats), as well as oxen for pack animals and riding, resulted in a series of wide trails (possibly following old animal tracks or former narrow paths) being created in the landscape (and crossing streams and rivers). Kraals were also established to give a degree of protection to large herds of livestock from wild animals and raids (Ibid: 13). The herders have left evidence of their presence in the shards of their unique pottery, associated with stone and bone tools, which can still be found. Stellenbosch Museum archaeologist Hennie Vos noticed several fragments in the dust of a road on the farm Meerust in 2004.

For the new colonial settlers the fifty-year period before 1700 was a time of learning how to live on the land and to construct buildings with whatever means were available. The VOC supplied them with tools, muskets, powder and ammunition, provisions for a few months, wood to build shelters and a team of oxen to break the soil. They were able to exploit the game and timber from the forests and vleis, but the poor soils forced them into working long backbreaking hours to increase the productivity of a fixed quantity of land. A demand for labour was created and this was met by the VOC's importation of slaves. Slaves were the central and vital component of the 18th century colonial economy. Khoekhoen descendants were incorporated into the farm labour pool, as a result of loss of independent economic means and through coercion, with little more freedom of choice than slaves. Some managed to retain an independent life by keeping beyond the reach of VOC guns and horses, but were increasingly pushed into marginal environments.

The later 18th century was a period of great agricultural prosperity and expansion, especially in the wine industry. It was during this time that most of the larger, grander historical farm werfs were established, either newly built or altered/rebuilt to reflect the status and prosperity of the land owners.

Historically, commonage provided a place for town residents to keep their transport animals, milk cows, animals for slaughter and butcher's stock. Stock being moved between grazing lands could depasture on the commonage. Access to commonage, free-flowing water and natural mountain slopes were held as extremely significant rights by Cape communities. It was on the commonage where old traditions were (and are) performed, family and communal gatherings take place, and freedom and solace may be found.

[6] Todeschini et al, 2018. and Malan, 2018.



53. DIE KAAPSE VOLKSPLANTING NA VYFTIG JAAR

Figure 81: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) with inset showing Welmoed and the C17th historic route that is now R310

Burials also took place beyond the boundaries of farms. Initiation sites are another category of heritage resource that requires privacy and solitude. As many of these places have been kept secret from property owners and authorities, they are extremely vulnerable to accidental damage or destruction.

During the 18th and 19th centuries, the region was well known for its mixed farming; grain fields, grazing lands and vineyards but with an increasing emphasis on wine production. Up until about the 1860s wine was one of the most important sources of income for the Cape Colony and the Drakenstein became a major wine production area. In the late 19th century the wine industry at the Cape collapsed as a result of Phylloxera. By the 1890s, 80% of the vineyards of Drakenstein had been destroyed despite all sorts of attempts to control the disease. It was only later that the 'winelands' returned, and under centralised control.

After WW2, commercial enterprises and commercial farming transformed land use and saw the demise of traditional Cape colonial family network farming practices. Mechanisation resulted in a decline in the attachment of the farmer to his land, his workers, his animals and their communal co-existence. New linkages were established between the new class of commercial farmers and the growing stratum of intellectuals that Victoria College in Stellenbosch was producing. Driving livestock from Franschhoek to seasonal pastures on the West Coast came to an end. The old pastures, on the middle mountain slopes, were replaced with forestry. Agricultural Boards supported White farmers and regulated production and markets. KWV (1918) and SFW (1935) centralised wine-making and exports and SAD (1938) did the same for dried fruit. Several Co-Operative cellars were formed in the 1940s.

The extensive building and development after WW2 escorted South African wine cellaring into a new era: cold fermentation, better pumps, and monumental vaults of wines and brandies. In 1971, the first South African wine route was opened in Stellenbosch, the brainchild of Frans Malan of the Simonsig Estate and Niel Joubert of Spier. Dairy farming was consolidated into mega-businesses, vineyards and wineries replaced grain crops and orchards, and market gardens were usurped by infill suburban or social housing. A Cape wine estate became a prestigious investment (also for tax relief) for local and overseas magnates, and big injections of

capital were necessary to sustain agriculture and the rural economy. Buildings and infrastructure were replaced and modernised and properties were subdivided. Small-scale fruit and vegetable traders continued their operations in and around the villages during the 1950s before being restrained by apartheid laws and other obstacles. The last 80 years have seen massive changes in the development of the subject cultural landscapes with much agricultural land being lost.

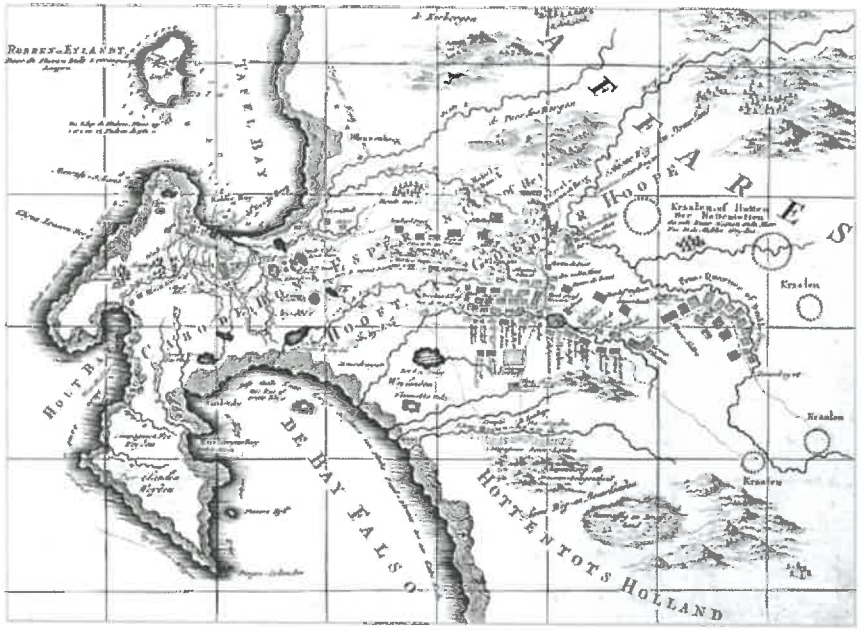


Figure 82: Cape Colony c.1700 (UCT Digital Archive)

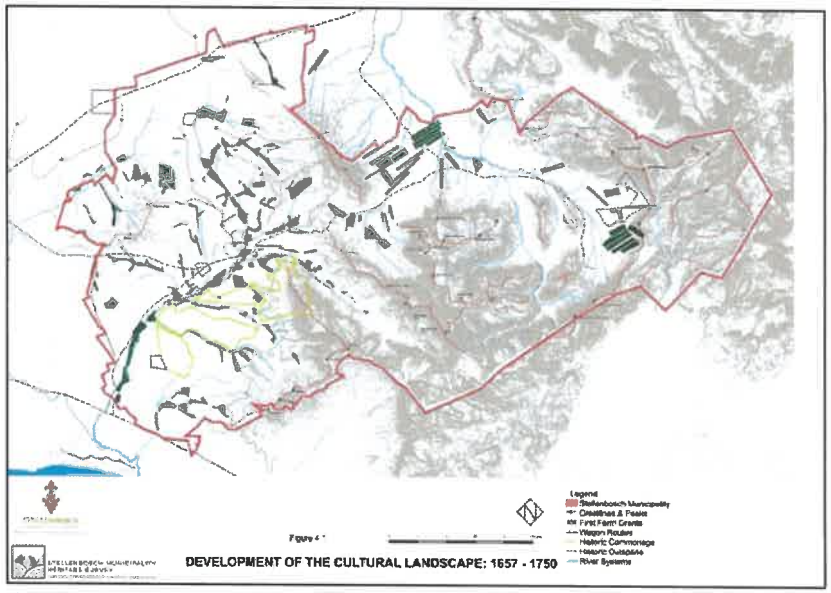


Figure 83: Development of the Stellenbosch cultural landscape 1657 to 1750 (Todeschini et al, 2018)

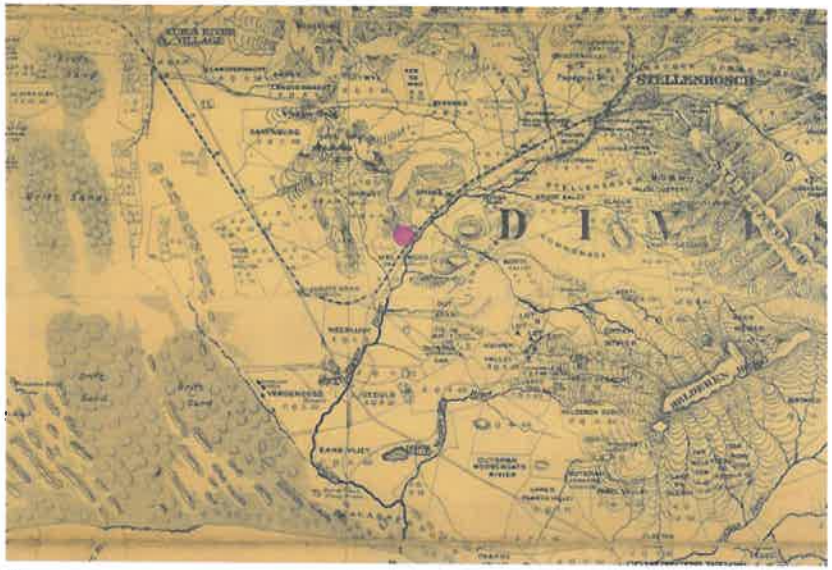


Figure 84: Cape Quitrent Grants Map, 1880 with ~RE/Ptn28/468 (purple)

1077

3.3 Site history

Farm Welmoed is one of the earliest freehold land grants along the Eerste River dating to 1690. In 1690 it was granted to Henning Huysing and in 1696 to Huysing's friend, Jacob van der Heyden, who was a "man of means" (Vos, 1998). From 1725 to 1759, the farm was owned by Andries Schutte, Heyden's son-in-law. Jan de Villiers, son of a Huguenot, Pierre de Villiers, took ownership of Welmoed in 1759 until 1796 when he passed away. In 1797 the farm was acquired by Pieter Gerhard van der Byl, and stayed in the family's ownership for many decades. It must be noted that, before the Van der Byl's, the owners of the farm Welmoed were buried in the DR Church cemetery in Stellenbosch. By 1800s the church became too small for the growing congregation and cemetery space became unavailable, which, together with the increased move to ownership and self automony, led to the development of farm family graveyards (Vos, 1998).



Figure 85: c.1690 schematic map of early land grants, with Welmoed on the far left (Cape Archives M1/ 273)

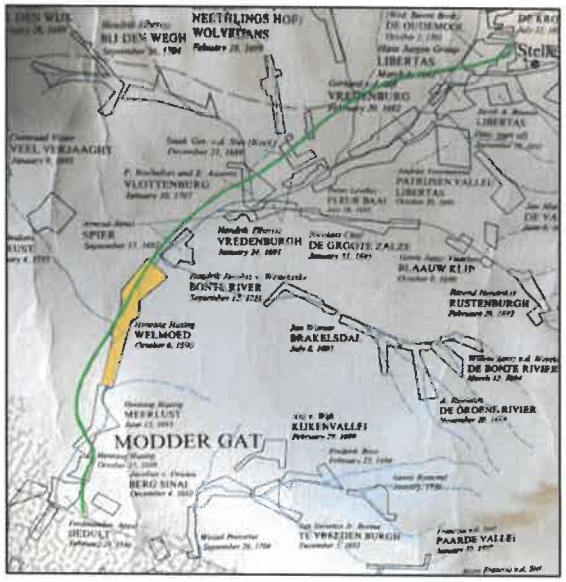


Figure 86: Guelke map (1987) of early freehold grants at the Cape showing farm Welmoed, 1690 (yellow) and the historic route of the R310/ Baden Powell Dr (green).

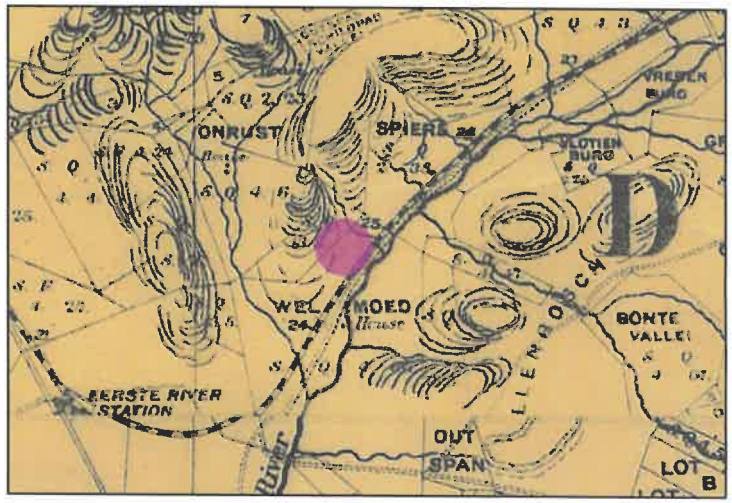


Figure 87: 1902 Divisional map showing approximate location of RE/Ptn28/ 468.

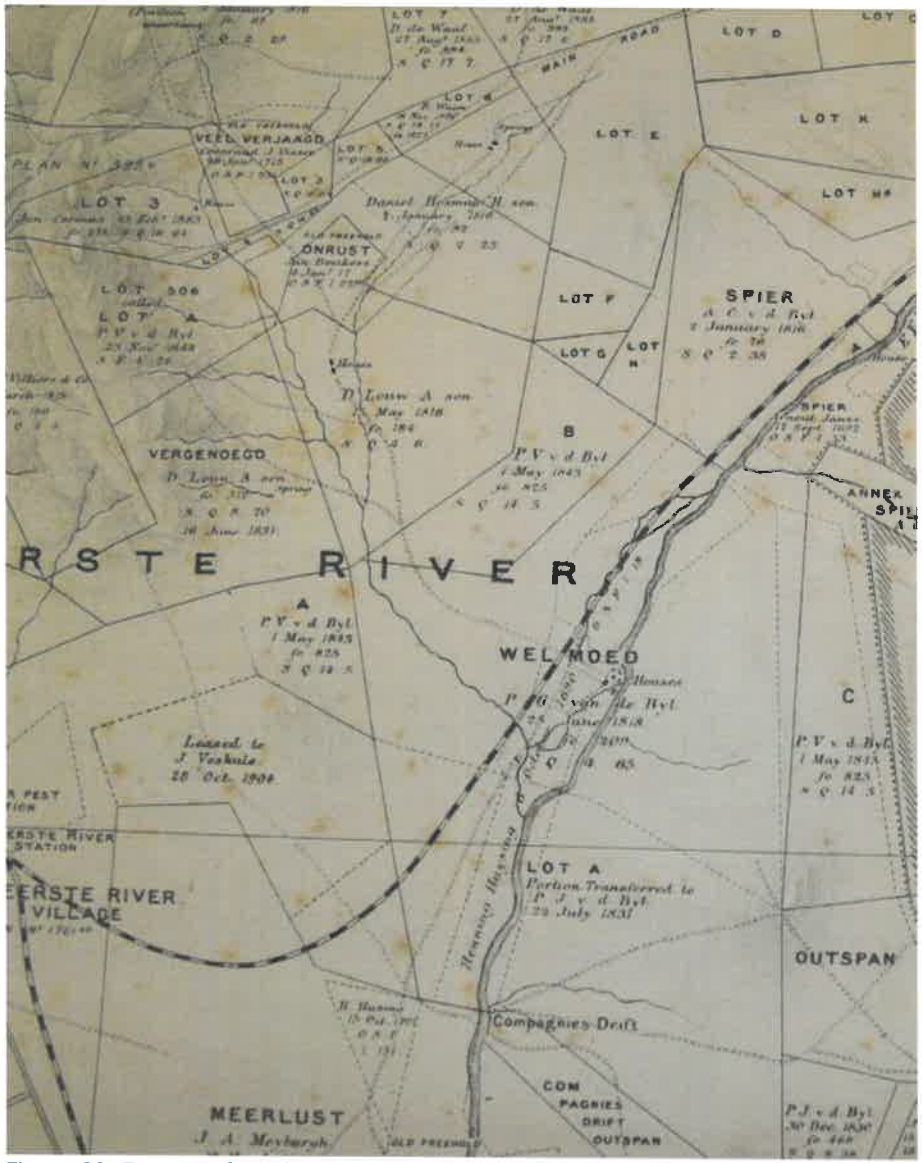


Figure 88: Excerpt of Brink map 1892 showing Welmoed. No buildings are identified on RE/ Ptn28.

Rudolph Kramer, an extremely wealthy Jewish gentleman, owned the United Tobacco Company of SA and had large financial interests in The Castle Wine & Brandy Company. He purchased the farm Welmoed in 1917 and built and lived in the new house. Now known as the Drie Geuwels Hotel, in the 1930s it was known as Glen Eagles Hotel (Figure 94). Drie Geuwels Hotel is a grand old Cape Revival house with a high degree of architectural significance. This building falls outside the study area. The Stellenbosch Municipal Heritage inventory (2018) graded the Drie Geuwels IIIA as a rare local example[7].

Today a few historic and modern structures are clustered around the central historic path that runs across RE/Ptn28 Farm 468. The 1920s SG Diagram shows structures in the location of the Drie Guewels Hotel as well as the barn (Structure G). It is likely that the historic structures on RE/ Ptn 28/ 468 as well as the historic buildings within Lynedoch precinct were constructed in the period of Kramer's ownership of the property.

In 1999 the Sustainability Institute and Lynedoch Village was formed by Eve Annecke and Mark Swilling as a place to create an ecologically restorative community. The 6ha of land was purchased with financial assistance from Spier's Enthoven family with the shared interest in the vision to uplift the local community. At the time, the old historic Drie Geuwels Hotel was in a dilapidated condition with various associated structures in states of disrepair[8].

The Lyndoch Ecovillage is pioneering approaches to creating socially diverse ecological communities. A mixed community of over 15 families from diverse racial and social economic groups has been built around a child-centred learning precinct. It is intended to be a financially and economically viable community requiring no external funding to sustain itself. It is managed by a Home Owners Association. Today there are 32 families living at the eco-village.[9] The Lynedoch Eco-Village and Sustainability Institute fall outside the proposed development site.

[7] https://www.stellenboschheritage.co.za/property/drie-gewels-hotel
[8] https://www.sustainabilityinstitute.net/wp-content/uploads/2020/03/SI-20YRS-Full-Doc-small-spreads.pdf
[9] https://www.sustainabilityinstitute.net/wp-content/uploads/2020/03/SI-20YRS-Full-Doc-small-spreads.pdf

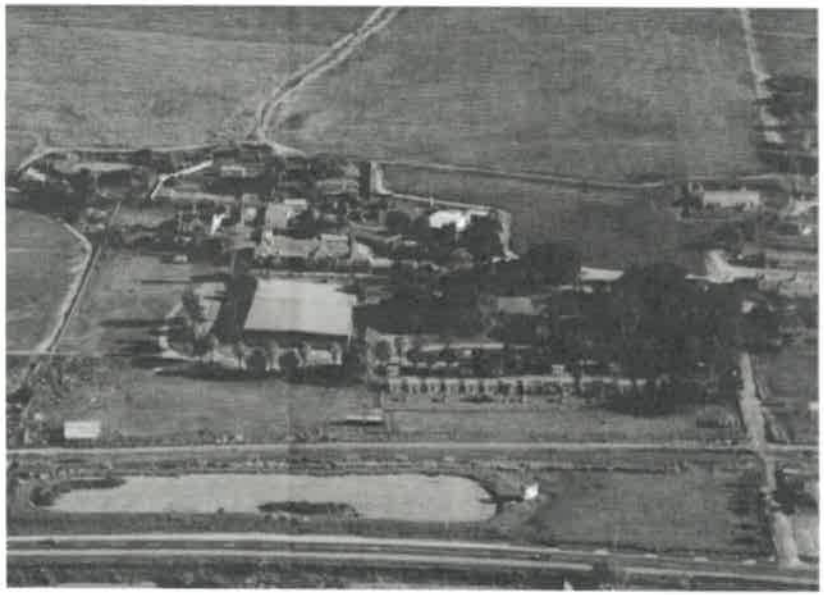


Figure 89: Aerial photo of Lynedoch before renovation by Sustainability Institute taken c. 1977.



Figure 90: Drie Geuwels Hotel circa 1999.

The R310, Baden Powell Drive, running adjacent to the study area, is a significant historic and scenic route, which has linked the Stellenbosch area to the Cape since precolonial times. It is evident on the first maps of the Cape made by the Dutch VOC administrators (Figure 28).



Figure 91: "Die Kaapse volksplanting na vuftig jaar" (Boeseken, 1948) showing Welmoed and the C17th historic route that is now R310

Several hamlets/projects are proposed for consideration as development nodes (as well as housing for farm employees). The Stellenbosch Municipality SDF (Sustainability Institute 2017), approved in May 2017, includes Lynedoch, however, this has not been formalized and currently the land proposed for development lies outside the urban edge.

The agricultural use of the land, dating back to the earliest settlers, is ongoing, however the insensitive recent intrusions, such as industrialised farming activities and associated agri-industrial structures cluttering the historic landscape, is threatening the significant historic pattern of settlement distinct to the Eerste River Corridor.

1080

Build Chronology

Archaeological resources (over 100yrs):

Pre-1920
Identified in 1920 SG Diagram

- G - Barn-like structure
- Drie Geuwels within Lynedoch precinct (not surveyed – Graded IIIA by SMHS, 2018).

1920-1930
Identified in 1930 SG Diagram

- B - Rectangular structure in linear alignment with structure G along the same contour.
- F - "Windmill" located where there is currently a cement dam.
- Footpath across Ptn28/ 468.
- Small structure within Lynedoch precinct (not surveyed).
- Lynedoch railway station (outside study area)

Historic resources (over 60yrs):

1930-1938
Identified in 1938 aerial photograph.

- C – possible small structure at location of the cement dam, most likely related to water management.
- D – evidence of earthworks
- E – Small rectangular structure
- F – small structure at location of "windmill".
- Orchards in the fields adjacent to location of D.

1938 – 1944
Identified in 1944 aerial photographs

- C – dam structure
- D – possible structure with different orientation to current building
- E – large rectangular addition to north-east façade.

1944 - 1955
Identified in 1953 aerial photographs

- D – large rectangular structure in position and orientation of current barn
- E – terraced gardens have been laid out to the south east of the building
- Orchards no longer evident, only vineyards and open fields.
- Hipped roof structure on the south-east boundary near the Lynedoch station building (not within study area).

1955-1977
Identified in 1977 aerial photograph

- A - Modern residential building c. 1953-1977
- B – extention to south east façade of barn structure
- E – structures are no longer evident on the aerial photo
- Hipped roof structure on south-east boundary no longer evident.

1977 - 2023
Identified in 2023 aerial photograph

- E – New hipped roof residential structure



Figure 92: 1920 SG Diagram of Farm 468, Stellenbosch, with insert showing close up of RE/Ptn 28/ 468 structures

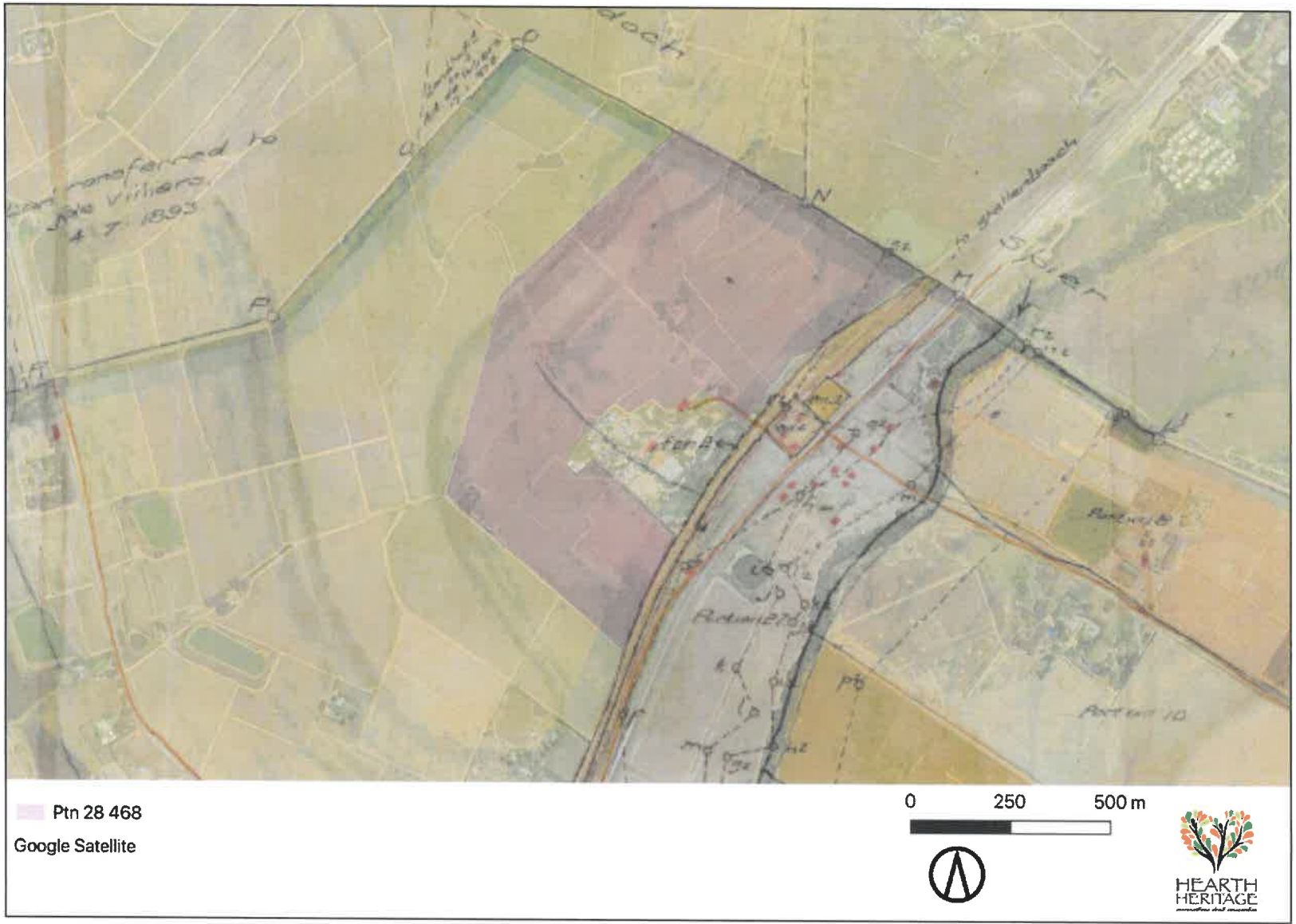


Figure 93: 1920 SG Diagram with RE/Ptn28/ 468 in purple – two historic houses are noted in the area of Drie Geuwels Hotel and the historic barn. The historic entrance road from the R310 is evident as is the non-perennial stream running down through RE/Ptn28/ 468. Both Baden Powell and Annandale Roads are evident.

1083

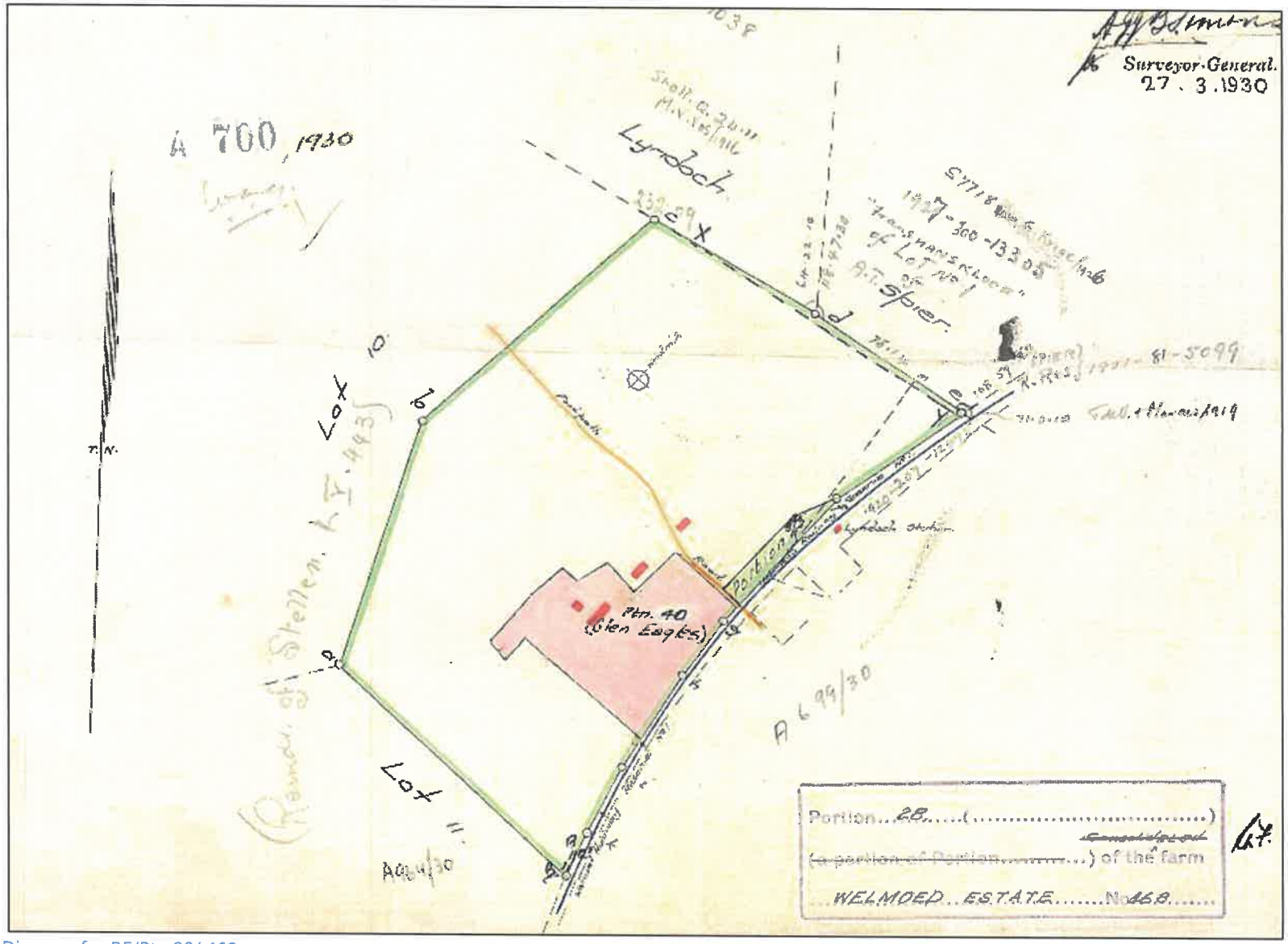


Figure 94: 1930 SG Diagram for RE/Ptn 28/ 468.



Figure 95: 1930 SG Diagram of Welmoed farm over Google aerial image showing ~ RE/Ptn 28/ 468 in purple. The Drie Geuwels and two historic buildings (B and G) are noted as is Lynedoch Station along the railway and the footpath running through RE/Ptn 28/ 468 and onto R310. A windmill is identified where the current concrete dam is located.

1085



Figure 96: 1938 aerial photo



Figure 97: 1944 aerial photo



Figure 98: 1953 aerial photo

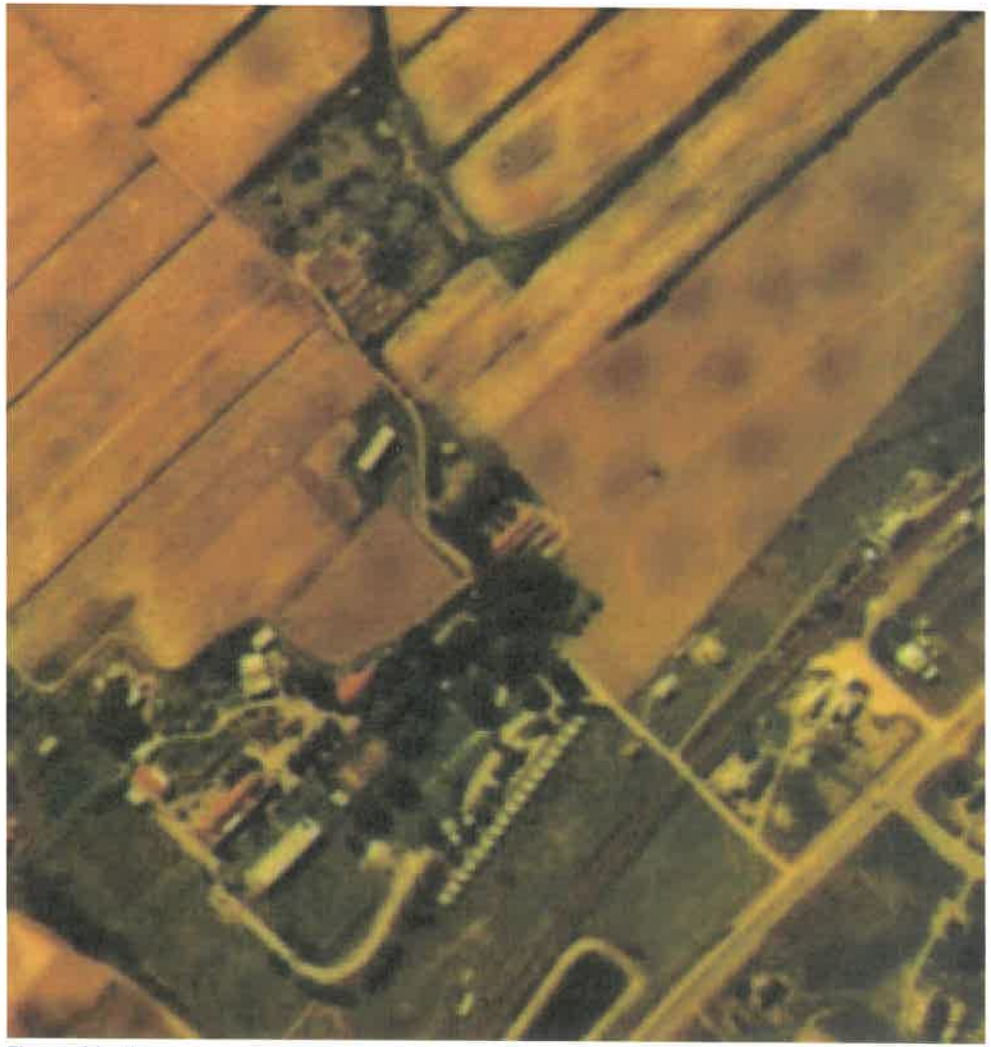


Figure 99: Figure 100: 1977 aerial photo



Figure 101: 2022 aerial image showing surrounding area and excerpt of structures on RE/Ptn28 of 468.

4.1 Archaeological background[10]

Pre-colonial material is known from the wider area, predominantly in the form of Early Stone Age material such as cores, flakes, handaxes and cleavers, although ephemeral Later Stone Age material has also been located (Halkett and Webley, 2009; Webley and Halkett, 2009; Webley and Orton, 2009). The ESA material is quite ubiquitous in the region, but is predominantly identified in secondary context, found along field margins, in vineyards, cuttings, slope washes or other disturbed contexts (Kaplan, 2006). Such finds are generally accorded low significance (Halkett and Webley, 2009; Webley and Halkett, 2009; Webley and Orton, 2009). ESA finds have been recorded in the vicinity of the Drie Geuwels Hotel (Seddon, 1967).

No pre-colonial burials have been recorded in the Lynedoch area, but it is possible, that pre-colonial human remains might be encountered.

Historic period finds might include structural remains of demolished or collapsed buildings, farm structures or irrigation features such as stone-lined channels or stone-lined wells. Closer to the farm buildings, one might expect to locate middens containing household debris such as discarded food remains, glass, ceramic and metal items. Diffuse scatters of such material could be found more widely across the property, but these would likely be in secondary context. Historic period burials are possible, but none have been identified to date.

4.2 Field Assessment

The field survey was conducted on foot to inspect the vineyards and undeveloped portions of RE/Ptn 28 Farm 468, as well as the existing historic structures on the site proposed for development. No archaeological investigation was conducted within the Lynedoch village precinct as this area does not form part of this study area. Historic relationships do, however, exist between the historic buildings within the Lynedoch precinct and the study area, and these have been kept in mind in the consideration of the significance of the historic structures within the area proposed for development. As this assessment is for a Phase 1 HIA, no specific development footprints were available for detailed survey and a general survey was conducted of the whole study area as far as visibility allowed.

4.2.1 Agricultural land

The vineyards and open land encompass most of the development site. The lower reaches of the study area are densely covered in kikuyu grass and act as a seasonal water retention area during the rainy winter season. From halfway up the slope to the top of the site, the land has been divided into vineyards, with some currently being rested/ open. The fields and vineyards were densely covered with foliage limiting visibility, however no structures were identified in these areas on any maps and the seasonal water logging would have made these areas unsuitable for building. Most visibility was along farm tracks and around the existing buildings. Rows of olive trees run along contour lines on the top boundary of the study area.

1089

[10] Smuts, 2021.



Figure 102: Photo of study area showing thick grass lower down with vineyards on slopes.





Figure 103: Looking NE over Lynedoch to Stellenbosch and Jonkershoek Mountains (left); Water collection after rainfall (right).





Figure 104: Looking S over Lynedoch to Helderberg and Macassar (left) and view of seasonal wetland in eastern corner of the site (right).





Figure 105: Looking N from NW crn of site (left); View SE over neglected vineyards (right).

1090

4.2.2 Structures

A few altered historic and modern structures are clustered around the central historic path that runs across RE/Ptn28 Farm 468. The 1920s SG Diagram shows structures in the location of the Drie Guewels Hotel as well as the barn (Structure G) (Figure 93). It is likely that the historic structures on RE/ Ptn 28/ 468 as well as the historic buildings within Lynedoch precinct were constructed and altered in the period of Kramer's ownership of the property as most are indicated on the 1930 SG Diagram (Figure 94). None of the structures on RE/Ptn28/468 were identified in the Stellenbosch Municipal Heritage Survey (2018).

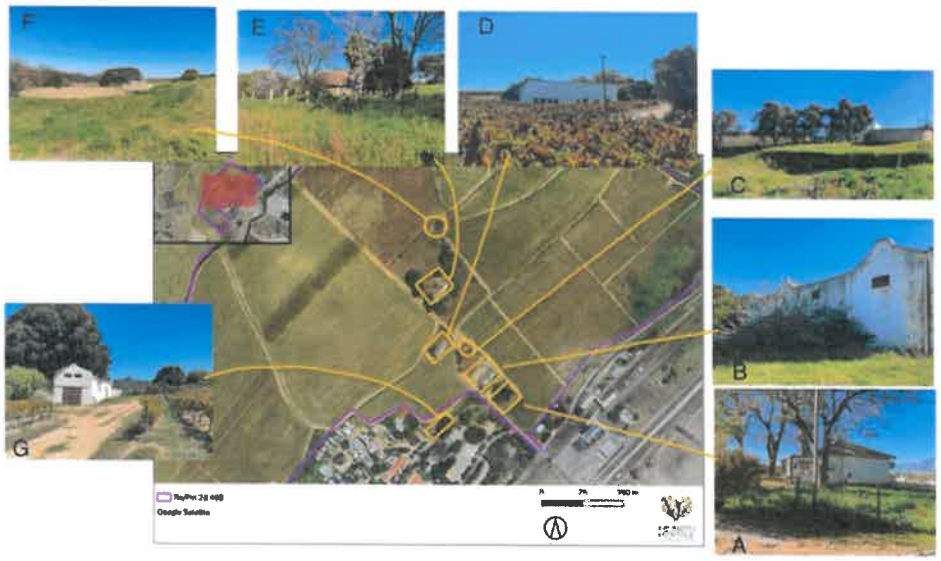


Figure 106: Layout of identified structures on study are

A

- Hipped roof residential building built c. 1955-1977
- Currently occupied.
- Possibly >60yrs
- No cultural material was found relative to the structure.
- NCW



Figure 107: South-west façade of structure at A.



Figure 108: Lower vineyards looking north to structures at A (left) and B (right).

B

- Wine cellar built between 1920-1930. The building has been altered and additions made over time to accommodate function. Currently the building is in a dilapidated state and not maintained well. No cultural material was found relative to the structure.
- The Drie Geuwels Hotel (within Lynedoch precinct) and barn like structures B and G create a linear build typology along the contour and were likely all built by Kramer.
- Suggested Grade IIIB due to its relationship to Drie Guewels.




Figure 109: South-east elevation of structure at B (left) and interior (right)




Figure 110: Interior of structure at B showing (left) and north-west elevation of B with ruined foundation in front (right).

C

- Terrace with a concrete dam/ reservoir
- No cultural material was found relative to the structure.
- >60yrs
- NCW



Figure 111: Terrace with reservoir at C and structure at D behind the treeline.



Figure 112: Vineyards looking north-east to Structures B (right) and D (left)

1092

D

- Double volume barn like structure with wooden internal rafters and floor boards for second floor. The building is in a dilapidated state and is currently being used to store animal feed. No cultural material was found relative to the structure.
- >60yrs
- NCW



Figure 113: Structure at D south east elevation (left) and south west elevation (right) with structure at G in the background.



Figure 114: Interior of structure at D showing wooden ceiling (left) and north west façade of building showing significant terrace cutting (right).

E

- Hipped roof face brick residential building built after 1977 located on terraced landscape.
- Currently occupied.
- No cultural material was found relative to the structure.
- NCW



Figure 115: North-east elevation of structure at D. Remnant of landscapes garden evident.

F

- Water management infrastructure including cement reservoir and modern Jojo tanks.
- Originally marked as "windmill" on 1930 SG Diagram.
- No cultural material was found relative to the structure.
- NCW



Figure 116: Water management infrastructure at F.

1093

G

- >100yrs
- Barn style structure built before 1920 and related to Drie Geuwels hotel structure. The building has been altered and additions made over time to accommodate function. No cultural material was found relative to the structure.
- The Drie Geuwels Hotel (within Lynedoch precinct) and barn like structures B and G create a linear build typology along the contour and were likely all built by Kramer.
- Suggested Grade IIIC due to its relationship to Drie Guewels.



Figure 117: North-east elevation of structure at G with Lynedoch Ecovillage residential buildings behind.



Figure 118: Barn like structures at B (left) and G (right) orientated along the contour.

4.2.3 Archaeological Resources

A foot survey of the study area found a few *ex situ* lithic material remains as is expected for this part of Stellenbosch as well as a collection of C18th to C19th century ceramics located primarily in the and around a low lying vineyard approximately 300m from historic existing structures within the study. Without a clear relationship to any particular existing structure, the ceramics may be related to the structure on the south-east boundary adjacent to the study area, identified in the 1955 aerial, which has since been demolished. The ceramics are most likely *ex situ* due to their location in and along the gravel road and vineyard. Due to their disturbed nature and lack of provenance, these finds are graded as NCW or IIIC and it is recommended that their recording through this report is sufficient mitigation.

Due to the dense vegetation covering the majority of the study area, archaeological visibility was largely limited to the gravel roads and pathways between the vineyards and investigation amongst the vineyards revealed limited visibility or finds. Most of the lower portions of the study area were completely covered in long grass and water logged with rain runoff.

Due to the water run off that is prevalent on the downslope of this study area, it is likely that some archaeological material may have been washed down and now lie within the areas of low visibility directly adjacent to and beneath Lynedoch Road (Clift, 2011) as well as the railway line. The provenance of this material will not be clear and thus the significance for it to add to our understanding of the archaeological history of the area is reduced.

Table 3: Observations noted during field survey 25.7.23

Find ID	Description	Coordinate	Grading	Mitigation
"LYN139"	ESA/ MSA core/ chunk	"S33° 58.988' E18° 45.827'"	NCW	None
"LYN140"	ESA/MSA core/ chunk	"S33° 58.741' E18° 45.927'"	NCW	None
"LYN148"	Ceramic pipe/ Stoneware	"S33° 58.635' E18° 46.198'"	NCW	None
"LYN149"	Concrete boundary marker	"S33° 58.647' E18° 46.210'"	IIIC	20m buffer
"LYN150"	C18th/ C19th ceramic	"S33° 58.802' E18° 46.275'"	IIIC	Record
"LYN158"	C18th/ C19th ceramic	"S33° 58.806' E18° 46.284'"	IIIC	Record
"LYN159"	C18th/ C19th ceramic	"S33° 58.807' E18° 46.284'"	IIIC	Record
"LYN160"	C18th/ C19th ceramic	"S33° 58.822' E18° 46.271'"	IIIC	Record
"LYN168"	Ceramic – possibly porcelain from toy/ doll	"S33° 58.820' E18° 46.297'"	IIIC	Record
"LYN169"	C18th/ C19th ceramic	"S33° 58.820' E18° 46.291'"	IIIC	Record
"LYN170"	C18th/ C19th ceramic and glass (purple)	"S33° 58.857' E18° 46.237'"	IIIC	Record
"LYN178"	Hammer/ upper grindstone	"S33° 58.912' E18° 46.197'"	NCW	None
"LYN179"	Hammer/ upper grindstone	"S33° 58.841' E18° 46.134'"	NCW	None
"LYN180"	C18th/ C19th ceramic	"S33° 58.827' E18° 46.181'"	IIIC	None
"LYN188"	C18th/ C19th ceramic	"S33° 58.846' E18° 46.205'"	IIIC	Record
"LYN189"	C19th ceramic	"S33° 58.814' E18° 46.263'"	NCW	None
"LYN198"	ESA/ MSA core/ chunk	"S33° 58.781' E18° 45.978'"	NCW	None

1096



Figure 119: Survey tracks

1097



Figure 120: Survey finds

4.3 Selected photographic record of artefact observations



Figure 121: Artefact observations L to R: LYN139; LYN149; LYN140; LYN148



Figure 122: Artefact observations L to R: LYN150; LYN158; LYN159; LYN160



Figure 123: Artfefact observations L to R: LYN179; LYN169; LYN189; LYN198

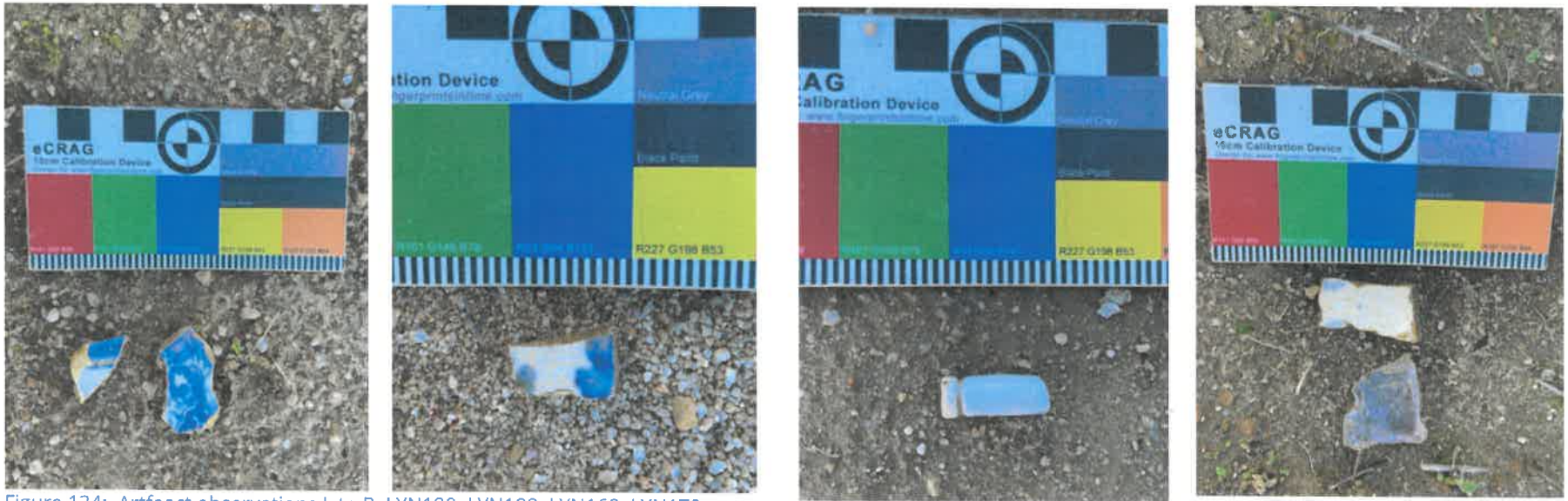


Figure 124: Artfeact observations L to R: LYN180; LYN188; LYN168; LYN170.

6. CONCLUSION

The area proposed for the development has yielded some cultural remains but with varied value and preservation.

Previous archaeological surveys within the Eerste River floodplain have identified large numbers of Early Stone Age artefacts and as such the significance of the ESA within Stellenbosch is well established. The lithic scatter artefacts in the study area are typical of the transformed agricultural landscape of Stellenbosch and have limited value considering that they have been accumulated and modified to their current *ex situ* state. The anticipated negative impact of the proposed development on the archaeological resources is considered low due to the degraded and heavily transformed nature of the landscape from centuries of agricultural use.

The isolated historic ceramics are graded IIIC for their potential to add to the understanding of the Stellenbosch historic landscape context.

The historic structures are common for the Stellenbosch area and have been heavily altered over time, and do not represent any rare or significant heritage. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.

Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them.

It is the conclusion of this Archaeological Impact Assessment report that the proposed development, with recommendations, will not negatively impact on the archaeological heritage resources of the site and should be allowed to proceed.

7. RECOMMENDATIONS

12. No mitigation required for identified pre-colonial archaeological resources.
13. Simple archaeological recording of historic ceramics.
14. The structures at B and G are directly related to the Drie Geuwels Hotel building (IIIA) and, as such, should be graded IIIB as contextual heritage elements and retained in form in any future development.
15. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Guewels and Structures at B and G should be retained in form in any future development.
16. No development within 20m of the concrete boundary marker at LYN149.
17. Archaeological monitoring of all development within 50m of the structures B and G and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
18. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
19. Any buildings older than 60 years will require Section 34 (NHRA, 25 of 1999) permits from Heritage Western Cape for any proposed demolitions, alterations or additions. Since all the buildings on the site are over 60yrs, this applies to all of them.
20. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
21. The HWC Fossil Finds Protocol is to be implemented.

8. BIBLIOGRAPHY

- ACO. 2012. AIA: Portion 128 of Farm 468 (Welmoed Estate), Stellenbosch, Western Cape Province. Report for Lize Malan, Heritage Consultant.
- Bailey, E. 2020. AIA Donkerhoek, RE Far, 956, Simondium, Drakenstein.
- Boeseken, A. J. 1948. *Geskiedenis-Atlas vir Suid-Afrika*. Kaapstad: Nasionale Pers.
- Clift, H. 2011. HIA: Upgrade of R310 (MR168 and TR2/1) and Quarterlink on TR2/1
- Deacon, H.J. and Goosen, R.J. 1997. Phase 1 Archaeological investigation De Zalze Golf and Agricultural Estate. Report prepared for De Zalze Development (Pty) Ltd. Department of Archaeology, University of Stellenbosch.
- Fransen, H. 2004. *The Old Buildings of the Cape*. Cape Town: Jonathan Ball.
- Goodwin, A.J.H. & Van Riet Lowe, C. 1929. The Stone Age Cultures of South Africa. Annals of the South African Museum. 27.
- Guelke, L. 1987. The Southwestern Cape Colony 1657–1750, Freehold Land Grants. *Department of Geography Publication Series, Occasional Paper No.5*, University of Waterloo, Canada.
- Harris, S. 2000. *Who's Where in Cape Architecture*. VASSA.
- Kaplan, 2018. Archaeological Impact Assessment, proposed new municipal cemetery Louw's Bos North and Louw's Bos South, Remainder Farm 502, Stellenbosch, Western Cape. Report prepared for CKR Rumboll & Partners. ACRM, Cape Town
- Kaplan, J. 2015a. Kaplan, J. 2015. Heritage Impact Assessment, proposed, Plankenbrug Sewer Outfall Pipeline, Stellenbosch. Report prepared for Withers Environmental Consultants. ACRM Cape Town
- Kaplan, J. 2015b. Archaeological Impact Assessment, the proposed Vlottenburg Settlement near Stellenbosch. Report prepared for Withers Environmental Consultants. ACRM Cape Town
- Kaplan, J. 2012. Heritage Impact Assessment, the proposed Adam Tas Anaerobic Waste Water Treatment Facility on Erf 2684, Stellenbosch. Report prepared for Resource Management Services. ACRM Cape Town
- Kaplan, J. 2010. Archaeological Impact Assessment proposed establishment of a new cemetery on the Onder Papagaaiberg (Farm 183) Stellenbosch, Western Cape. Report prepared for Cape Lowlands Environmental Services. ACRM Riebeek West
- Kaplan, J. 2009. Archaeological Impact Assessment De Zalze Winelands Golf Estate, Southern Extension. Erf 4 de Zalze and Portion 10 of Farm 502 Stellenbosch. Report prepared for DJ Environmental Consultants. ACRM Riebeek West
- Kaplan, J. 2006. Archaeological Heritage Impact Assessment pre-feasibility study Faure Farms Faure (Helderberg). Report prepared for Chand Environmental Consultants. ACRM Riebeek West.
- Kaplan, J. 2005. Archaeological report Croyden Olive Estate. Report prepared for Ecosense Consulting Environmentalists and Ecologists. ACRM Riebeek West
- Kaplan, J. 2004. Archaeological scoping for the proposed Croyden Vineyard Estate Farm 654 Croyden. Report prepared for Ecosense Consulting Environmentalists and Ecologists. ACRM Riebeek West
- Kaplan, J. 2002. Phase 1 Archaeological Impact Assessment proposed development De Wijnlanden Residential Estate. Report prepared for Greenfield Consultants. ACRM Riebeek West
- Lavin, J. 2019/ 2020. HIA for Proposed vineyard development on Rem Ptn 10 Farm 502, Stellenbosch.
- Malan, A. 2018. "An Archaeological , Archival, Oral and spatial History" compiled for the Stellenbosch Heritage Survey and Management Plan.
- Malan, L. and Albertyn, E. 2012. HIA: Ptn 128 of the Farm Welmoed Estate No 468. Stellenbosch.
- Péringuey, L. 1902. Stone Implements from Paarl and Stellenbosch. Transactions of the South African Philosophical Society 11(4).
- Péringuey, L. 1911. The Stone Ages of South Africa as represented in the collection of the South African Museum. Annals of the South African Museum 8:180-201
- Pinto, H., Smuts, K. & Hart, T. nd. Archaeological Impact Assessment of Historic Wine Cellar, Solms Delta Farm 1460, Groot Drakenstein. Report for Prof. Mark Solms.
- Randle, T. 2014. Heritage Significance of Farm 461 (Spier), Stellenbosch Division. Report for Spier Estate.
- Randle, T. 2016. Draft Scoping Report for Heritage Inventory of tangible resources in the Stellenbosch Municipality. Report for Cape Winelands

Professional Practices in Association (Pty) Ltd.
- Seddon, D. 1966. Some Early Stone Age surface sites around Stellenbosch, S.W. Cape. South African Archaeological Bulletin 22:57-59.
- Smuts, K. 2012. Report on research excavation of the stables building at Solms Delta Farm, Groot Drakenstein, Western Cape. Report for Heritage Western Cape.
- Smuts, K. 2012. An archaeology of the eighteenth and nineteenth century Cape wine economy from the perspective of Solms Delta and Babylonstoren. MPhil., Archaeology Department, University of Cape Town.
- Webley, L. and Halkett, D. 2012. AIA for Ptn 128 of the Farm Welmoed Estate No. 468, Stellenbosch.
- Vos, H. 1998. Welmoed Farm, Stellenbosch: Investigation of the C19th graveyard of the Van der Bijl family.

WEB RESOURCES
- https://www.sustainabilityinstitute.net/lynedoch-valley/
- https://www.stellenboschheritage.co.za/stellenbosch-resources/stellenbosch-heritage/graded-stellenbosch-heritage

MAPPING
- Leonard Guelke's 1987 map of "The Southwestern Cape Colony, 1657 - 1750, Freehold Grants", Department of Geography, University of Waterloo.
- Topocadastral imagery from the National Geo-Spatial Information Department, Mowbray. Surveyor General's 1900 Divisional Map of Stellenbosch, National Geo- Spatial Information Department, Mowbray.
- Surveyor General's map of The South Western Districts: Sheets 1 & 13, Cape and Malmesbury (1880 - 1900), National Geo-Spatial Information Department, Mowbray.
- Aerial photography for the area, National Geo-Spatial Information Department, Mowbray.
- Cape Farm Mapper
- Google Earth

APPENDIX B: PALAEONTOLOGICAL IMPACT ASSESSMENT

1104

Palaeontological Impact Assessment for the proposed development on Portion 28 of Farm Welmoed 468, southwest of Stellenbosch, Western Cape Province

Desktop Study (Phase 1)

For

Hearth Heritage

23 August 2023

Prof Marion Bamford
Palaeobotanist
P Bag 652, WITS 2050
Johannesburg, South Africa
Marion.bamford@wits.ac.za

Expertise of Specialist

The Palaeontologist Consultant: Prof Marion Bamford
Qualifications: PhD (Wits Univ, 1990); FRSSAf, mASSAf, PSSA
Experience: 34 years research and lecturing in Palaeontology
26 years PIA studies and over 350 projects completed

Declaration of Independence

This report has been compiled by Professor Marion Bamford, of the University of the Witwatersrand, sub-contracted by Hearth Heritage, South Africa. The views expressed in this report are entirely those of the author and no other interest was displayed during the decision making process for the Project.

Specialist: Prof Marion Bamford

Signature:

Executive Summary

A Palaeontological Impact Assessment was requested for the proposed development on RE/ Ptn 28 Farm 468, Welmoed, Stellenbosch, Western Cape. The site is adjacent to Lynedoc Eco Village, between Eeste River and Stellenbosch.

To comply with the regulations of the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a desktop Palaeontological Impact Assessment (PIA) was completed for the proposed development.

The proposed site lies on the non-fossiliferous granites of the Malmesbury Group and on moderately fossiliferous Quaternary sands and alluvium. No fossils have been reported from the site. Nonetheless, a Fossil Chance Find Protocol should be added to the EMPr. Based on this information it is recommended that no further palaeontological impact assessment is required unless fossils are found by the contractor, environmental officer or other designated responsible person once excavations, drilling or mining activities have commenced. Since the impact will be low, as far as the palaeontology is concerned, the project should be authorised.

ASPECT	SCREENING TOOL SENSITIVITY	VERIFIED SENSITIVITY	OUTCOME STATEMENT/ PLAN OF STUDY	RELEVANT SECTION MOTIVATING VERIFICATION
Palaeontology	Moderate	Very Low	Paleontological Impact Assessment	Section 7.2. SAHRA Requirements

Table of Contents

Expertise of Specialist 1
Declaration of Independence 1
1. Background 4
2. Methods and Terms of Reference 7
3. Geology and Palaeontology 7
i. Project location and geological context 7
ii. Palaeontological context 9
4. Impact assessment 9
5. Assumptions and uncertainties 11
6. Recommendation 11
7. References 12
8. Chance Find Protocol 12
9. Appendix A – Examples of fossils 13
10. Appendix B – Details of specialist 14

Figure 1: Google Earth map of the general area to show the relative land marks. 6
Figure 2: Google Earth Map of the proposed development 6
Figure 3: Geological map of the area around the project site 7
Figure 4: SAHRIS palaeosensitivity map for the site 9

1106

1. Background

A Palaeontological Impact Assessment was requested for the proposed development on RE/ Ptn 28 Farm 468, Welmoed, Stellenbosch, Western Cape. The site is adjacent to Lynedoch Eco Village, between Eeste River to the southwest and Stellenbosch to the northeast. It is along Baden Powell Road and the area has been cultivated (Figures 1-2).

A Palaeontological Impact Assessment was requested for the Welmoed project. To comply with the regulations of the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a desktop Palaeontological Impact Assessment (PIA) was completed for the proposed development and is reported herein.

Table 1: National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) - Requirements for Specialist Reports (Appendix 6).

	A specialist report prepared in terms of the Environmental Impact Regulations of 2017 must contain:	**Relevant section in report**
ai	Details of the specialist who prepared the report,	Appendix B
aii	The expertise of that person to compile a specialist report including a curriculum vitae	Appendix B
b	A declaration that the person is independent in a form as may be specified by the competent authority	Page 1
c	An indication of the scope of, and the purpose for which, the report was prepared	Section 1
ci	An indication of the quality and age of the base data used for the specialist report: SAHRIS palaeosensitivity map accessed – date of this report	Yes
cii	A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	Section 5
d	The date and season of the site investigation and the relevance of the season to the outcome of the assessment	N/A
e	A description of the methodology adopted in preparing the report or carrying out the specialised process	Section 2
f	The specific identified sensitivity of the site related to the activity and its associated structures and infrastructure	Section 4
g	An identification of any areas to be avoided, including buffers	N/A
h	A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including	N/A

	A specialist report prepared in terms of the Environmental Impact Regulations of 2017 must contain:	**Relevant section in report**
	buffers;	
i	A description of any assumptions made and any uncertainties or gaps in knowledge;	Section 5
j	A description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment	Section 4
k	Any mitigation measures for inclusion in the EMPr	Section 8, Appendix A
l	Any conditions for inclusion in the environmental authorisation	N/A
m	Any monitoring requirements for inclusion in the EMPr or environmental authorisation	Section 8, Appendix A
ni	A reasoned opinion as to whether the proposed activity or portions thereof should be authorised	Section 6
nii	If the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Sections 6, 8
o	A description of any consultation process that was undertaken during the course of carrying out the study	N/A
p	A summary and copies of any comments that were received during any consultation process	N/A
q	Any other information requested by the competent authority.	N/A
2	Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	N/A



Figure 1: Google Earth map of the general area to show the relative landmarks. The Welmoed project is shown by the white polygon.



Figure 2: Google Earth Map of the proposed development on RE/ Ptn 28 Farm 468, Welmoed shown by the white polygon.

2. Methods and Terms of Reference

The Terms of Reference (ToR) for this study were to undertake a PIA and provide feasible management measures to comply with the requirements of SAHRA.
The methods employed to address the ToR included:

1. Consultation of geological maps, literature, palaeontological databases, published and unpublished records to determine the likelihood of fossils occurring in the affected areas. Sources include records housed at the Evolutionary Studies Institute at the University of the Witwatersrand and SAHRA databases;
2. Where necessary, site visits by a qualified palaeontologist to locate any fossils and assess their importance (*not applicable to this assessment*);
3. Where appropriate, collection of unique or rare fossils with the necessary permits for storage and curation at an appropriate facility (*not applicable to this assessment*); and
4. Determination of fossils' representivity or scientific importance to decide if the fossils can be destroyed or a representative sample collected (*not applicable to this assessment*).

3. Geology and Palaeontology

i. Project location and geological context

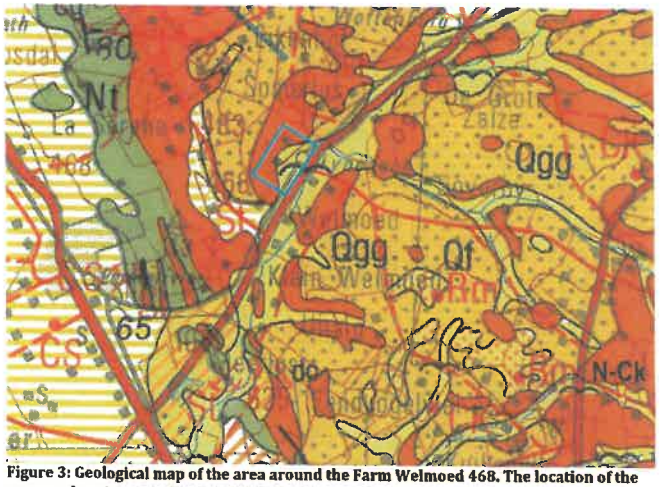


Figure 3: Geological map of the area around the Farm Welmoed 468. The location of the proposed project is indicated within the blue rectangle. Abbreviations of the rock types

1108

are explained in Table 2. Map enlarged from the Geological Survey 1: 250 000 map 3318 Cape Town.

Table 2: Explanation of symbols for the geological map and approximate ages (Gresse et al., 2006; Roberts et al., 2006; Scheepers and Schoch, 2006). SG = Supergroup; Fm = Formation; Ma = million years; grey shading = formations impacted by the project.

Symbol	Group/Formation	Lithology	Approximate Age
Q	Quaternary	Alluvium	Quaternary ca 1.0 Ma to Present
Qs	Quaternary	Light grey and pale red sandy soil	Quaternary ca 1.0 Ma to Present
Qgg	Quaternary	Gravelly clay or loamy soil	Quaternary ca 1.0 Ma to Present
Qf	Quaternary	Limestone and calcrete	Quaternary ca 1.0 Ma to Present
Nt	Tygerberg Fm, Malmesbury Group	Greywacke, phyllite	Cambrian Ca 550-530 Ma
N-Ck	Kuils River Batholith, Helderberg Group, Cape Granite Suite	Granite, porphyritic in places	Cambrian Ca 550-500 Ma

The project lies in the southern margin of South Africa where the Neoproterozoic (Namibian) to Early Cambrian rocks are exposed. They comprise a system of mobile belts that have welded together the older cratons of the African continent (Gresse et al., 2006) as well as some much younger overlying Quaternary sands (Figure 3).

In the Saldania mobile belt are several terranes or blocks of rocks. Within these the Malmesbury Group occurs in three terranes, namely the Boland, the Swartland and the Tygerberg Terranes (Gresse et al., 2006). In the latter only the **Tygerberg Formation** is recognised and it is composed of greywacke and phyllites. These are deformed argillaceous sandstones that are highly indurated and poorly sorted because of tectonic activity in the past.

Intruding through the area are batholiths and plutons of the Cape Granite Suite and one of these is the Kuils River Batholith (Scheepers and Schoch). Granites are volcanic rocks and do not preserve fossils.

The overlying Sandveld Group of Quaternary age (Miocene to Holocene) is composed of sands that have been affected by sealevel change, fluvial, estuarine and marine activities. These are difficult to date because the sands have been reworked but in the older deposits fossils of plants, terrestrial and marine vertebrates and marine invertebrates have been used for biostratigraphy (Roberts et al., 2006). The overlying sands in the river valleys and depressions are the more recent, unconsolidated aeolian sands and alluvium.

ii. Palaeontological context

The palaeontological sensitivity of the area under consideration is presented in Figure 4. The site for development is in the non-fossiliferous Kuils River batholith (grey) and on very young sands and alluvium along the river valley (green).



Figure 4: SAHRIS palaeosensitivity map for the site for the proposed development on Portion 28 of Farm Welmoed 468 shown within the yellow rectangle. Background colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.

Although sands do not preserve fossils because they are coarse-grained, well-aerated and transported (for preservation of fossils a stable, anoxic environment is required (Cohen, 1995), the sands might have transported fossils from the source area. In this case, only robust yet fragmentary fossils would be transported so their primary context would be lost. Such fossils are of limited interest to science.

4. Impact assessment

An assessment of the potential impacts to possible palaeontological resources considers the criteria encapsulated in Table 3:

Table 3a: Criteria for assessing impacts

PART A: DEFINITION AND CRITERIA		
Criteria for ranking of the SEVERITY/NATURE of environmental impacts	H	Substantial deterioration (death, illness or injury). Recommended level will often be violated. Vigorous community action.
	M	Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be violated. Widespread complaints.
	L	Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	L+	Minor improvement. Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	M+	Moderate improvement. Will be within or better than the recommended level. No observed reaction.
	H+	Substantial improvement. Will be within or better than the recommended level. Favourable publicity.
Criteria for ranking the DURATION of impacts	L	Quickly reversible. Less than the project life. Short term
	M	Reversible over time. Life of the project. Medium term
	H	Permanent. Beyond closure. Long term.
Criteria for ranking the SPATIAL SCALE of impacts	L	Localised - Within the site boundary.
	M	Fairly widespread – Beyond the site boundary. Local
	H	Widespread – Far beyond site boundary. Regional/ national
PROBABILITY (of exposure to impacts)	H	Definite/ Continuous
	M	Possible/ frequent
	L	Unlikely/ seldom

Table 3b: Impact Assessment

PART B: Assessment		
SEVERITY/NATURE	H	-
	M	-
	L	Sands and alluvium do not preserve fossils; so far there are no records from the alluvium of plant or animal fossils in this region so it is very unlikely that fossils occur on the site. The impact would be negligible
	L+	-
	M+	-
	H+	-
DURATION	L	-
	M	-
	H	Where manifest, the impact will be permanent.

PART B: Assessment		
SPATIAL SCALE	L	Since the only possible fossils within the area would be transported fossil fragments in the alluvium, the spatial scale will be localised within the site boundary.
	M	-
	H	-
PROBABILITY	H	-
	M	-
	L	It is extremely unlikely that any fossils would be found in the loose soils and sands that cover the area or in the alluvium that will be excavated. Nonetheless, a Fossil Chance Find Protocol should be added to the eventual EMPr.

Based on the nature of the project, surface activities may impact upon the fossil heritage if preserved in the development footprint. The geological structures suggest that the rocks are either the wrong kind (volcanic) or too friable and transported to contain intact fossils. Since there is an extremely small chance that transported fossils may be trapped in the sands and may be disturbed a Fossil Chance Find Protocol has been added to this report. Taking account of the defined criteria, the potential impact to fossil heritage resources is extremely low.

5. Assumptions and uncertainties

Based on the geology of the area and the palaeontological record as we know it, it can be assumed that the formation and layout of the granites, sandstones, shales and sands are typical for the country and do not contain fossil plant, insect, invertebrate and vertebrate material. The sands of the Quaternary period would not preserve fossils but might have transported fragmentary fossils.

6. Recommendation

Based on experience and the lack of any previously recorded fossils from the area, it is extremely unlikely that any fossils would be preserved in the overlying soils of the Quaternary. There is a very small chance that transported and fragmentary fossils may occur in the sands and alluvium a Fossil Chance Find Protocol should be added to the EMPr. If fossils are found by the environmental officer, or other responsible person once excavations for foundations and infrastructure have commenced then they should be rescued, Heritage Western Cape notified and if necessary a palaeontologist called to assess and collect a representative sample. The impact on the palaeontological heritage would be low, as far as the palaeontology is concerned, so the project should be authorised.

ASPECT	SCREENING TOOL SENSITIVITY	VERIFIED SENSITIVITY	OUTCOME STATEMENT/ PLAN OF STUDY	RELEVANT SECTION MOTIVATING VERIFICATION
Palaeontology	Moderate	Very Low	Paleontological Impact Assessment	Section 7.2. SAHRA Requirements

7. References

Gresse, P.G., von Veh, M.W., Frimmel, H.E., 2006. Namibian (Neoproterozoic) to Early Cambrian Successions. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 395-420.

Plumstead, E.P., 1969. Three thousand million years of plant life in Africa. Geological Society of southern Africa, Annexure to Volume LXXII. 72pp + 25 plates.

Roberts, D.L., Botha, G.A., Maud, R.R., Pether, J., 2006. Coastal Cenozoic deposits. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 605-628.

Scheepers, R., Schoch, A.E., 2006. The Cape Granite Suite. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 421-432.

8. Chance Find Protocol

Monitoring Programme for Palaeontology – to commence once the excavations / drilling activities begin.

1. The following procedure is only required if fossils are seen on the surface and when drilling/excavations commence.
2. When excavations begin the rocks and discard must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (plants, insects, bone or coal) should be put aside in a suitably protected place. This way the project activities will not be interrupted.
3. Photographs of similar fossils must be provided to the developer to assist in recognizing the fossil plants, vertebrates, invertebrates or trace fossils in the shales and mudstones (for example see Figures 5-6). This information will be built into the EMP's training and awareness plan and procedures.

4. Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment.
5. If there is any possible fossil material found by the developer/environmental officer then a qualified palaeontologist sub-contracted for this project, should visit the site to inspect the selected material and check the dumps where feasible.
6. Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site an HWC or SAHRA permit must be obtained. Annual reports must be submitted to HWC and SAHRA as required by the relevant permits.
7. If no good fossil material is recovered then no site inspections by the palaeontologist will be necessary. A final report by the palaeontologist must be sent to HWC and SAHRA once the project has been completed and only if there are fossils.
8. If no fossils are found and the excavations have finished then no further monitoring is required.

9. Appendix A – Examples of fossils from the Quaternary



Figure 5: Photographs of fragmented and transported fossils found in transported Quaternary sands and alluvium.

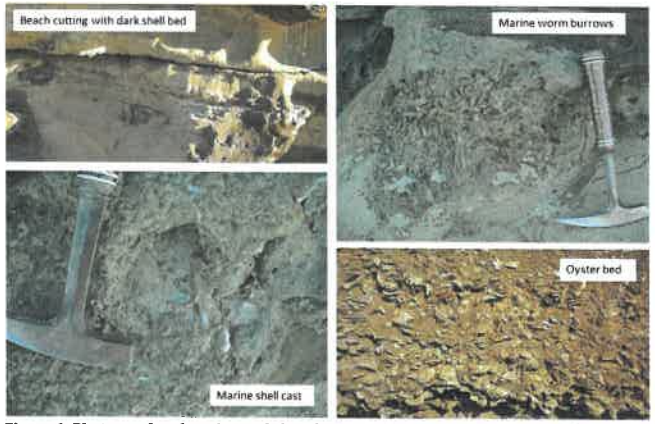


Figure 6: Photographs of marine and shoreline fossils that could be transported into the Quaternary valleys and buried by sands.

10. Appendix B – Details of specialist

Curriculum vitae (short) - Marion Bamford PhD
January 2023

Present employment: Professor; Director of the Evolutionary Studies Institute. Member Management Committee of the NRF/DSI Centre of Excellence Palaeosciences, University of the Witwatersrand, Johannesburg, South Africa

Telephone : +27 11 717 6690
Cell : 082 555 6937
E-mail : marion.bamford@wits.ac.za ; marionbamford12@gmail.com

ii) Academic qualifications
Tertiary Education: All at the University of the Witwatersrand:
1980-1982: BSc, majors in Botany and Microbiology. Graduated April 1983.
1983: BSc Honours, Botany and Palaeobotany. Graduated April 1984.
1984-1986: MSc in Palaeobotany. Graduated with Distinction, November 1986.
1986-1989: PhD in Palaeobotany. Graduated in June 1990.

iii) **Professional qualifications**
Wood Anatomy Training (overseas as nothing was available in South Africa):
1994 - Service d'Anatomie des Bois, Musée Royal de l'Afrique Centrale, Tervuren, Belgium, by Roger Dechamps
1997 - Université Pierre et Marie Curie, Paris, France, by Dr Jean-Claude Koeniguer
1997 - Université Claude Bernard, Lyon, France by Prof Georges Barale, Dr Jean-Pierre Gros, and Dr Marc Philippe

iv) **Membership of professional bodies/associations**
Palaeontological Society of Southern Africa
Royal Society of Southern Africa - Fellow: 2006 onwards
Academy of Sciences of South Africa - Member: Oct 2014 onwards
International Association of Wood Anatomists - First enrolled: January 1991
International Organization of Palaeobotany – 1993+
Botanical Society of South Africa
South African Committee on Stratigraphy – Biostratigraphy - 1997 - 2016
SASQUA (South African Society for Quaternary Research) – 1997+
PAGES - 2008 –onwards: South African representative
ROCEEH / WAVE – 2008+
INQUA – PALCOMM – 2011+onwards

v) **Supervision of Higher Degrees**

All at Wits University

Degree	Graduated/completed	Current
Honours	13	0
Masters	13	3
PhD	13	7
Postdoctoral fellows	14	4

vi) **Undergraduate teaching**
Geology II – Palaeobotany GEOL2008 – average 65 students per year
Biology III – Palaeobotany APES3029 – average 25 students per year
Honours – Evolution of Terrestrial Ecosystems; African Plio-Pleistocene Palaeoecology; Micropalaeontology – average 12 - 20 students per year.

vii) **Editing and reviewing**
Editor: Palaeontologia africana: 2003 to 2013; 2014 – Assistant editor
Guest Editor: Quaternary International: 2005 volume
Member of Board of Review: Review of Palaeobotany and Palynology: 2010 –
Associate Editor: Cretaceous Research: 2018-2020
Associate Editor: Royal Society Open: 2021 -
Review of manuscripts for ISI-listed journals: 30 local and international journals

viii) **Palaeontological Impact Assessments**
25 years' experience in PIA site and desktop projects
- Selected from recent projects only – list not complete:
- Skeerpoort Farm Mast 2020 for HCAC

- Vulindlela Eco village 2020 for 1World
- KwaZamakhule Township 2020 for Kudzala
- Sunset Copper 2020 for Digby Wells
- McCarthy-Salene 2020 for Prescali
- VLNR Lodge 2020 for HCAC
- Madadeni mixed use 2020 for Enviropro
- Frankfort-Windfield Eskom Powerline 2020 for 1World
- Beaufort West PV Facility 2021 for ACO Associates
- Copper Sunset MR 2021 for Digby Wells
- Sannaspos PV facility 2021 for CTS Heritage
- Smithfield-Rouxville-Zastron PL 2021 for TheroServe
- Glosam Mine 2022 for AHSA
- Wolf-Skilpad-Grassridge OHPL 2022 for Zutari
- Iziduli and Msenge WEFs 2022 for CTS Heritage
- Hendrina North and South WEFs & SEFs 2022 for Cabanga
- Dealesville-Springhaas SEFs 2022 for GIBB Environmental
- Vhuvhili and Mukondelei SEFs 2022 for CSIR
- Chemwes & Stilfontein SEFs 2022 for CTS Heritage
- Equestria Exts housing 2022 for Beyond Heritage
- Zeerust Salene boreholes 2022 for Prescali
- Tsakane Sewer upgrade 2022 for Tsimba
- Transnet MPP inland and coastal 2022 for ENVASS
- Ruighoek PRA 2022 for SLR Consulting (Africa)
- Namli MRA Steinkopf 2022 for Beyond Heritage

ix) **Research Output**
Publications by M K Bamford up to January 2022 peer-reviewed journals or scholarly books: over 170 articles published; 5 submitted/in press; 14 book chapters.
Scopus h-index = 31; Google Scholar h-index = 39; -i10-index = 116 based on 6568 citations.
Conferences: numerous presentations at local and international conferences.

C08 FINE GRAINED SCATTERED, YET ORDERED LANDSCAPE

The unit has a degree of architectural, landmark, historical, artistic and contextual significance next to the R310.

MAIN AIM: ENHANCE (MANAGE) AND INTERVENE (CHANGE): Improve land parcels by strengthening or reinforcing agricultural use and its characteristic elements and features, most importantly the tree-lines and windbreaks between properties, as well as vineyards and farmstead/werf areas. Non-agricultural development should be located at the Lynedoch node.

MAIN VALUE: HISTORIC - Appropriate use of heritage features is critical for their preservation. Development that will result in the loss of the sense of "openness" of the space, as well as its historic use as agriculture, will threaten the heritage value of this landscape unit.

CONSERVATION SYSTEM: This landscape unit is located alongside the R310 scenic route, has over 70% visibility and forms part of a wider landscape of exceptional scenic qualities. The visual impact of proposed developments must be carefully considered. This landscape unit also forms part of the green transitions conservation system, so maintenance of its green and open agricultural character is important.

DEVIATED LAND USE/USES THAT WILL LIKELY ERODE LANDSCAPE CHARACTER: Over-scaled private dwellings, cluttered properties, gated residential estates, large-scale industrial structures, suburban development, mining, landfill or sewage plant, parking lot, business park, isolated shopping centre.



DEVELOPMENT CRITERIA

Please refer to the Conservation Management section of the CMP for general guidelines, explanatory text/terms, and the process behind developing the Development Criteria. The Development Criteria sheets are based on Landscape and Townscape typologies found within the Stellenbosch Municipality. The focus is on the current heritage elements and character of the landscapes, and the criteria are discussed under the five value lines (ecologic, aesthetic, historic, social and economic). They should also be read in conjunction with the Heritage Inventory (individual sites) and the Conservation Systems (Appendix 3 of the CMP).



A ECOLOGICAL

Significance: The landscape unit is not of very high ecological significance, when compared to its surrounds.

Development Criteria:

- Protect biodiversity by not allowing development in areas of ecological sensitivity such as wetlands, drainage lines, steep slopes, floodplains, areas with a high water table, areas with high biodiversity, and areas with threatened species.

B AESTHETIC

Significance:

This land unit features gradual south-east facing slopes with a single drainage line just off the northern boundary leading into the Eerste River.

The contrast with the flat floodplains of the Eerste River elevates the scenic quality.

It is visible from Baden Powell Drive and Annandale Road with expansive views back towards the Stellenbosch mountain range.

Characteristically rural in character with a textured balance in its coloured patchwork of vineyards interlaced with vegetated edges and small pockets of settlement.

The edge of the rolling hills adds value to the scenic route as one enters the Cape Winelands from the N2. Its typology is of a very fine grain with a scattered, yet ordered feel.

Taking into account the history and associations of this landscape unit, any form of development should challenge the current tendencies (gated exclusion) and to pioneer an integrated society.

Development Criteria:

- Avoid development or infrastructure (such as wind turbines, communication towers and power lines) on rocky outcrops or ridgelines, because of their high visibility and the visual sensitivity of the skyline.
- Avoid the visual cluttering of the landscape by intrusive signage, and the intrusion of commercial, corporate development along roads (such as one-stop filling stations).
- Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines and hillcrests. Retain the integrity of the distinctive and predominantly agricultural landscape character.
- The construction of over-scaled private dwellings and other structures in locations of high visual significance, and on visually-exposed promontories, ridges and ridgelines, should be discouraged. Preferred locations are sites that have already been settled (for instance consolidated around farmyards and at the Lynedoch node), or sites 'tucked into' the landscape, using the same criteria for site-location as the adjacent, older farmsteads.
- Land use related to agricultural use but with large visual intrusions / clutter (such as timber yards and nurseries) should be carefully assessed. Mitigation measures should be put in place before any development or rezoning is permitted to allow such use.
- Encourage mitigation measures (for instance use of vegetation) to "embed" existing over-scaled industrial structures and/or nursery uses within the surrounding agricultural landscape.
- Land-use and infrastructure that is not

one of the core agricultural systems (vineyards and orchards), could have a negative visual effect in the landscape (greenhouses, black plastic ground cover, shade netting, chicken batteries). The placement of these agricultural elements should be carefully considered.
- Care should be taken to avoid locating strawberry fields along scenic routes. These elements should be confined to designated and traditional areas (such as Annadale).

C HISTORIC
Significance:
Early Stone Age tools found were found on the slopes of this land unit, and an early freehold farm occupied a large stretch of the south-eastern boundary.

The hamlet of Lynedoch is situated around the former Drie Gewels Hotel, one of the finest examples of Cape Revival buildings within the winelands.

Development Criteria:
- Handaxes and cleavers, etc. are found throughout the area, and their heritage significance is clear. All archaeological material is protected in terms of the NHRA.
- Any remaining structures or fabric associated with the first freehold land grants should be protected, and included as part of the heritage inventory.
- Alterations and additions to conservation-worthy structures should be sympathetic to their architectural character and period detailing. Inappropriate maintenance can compromise historic fabric.
- Promote urban densification within the historic node to protect the rural landscape as the main communal asset. Urban and rural regeneration should include former industrial sites.
- Respect traditional settlement patterns. This includes the backdrop of the natural landscape against which settlement is sited, as well as its spatial structure. Any development that negatively impacts the inherent character of the settlement should be discouraged.
- New interventions within settlements must respect the layout, scale, massing, hierarchy, alignments, access, landscaping and setting of the existing settlement pattern.

RAILWAY LINE
- The existing rail networks present an opportunity for a new typology of integrated development around stations, effectively connecting new development sites to the historic core of the towns and villages of Stellenbosch Municipality.
- Historic settlement patterns associated with the development of the railways should be respected.
- The potential of the railway network as an existing but underutilised transport system to and within the Winelands could enhance the cultural significance of the landscape, if harnessed effectively.

D SOCIAL
Significance:
The Sustainability Institute's Eco Village (with school and wetland) is a good example of integration of mixed income and use. In the 1980's, the Drie Gewels Hotel hosted music concerts associated with the Voelvry movement (a genre of anti-apartheid Afrikaans music).

Development Criteria:
- Proposed development should recognise and consider the relationship of communities to their land and communal facilities.
- Prevent gentrification from threatening the distinctiveness of the unique settlements within the landscape unit. In particular, gentrification of rural settlements through lifestyle 'rural' estates be discouraged.
- Encourage development that follows the pattern of, and builds on the example of, the Lynedoch eco-village. Here, a model for integrated communities with different income levels has been successfully applied and tested.
- Security estates and gated communities are mono-functional entities which exclude rather than foster integrated planning ideals. In many cases, historic farms, vineyards, orchards, and workers cottages located around the edges of towns have been sanitised and incorporated in such urban sprawl. A typology that should be considered is a self-sufficient, sustainable and socially transformed 'villages' with different income levels, incorporating a level of subsidised housing.

E ECONOMIC
Significance:
Most of this pocket has high soil suitability for vineyards.

The railway line forms the southern boundary to this land unit.

The Eco Village is situated in close proximity to Lynedoch railway station, which has a very invasive and bulky concrete pedestrian bridge over the road, and a giant strawberry is the landmark for a filling station and store.

Development Criteria:
- Developments that promote the continuity of the core function of agriculture within the Stellenbosch winelands should be promoted.
- Care should be taken that vineyards and other agricultural uses are not needlessly destroyed, and replaced by non-agricultural development.
- The proliferation of non-agricultural uses, particularly in visually prominent locations, should be avoided. This is in order to protect the predominantly agricultural character of the landscape.
- The subdivision of farms into smaller uneconomic 'lifestyle' plots fundamentally erodes the agricultural character of the landscape and should be discouraged. Rather, maintain larger unified land areas to protect larger landscape continuums that display a unified scenic character.
- Agricultural netting and tunnels should preferably not be permitted within the 500m buffer along scenic route corridors (see Scenic Route conservation system).

APPENDIX D: Stellenbosch Municipal Heritage Survey Information Sheets

SITE NAME: DRIE GEWELS HOTEL

LANDSCAPE UNIT NUMBER: C08

LANDSCAPE UNIT GRADE: Grade II

ADDRESS OF THE SITE

PROPERTY NO	28
SITE ADDRESS	Off Lynedoch Road
CURRENT USE	Hotel
ORIGINAL USE	House

PROTECTION AND GRADING

Curr.NHRA Protection	S34
>60YRS?	**Yes**
PROPOSED GRADING	Grade IIIa

SIGNIFICANCE

Associational	Medium	Representivity	Medium
Age	Low	Rarity	High
Scientific	None	Archaeology	Low
Symbolic	Medium	Intangible	
Architectural	Medium		

ARCHITECTURAL STYLE

Cape Revival

ARCHITECT/BUILDER

MAP





LATITUDE/LONGITUDE

-33.98235 18.767728

SITE DESCRIPTION

A grand old Cape Revival house, set on the slope and on a plinth, with a deep stoep supported by Doric columns and elaborate balustrade, and original joinery including an extremely fine entrance door with fan and slide lights, lead-paned windows and French doors. The structure retains its characteristic red-tiled hipped roof, with tall Cape Revival gables to either side of the stoep.

SITE HISTORY

Rudolph Kramer, an extremely wealthy Jewish gentleman, owned the United Tobacco Company of SA and had large financial interests in The Castle Wine & Brandy Company. He purchased the farm Welmoed in 1917 and built and lived in this new house, set on the s

STATEMENT OF SIGNIFICANCE

This site has a high degree of architectural significance, as one of the finest examples of a Cape Revival house within the winelands. In the 1980s, the building - then an hotel - was used for music concerts that were associated with the Voelvry Movement (a genre of anti-apartheid Afrikaans music). It is currently used by the Sustainability Institute of the University. The site has a high degree of architectural, landmark, historical, artistic and contextual significance. It is a landmark site along the R310.

LANDSCAPE SIGNIFICANCE

Tall, mature palm trees surround the structure and are characteristic of the site.

INTERIOR DESCRIPTION

CONTEXTUAL DESIGN

This house is a very fine example of early 20th century Cape Dutch Revival architecture in the winelands. Prior to its purchase by the Sustainability Institute in 1999, the old hotel and its outbuildings were in a state of disrepair, and have since been

GROUPING WITH OTHER SITES

INVASIVE ELEMENTS

EVIDENCE OF DEMOLITION

HERITAGE VULNERABILITY

REFERENCES

DATE

1117

SITE NAME: WELMOED

LANDSCAPE UNIT NUMBER: C11
LANDSCAPE UNIT GRADE: Grade II

ADDRESS OF THE SITE

PROPERTY NO
SITE ADDRESS Off R310
CURRENT USE Agri-industry
ORIGINAL USE Agricultural werf

SIGNIFICANCE

Associational	Medium	Representivity	Medium
Age	Medium	Rarity	Medium
Scientific	None	Archaeology	Medium
Symbolic	Low	Intangible	Low
Architectural	Medium		

PROTECTION AND GRADING

Curr.NHRA Protection S34
>60YRS?
PROPOSED GRADING Grade IIIa

ARCHITECTURAL STYLE

Cape Dutch with late Victorian additions

ARCHITECT/BUILDER

MAP





LATITUDE/LONGITUDE

-33.9917116667 18.76819

SITE DESCRIPTION

A linear werf consisting of a farmhouse and three long barn structures, a bell-tower set on the approach avenue (now separated from the R310), and a burial ground. Unfortunately, the third (southernmost) barn building and burial ground now lie on a subdivided potion - Farm 128/468. The complex occupies a natural rise that runs parallel to the Eerste River, which forms the eastern boundary and backdrop to the complex. There is historic fabric evident in the northern edge of the main farmhouse, and would have faced towards Lynedoch and the R310, creating a landmark element, but this has been visually severed due to the placement of a large shed.

SITE HISTORY

Granted to Henning Huysing in 1690, and to Jacob van der Heyden in 1696. In 1797 the farm was acquired by Pieter Gerhard van der Byl, adn stayed in the family's ownership for many decades (Fransen, 2004: 223).

STATEMENT OF SIGNIFICANCE

The industrialisation of farming activities at Welmoed is evident in the presence of larger sheds around the historic werf, and many of these are insensitively placed. The development of the site is one that shows the steady erosion of one of the historic werfs along the Eerste River Corridor during the latter half of the 20th century. Some of the historic fabric as well as the larger werf space seems to be retrievable, but this would require the long-term management of far-sighted owners, who could recognise the long-term payoffs and public good of restoring the main, historic werf space. Regardless, the site has historical, architectural and associational significance.

LANDSCAPE SIGNIFICANCE

There are some trees of age within the werf area, but the landscape patterns across the site have been eroded.

INTERIOR DESCRIPTION

CONTEXTUAL DESIGN

The site is set against the green belt of the Eerste river, with views to the Helderberg beyond. However, the sense of the whole/sense of place has been eroded due to subdivision and the inappropriate placement of large agri-industrial sheds.

GROUPING WITH OTHER SITES

The site contributes to the understanding of the historic pattern of settlement between the R310 and Eerste river.

INVASIVE ELEMENTS

EVIDENCE OF DEMOLITION

HERITAGE VULNERABILITY

This site is particuarly vulnerable to agri-industrial development, which has already significantly eroded the site.

REFERENCES Fransen 2004: 223

DATE

1118

SITE NAME: ANNANDALE-R310 CHURCH BUILDING

LANDSCAPE UNIT NUMBER: C11
LANDSCAPE UNIT GRADE: Grade II

ADDRESS OF THE SITE

PROPERTY NO	
SITE ADDRESS	Intersection of Annandale and the R310
CURRENT USE	Church/community
ORIGINAL USE	Church

PROTECTION AND GRADING

Curr.NHRA Protection	S34
>60YRS?	**Yes**
PROPOSED GRADING	Grade IIIb

SIGNIFICANCE

Associational	High	Representivity	Medium
Age	Medium	Rarity	Low
Scientific	None	Archaeology	
Symbolic	High	Intangible	
Architectural	Low		

ARCHITECTURAL STYLE
Vernacular

ARCHITECT/BUILDER

MAP



LATITUDE/LONGITUDE
-33.9832316667 18.772085



SITE DESCRIPTION
This modest church building, with surrounding structures, is of simple rectangular plan, single-storey with double-pitched roof, gables, and arched windows. It is highly visible, being located at the intersection of Annandale Road and the R310

SITE HISTORY

STATEMENT OF SIGNIFICANCE
Although modest, this collection of buildings have high social, contextual and landmark significance. Together with workers housing, it makes manifest the institutions of a particular section of society within the Eerste river community.

LANDSCAPE SIGNIFICANCE
The line of "beefwood" trees to the north (across the Annandale Road) and dark foliage along the Eerste River create a "landscape room" for this collection of civic/religious structures, with the vines creating the landscaped foreground to them.

INTERIOR DESCRIPTION

CONTEXTUAL DESIGN
This collection of buildings has landmark presence at the intersection of the R310 and Annandale Road.

GROUPING WITH OTHER SITES
Farm workers

INVASIVE ELEMENTS

EVIDENCE OF DEMOLITION

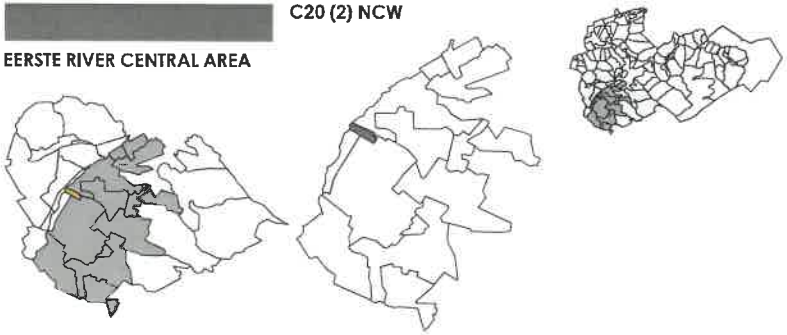
HERITAGE VULNERABILITY
Road widening and development.

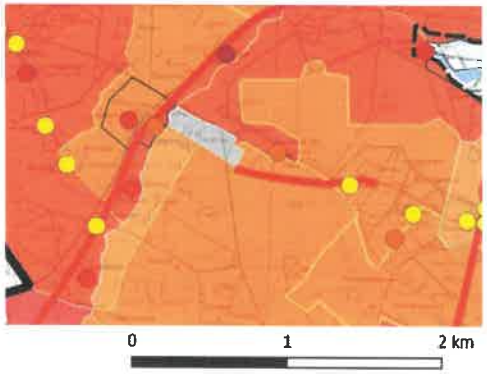
REFERENCES

DATE 8/31/2017

C20 (2) NCW

EERSTE RIVER CENTRAL AREA





C20 Strawberry farm on Annandale Road

This entire land unit is seen as an intrusion in the landscape. It consists of large-scale greenhouse structures and open strawberry fields lined with agricultural plastic. Its predominant pattern is consistent, but its character and scale is entirely contrasting to that of the surrounding landscape. The soils are not particularly suitable for viticulture, hence a variety of field crops were planted over the years. Only the easternmost corner of the unit forms part of the historic commonage, otherwise there are no other historic sites within the unit. The landscape has a slight fall to the west, thereby focusing views towards the larger Eerste River valley and edge of the rolling hills of the Stellenbosch Farms Area (C08).

This entire unit is considered intrusive in nature, the present land use of large-scale nursery structures are contrary to the surrounding character and sense of place. However, the concentration of intrusive agricultural practices in one area is preferable to scattering them through several areas. This entire unit is regarded as NCW (non-conservation worthy).



Annandale Road

1120

From: **Emmylou Bailey** emmylou@hearthheritage.co.za
Subject: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch
Date: 02 August 2023 at 12:46
To: Bernabe.DeLaBat@stellenbosch.gov.za

Dear Mr De la Bat,

Please find attached a letter requesting comment from Stellenbosch Municipality for a Phase 1 HIA for Ptn 28/ 468, Stellenbosch. The deadline for comment is Friday 25 August 2023.

Please do not hesitate to contact me should you require any more information or assistance.

Thanks and best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 I emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

HEARTH HERITAGE

PDF
Lynedoch Phase 1 I&AP...SM.pdf

1121

From: **Katherine Robinson** Katherine.Robinson@stellenbosch.gov.za
Subject: RE: [EX] REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch
Date: 24 August 2023 at 11:44
To: Emmylou Bailey emmylou@hearthheritage.co.za
Cc: Bernabe De La Bat Bernabe.DeLaBat@stellenbosch.gov.za

Good morning Emmylou,

My comment regarding the phase 1 HIA – Portion 28/468, Stellenbosch is as follows.

According to the Stellenbosch Heritage Inventory, Lyndoch is located in a IIIB historical landscape and also falls within the IIIA Scenic Route. Due to the sensitive nature of the context it is not recommended that this area be developed into a medium to high-density gated community.

Lyndoch currently has a small community that surrounds the historic hotel building which in turn is surrounded by a small hamlet with single and double-story unidentical buildings that have been individually designed to suit the current landscape. A medium to high-density gated community would be detrimental to this fine-grained resource.

When looking at the fan-shaped area of Lyndoch, it is noted that the slopes are highly visible from the scenic route and form an intrinsic part of the agricultural nature of the area. Any proposed development in this area would have to respect the current landscape and not be densely populated that it would be visually detrimental to the scenic vistas.

Kind regards,
Katherine Robinson
Senior Heritage Planner
Heritage Resource Management
Planning & Economic Development

T: +27 21 808 8608 Cell: 072 202 5008
Email: Katherine.Robinson@stellenbosch.gov.za
71 Plein Street, Stellenbosch, 7600
www.stellenbosch.gov.za

Disclaimer and confidentiality note: The legal status of this communication is governed by the terms and conditions published at the following link: http://www.stellenbosch.gov.za/main_pages/disclaimerpage.htm

About Stellenbosch Municipality
Our mission is to deliver cost-effective services that will provide the most enabling environment for civil and corporate citizens.
Our head office is at Town House Complex, Plein Street, Stellenbosch, 7600, South Africa.
For more information about Stellenbosch Municipality, please call +2721-808-8111, or visit www.stellenbosch.gov.za

Disclaimer:
The information contained in this communication from katherine.robinson@stellenbosch.gov.za sent at 2023-08-24 11:44:41 is confidential and may be legally privileged. It is intended solely for use by emmylou@hearthheritage.co.za and others authorized to receive it. If you are not emmylou@hearthheritage.co.za you are hereby notified that any disclosure, copying, distribution or taking action in reliance of the contents of this information is strictly prohibited and may be unlawful. Powered by IOCO

From: **Emmylou Bailey** emmylou@hearthheritage.co.za
Subject: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch
Date: 02 August 2023 at 12:50
To: info@sustainabilityinstitute.net

Please find attached a letter requesting comment from the Sustainability Institute for a Phase 1 HIA for Ptn 28/ 468, Stellenbosch. The deadline for comment is Friday 25 August 2023.

Please do not hesitate to contact me should you require any more information or assistance.

Thanks and best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 | emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

HEARTH HERITAGE

PDF
Lynedoch Phase 1 I&AP...SI.pdf

1122

From: **Jess Schulschenk** jess@sustainabilityinstitute.net
Subject: Re: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch
Date: 25 August 2023 at 11:43
To: Emmylou Bailey emmylou@hearthheritage.co.za
Cc: Damian Hacking damianuct@gmail.com

Hi Emmylou,

Thank you for sharing below. I have reviewed and cant see anything that might be missing from our understanding of the site. If anything, the information shared has been interesting and insightful!

We will wait for the social and environmental impact assessment calls for comment as this is where our major concerns lie.

Many thanks, Jess

Dr Jess Schulschenk
Co-Director

e jess@sustainabilityinstitute.net
a PO Box 162, Lynedoch, Stellenbosch, 7603
t +27 (0)21 881 3500 c +27 (0)76 173 1632
www.sustainabilityinstitute.net

Interested in our work? Join one of our incredible short courses | Book one of our beautiful venues and experiential workshops for your next workshop or event | Commission our Research & Advisory team | Donate to our non-profit education programmes with children & youth from the Lynedoch valley.

---------- Forwarded message ---------
From: **Emmylou Bailey** <emmylou@hearthheritage.co.za>
Date: Thu, Aug 24, 2023 at 10:02AM
Subject: Re: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch
To: Jess Schulschenk <jess@sustainabilityinstitute.net>

Hi Jess,

I have a link for the heritage reports if you are interested?
https://we.tl/t-2Cm5OBIN8B

You do not need to comment on them directly, but they may be of interest.

Looking forward to receiving your input on the Phase 1 HIA tomorrow.

Best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 | emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

From: **Emmylou Bailey** emmylou@hearthheritage.co.za
Subject: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch
Date: 02 August 2023 at 12:50
To: info@sustainabilityinstitute.net

Please find attached a letter requesting comment from the Sustainability Institute for a Phase 1 HIA for Ptn 28/ 468, Stellenbosch. The deadline for comment is Friday 25 August 2023.

Please do not hesitate to contact me should you require any more information or assistance.

Thanks and best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 | emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

PDF
Lynedoch Phase 1 I&AP...SI.pdf

Belangegroep Stellenbosch Interest Group

HM/CB/0815/32
interestgroupstellenbosch@gmail.com
2023-08-25

Emmylou Bailey
emmylou@hearthheritage.co.za

Dear Ms Bailey

Phase I Heritage Impact Assessment: Ptn 28, Farm 468, Welmoed, Stellenbosch

Regarding your enquiry about heritage consideration to be considered in the proposed development of Portion 28 of Farm 468, the Stellenbosch Interest Group (SIG) responds as follows, keeping in mind that we currently have no detailed information about the nature of the proposed development.

1. There is, apparently, only one building on the property, presumably a farmstead. If this building is older than sixty years, the consent of Heritage Western Cape will be required to demolish or alter it.

2. The property is situated within a Grade IIIB Cultural Landscape along a Grade IIIA Scenic Route (Baden Powell Drive). The entire area has a rural-agricultural aspect and most of the land is considered highly suitable for vineyards. Because the property slopes from its lowest point to its highest point (elevations of 25m and 110m respectively), most parts of it are highly visible from Baden Powell Drive and also from the Annandale Road. Developments on all parts of the property may be visibly intrusive; developments on the upper slopes will definitely be highly visually intrusive. In this regard, we refer you to the following statements in the Stellenbosch Municipality Heritage Survey regarding the area in which the property is situated:

   "Development that will result in the loss of the sense of 'openness' of the space, as well as its historic use as agriculture, will threaten the landscape heritage value of this unit."

   "This landscape unit is located alongside the R310 scenic route, has over 70% visibility and forms part of a wider landscape of exceptional scenic qualities. The visual impact of proposed developments must be carefully considered. This landscape unit also forms part of the green transitions conservation system, so maintenance of its green and open agricultural character is important."

   The following are listed as land uses that will tend to erode the character of the landscape: "Overscaled private dwellings, cluttered properties, gated residential estates, large-scale industrial structures, suburban development, mining, landfill or sewage plant, parking lot, business park, isolated shopping centre."

2217, Dennesig 7601 021 886 4741 info@stellenboschinterestgroup.org

   "Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines and hillcrests."

   "Care should be taken that vineyards and other agricultural uses are not needlessly destroyed, and replaced by non-agricultural development."

3. The entire area should be deemed a sensitive one from an archaeological perspective, since artefacts and tools from the Early Stone Age onwards have been found there. According to the Stellenbosch Municipality Heritage Survey: "Handaxes and cleavers, etc. are found throughout the area, and their heritage significance is clear. All archaeological material is protected in terms of the NHRA". If development were to take place, it would be necessary to have an archaeological consultant on call to assess *all* finds.

4. Although the area is not deemed to be highly sensitive from an ecological point of view since most of it is farmland, it contains pockets of endangered Swartland Granite Renosterveld. On the subject property there are areas that appear to be either fallow or covered in indigenous and alien vegetation. The SIG strongly recommends that an ecological assessment be undertaken to establish which parts of the property are or may be ecologically sensitive (this include watercourses). Such area should be deemed no-go areas for development. The SIG holds that *all* areas of indigenous vegetation (even when aliens are also present) and all farmland in the Winelands District should be considered endangered, given tendency to locate ever more urban and semi-urban developments in previously "green" areas.

Kind regards

Patricia Botha
(Chairperson)

From: **Emmylou Bailey** emmylou@hearthheritage.co.za
Subject: Fwd: !!Re: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch !!
Date: 24 August 2023 at 16:20
To: info@stellenboschheritage.co.za

To whom it may concern,

I sent the emails below to the chairperson@stellenboschheritage.co.za address but have to date not received any response.

You may want to follow up?

Deadline for comment is tomorrow COB unless we hear from you.

Best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 I emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

HEARTH HERITAGE
conversations about conservation

Begin forwarded message:

From: Emmylou Bailey <emmylou@hearthheritage.co.za>
Subject: **Re: !!Re: REQUEST FOR COMMENT Phase 1 HIA - Ptn 28/ 468, Stellenbosch !!**
Date: 24 August 2023 at 16:17:42 SAST
To: chairperson@stellenboschheritage.co.za

Dear Ms Buchanan,

I have a link for the heritage reports if you are interested?
https://we.tl/t-2Cm5OBIN8B

You do not need to comment on them directly, but they may be of interest.

Looking forward to receiving your input on the Phase 1 HIA tomorrow.

Best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 I emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

HEARTH HERITAGE

On 21 Aug 2023, at 10:18, Emmylou Bailey <emmylou@hearthheritage.co.za> wrote:

Dear Ms Buchanan,

I have had no response regarding this request for comment via the email addresses loaded as per the HWC website.

Could you please let me know whether you received the previous communication regarding comment for a PHASE 1 HIA for RE/Ptn28 Farm 468, Stellenbosch.

At this stage, we are asking for any identified heritage resources that are not included in the Stellenbosch Municipal Heritage Inventory for our inclusion in the Phase 1 HIA. The Phase 2 HIA, with proposed development design included, will be circulated for your comment and comment by HWC after this round of heritage resources identification as is required for a PHASE 1 HIA.

The **deadline for this comment is 25 August 2023.**

Please do not hesitate to contact me should you have any further questions.

Best regards
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 | emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

<Hearth Heritage approved2-email sign.jpg>

On 02 Aug 2023, at 12:25, Emmylou Bailey <emmylou@hearthheritage.co.za> wrote.

Dear Ms Buchanan,

Please find attached a letter requesting comment from SHF for a Phase 1 HIA for Ptn 28/ 468, Stellenbosch.
The deadline for comment is Friday 25 August 2023.

Please do not hesitate to contact me should you require any more information or assistance.

Thanks and best wishes
Emmylou

Emmylou Bailey
heritage practitioner: archaeologist + cultural landscapes
0721333828 | emmylou@hearthheritage.co.za

Please note that due to my own working pattern, I may on occasion send emails outside of core office hours. Please do not feel any obligation to respond until your normal working hours.

<Lynedoch Phase 1 I&AP letter - SHF.pdf>

CULTURAL LANDSCAPE & VISUAL IMPACT STUDY FOR THE PROPOSED HIGH DENSITY RESIDENTIAL WITH ADDITIONAL FACILITIES ON PORTION 28 WELMOED FARM 468, STELLENBOSCH.

CASE NUMBER: HWC23040509AM0411

August 2023





Bottom image, SMHS CMP, http://stellenboschheritage.co.za/smhs/map/landscape-unit-pdfs/c-eerste-river/c08.pdf

Prepared for Billy Visser Trust

by

claire abrahamse
architecture | urban design | heritage

SMArchS Urbanism (MIT), BArch (UCT), BAS (UCT), SACAP, CIfA, APHP, UDISA

2nd Floor. Wale Street Chambers. 38 Wale Street. Cape Town, 8001
E: claire@claireabrahamse.co.za T: 021 426 2668 M: 083 718 1919

1128

CULTURAL LANDSCAPE & VISUAL IMPACT STUDY FOR THE PROPOSED HIGH DENSITY RESIDENTIAL WITH ADDITIONAL FACILITIES ON PORTION 28 WELMOED FARM 468, STELLENBOSCH.

CASE NUMBER: HWC23040509AM0411

August 2023

CONTENTS

1. INTRODUCTION, PURPOSE OF THIS STUDY AND METHODOLOGICAL APPROACH

PURPOSE OF THIS STUDY Page 3

METHODOLOGY Page 3

2. INTRODUCTION Page 4

3. THE RECEIVING ENVIRONMENT Page 5

DEVELOPMENT OF THE SITE AND ITS CULTURAL LANDSCAPE Page 5

PLANNING FRAMEWORK AND THE URBAN EDGE Page 11

THE UNDERLYING LANDSCAPE CHARACTER OF THE SITE Page 12

The wider Eerste River Valley. Page 12

The Landscape Unit Scale. Page 13

The Site. Page 14

Visual Assessment Criteria in this Settling

Visual Exposure and Viewshed Area

Visual Sensitivity of the Area and the Viewpoints Page 15

Visual Absorption Capacity (VAC) Page 17

Visual Intrusion/Landscape Integrity Page 17

THE UNDERLYING "TOWNSCAPE" SETTING OF THE SITE AND SETTLEMENT NODE.

Analysis of the Patterns of Settlement-Making in the Cape Winelands Page 39

The Development of a Housing Typology in the Winelands Page 39

Existing character-giving elements of the environment surrounding the site Page 40

4. THE SITE CHARACTER Page 45

5. CONSIDERATION OF A "NO DEVELOPMENT" OPTION

6. HERITAGE INDICATORS AND GUIDELINES FOR THE SITE

7. ASSESSMENT OF VISUAL-CULTURAL LANDSCAPE IMPACT ASSESSMENT OF THE PROPOSED DEVELOPMENT. Page 49

8. RECOMMENDATIONS

1129

CULTURAL LANDSCAPE & VISUAL IMPACT STUDY FOR THE PROPOSED HIGH DENSITY RESIDENTIAL WITH ADDITIONAL FACILITIES ON PORTION 28 WELMOED FARM 468, STELLENBOSCH.

CASE NUMBER: HWC23040509AM0411

August 2023

1. INTRODUCTION, PURPOSE OF THIS STUDY AND METHODOLOGICAL APPROACH

PURPOSE OF THIS STUDY

A Notification of Intent to Develop (hereafter NID) for the above property was discussed at Heritage Western Cape on the 4th May 2023. Since HWC have reason to believe that the proposed development will impact heritage resources, a Heritage Impact Assessment was called for, which in addition to satisfying the provisions of Section 38 (3) of the National Heritage Resources Act (Act 25 of 1999), additionally called for a "Visual Impact Assessment".

In consultation with the primary heritage consultant, Ms. Emmylou Bailey, it was determined that a Visual Impact Assessment of the cultural landscape and rooted in the cultural landscape context of the site would be appropriate in this instance, especially since extensive technical visual assessment of the Stellenbosch Municipal Area was undertaken as part of the 2018 Stellenbosch Municipality Heritage Survey, led by Prof. F. Todeschini and Mr. L. Jansen, with the author of this report being part of the consultant team.

This study therefore aims to address the specialist Visual Impact Assessment requirement of the Response to the NID. It looks to analyse and assess the visual setting and character of the wider site, located at the Lynedoch intersection between the Annandale Road and the R310, at the Lynedoch railway station.

Through this analysis, the study also looks to establish the predominant agricultural and settlement patterns and associated visual absorption potential of the site. Following this analysis, heritage-based design indicators that set parameters for potential development in order to allow for it to remain within acceptable levels of impact are then derived for the site. These are intended to be incorporated into the Phase 1 Heritage Impact Assessment being prepared for the site.

METHODOLOGY

It is important to note that, although it is located within a predominantly rural setting, the Lynedoch precinct and subject site are also located within the approved urban edge area (Figure A). This small and contained urban node is focussed on the road intersection and railway station. As such, a more townscape-type analysis, with landscape considerations in terms of periphery, is considered appropriate here.

The study sets out to:

- Establish the Cultural Landscape Visual Assessment Methodology.
- Understand the Development of the Broader Site and its Cultural Landscape over time.
- Analyse the Receiving Environment and underling Landscape Character of the site. This is done at two scales:
    - The Local Setting of the site: Field of View and Outward Vistas, and
    - The "Townscape" Setting of the site and village node, and Major Character-Giving Elements.
- This allows for the determination of the Site Character, which in turn influences the heritage-based indicators that will underpin the visual impact assessment of the proposed development.
- A review as to whether any development is acceptable within this setting is undertaken.
- The findings of this analysis then influence the heritage-based guidelines and indicators that form the conclusion to this study.

Because this site is located within a rural "skirt" to an historic settlement in the Cape, and because it already combines elements of settlement (hotel and University of Stellenbosch Sustainability Institute, surrounding residential development, railway station and a small commercial node) within a setting of historic farmland, it is clear that a "visual study" must include aesthetic, cultural and spiritual/genus loci aspects of both the urban and rural environment that are closely juxtaposed within this node, and which taken together contribute to the local character of an area and its sense of place.

1130

Therefore, methodologies associated with a townscape analysis are also relevant here.

Fortunately, the landscape character of the site and its surrounds has also been closely studied and documented by Todeschini, Jansen et al as part of the 2018 Stellenbosch Municipality Heritage Survey, as well as by Viridian Consulting in the 2018 Visibility Analysis for the SMHS, and this work is relied on in this analysis.

2. INTRODUCTION

The Cultural Landscape Study and Visual-Townscape Study of the site have revealed elements within the landscape that are fundamental to its character. It follows that, to preserve heritage significance (particularly the tangible and landscape heritage significance associated with physical elements) these fundamental elements must be protected and enhanced during the future development and densification of the site.

Heritage indicators and guidelines give direction to new developments. New development at Lynedoch, Portion 28 of Farm 468, Welmoed, must be cognisant of and responsive to the cultural landscape, built environment and landscape "patterns" that precede it. Thus there is a need to understand the underpinning logic and spatial patterns/materiality of the place, and to recognise and reinforce such patterns in the new developments.

The analysis of the site has given rise to heritage-based indicators to development. The assessors believe these must be stringently followed to ensure that the heritage significance of the surrounds is preserved and enhanced, but which they believe are not so onerous as to completely limit the development and densification of the site.

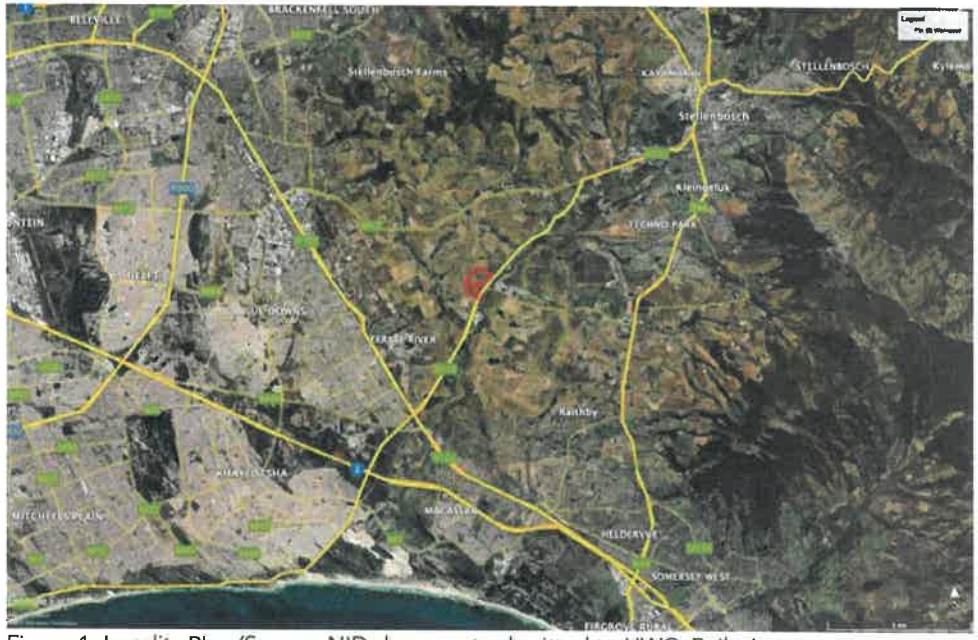


Figure 1: Locality Plan (Source: NID document submitted to HWC, Bailey).



Figure 2: Site Plan (Source: NID document submitted to HWC, Bailey).

3. THE RECEIVING ENVIRONMENT

DEVELOPMENT OF THE SITE AND ITS CULTURAL LANDSCAPE.

The subject site and its environs have always comprised highly fertile agricultural land, most especially for grazing livestock. Malan writes that:

> In his 1967 review of the ESA [Early Stone Age] from Stellenbosch, Seddon listed a total of 22 known ESA sites in and around Stellenbosch, although conceding that the "only place where numerous artefacts are to be found in situ is opposite the monument already mentioned; at the Bosman's Crossing site". They were: Gleneagles Hotel (2), Olives Farm, Lynedoch, Spier, Vlottenberg winery, Louishoogte site, Blaauklip vegentable garden and golf course, Vredenberg, Bosman's Crossing, General Box Factory, Suikerbosrand, Altavona, Blake's Quarry, Simts' Quarry, Schoongezicht, Rustenberg, Lorraine, Rozendal, Coetzenberg, GlenConner and Old Nectar" (2018: 7).

The subject site incorporates both the Gleneagles Hotel (now part of the Sustainability Institute) and Lynedoch, so these gentle, east-facing slopes were occupied by pre-colonial people.

However, following colonisation at the Cape by the Dutch, and their gradual expansion into the interior, the slopes of Lynedoch appear to have been of less importance than the land within the valley bottom. Vos writes that Commander van der Stel ventured into this part of the peninsula in 1679, in search of arable land for the cultivation of grain to supplement that being produced closer to the fort at Cape Town (1998: 1). Within 4 years, 30 families had settled along the Eerste River to farm the land, with the encouragement that they were allowed to claim as much land as they could cultivate within 3 years (Guelke, 1974: 117).

Among the first grants along the Eerste River were the farms Vergenoegd, Meerlust, Klein Welmoed, Welmoed, Spier, Vlottenberg and Vredenburgh.

The land that would become Lynedoch was part of the farm Welmoed (Figure 3). Welmoed was first granted to Henning Huysing in 1680 and transferred to Jacobus van der Heyden in 1696. In 1725 it came into the ownership of Andries Schutte through his marriage to van der Heyden's widow Hester, and in 1725 the farm was sold to Jan de Villiers. In 1797, Welmoed was purchased by Pieter Gerhard van der Byl, and would remain in the van der Byl family for many generations, and until the end of the 19th Century (van der Bijl, 2000: 86). However, it is only in the 1902 map that the name "Lyndoch" first appears on the side of the small hill providing the backdrop to Welmoed (Figure 5).

Records in the Cape Archives link the name to the inter-marriage of the van der Byl's with the Grahams of Cape Town, together with the emergence of the railway line. The South African Railways & Harbour Board undertook some research into the names of their stations in 1920, and wrote to the Town Clerk at Stellenbosch:

According to the old timetables which were in our possession, the Station was shewn therein both as "Lyndoch" and "Lynedock". The spelling "Lyndoch" appears to have been finally adopted in 1904 and has since continued to be used.

The Town Clerk must have consulted more widely and managed to contact John Graham who lived in the grand house Monorgan in Newlands, close to the cricket ground. Mr. Graham wrote as follows:

18th February 1920
Monorgan,
Newlands

I think I have arrived at the history of the name "Lynedock". Judge Cloete married a daughter of Robert Graham, a cousin and very intimate friend of Lord Lynedoch. The Judge's son, Laurence, married a sister of Laurence v.d. Byl.... By the intermarriage and acquaintanceship circumstances probably obtained which induced one of the v.d. Byl's to adopt the name for his farm.

May I suggest that your records, or rather those of the Divisional Council, preserve the correct spelling viz: Lynedoch. The e is frequently omitted and sometimes k is substituted for h.

Yours faithfully,
John Graham.

P.S. It is quite likely that one of the v.d. Byl's met Lord Lynedoch in Scotland.

Sir Thomas Lynedoch Graham was a well-known South African judge and politician, as well as a keen sportsman. He won the South African Doubles Lawn Tennis competition in 1891 and represented the Western Province Cricket Club as a fast bowler (https://esat.sun.ac.za/index.php/Thomas_Graham). In his capacity as Attorney-General of the Cape, Graham also acted as Prime Minister of the Cape Colony for a short time in 1902 (while the Prime Minister travelled to London for the Coronation of Edward VII) and was Judge-President of the Supreme Court of South Africa from 1913 until his retirement in 1937

(https://heinonline.org/HOL/LandingPage?handle=hein.journals/soaf21&div=27&id=&page=).

1132

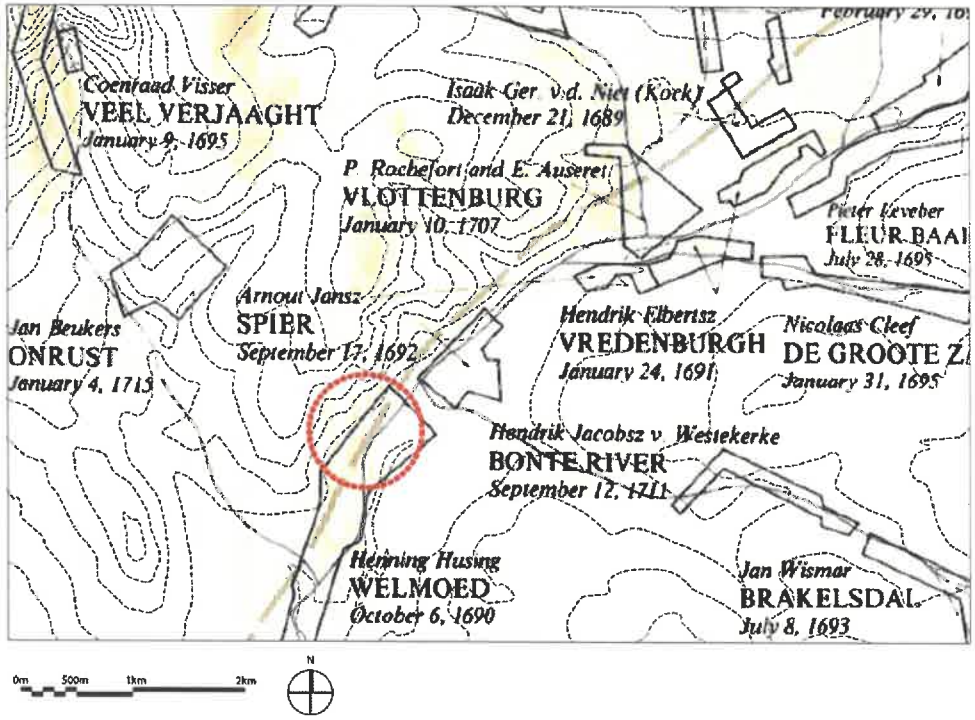


Figure 3: Detail from Guelke's 1657 - 1750 Southwestern Cape Colony Map, showing the first freehold farm grants made during this time. Present day Lynedoch, indicated in a red dashed circle, was part of the historic Welmoed grant of 1690.

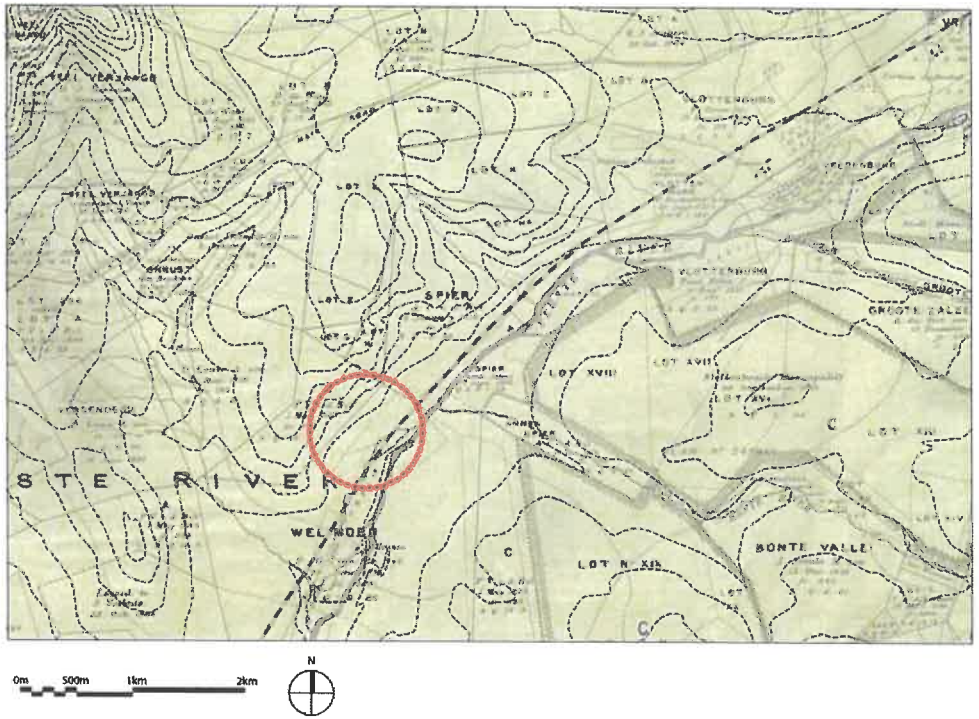


Figure 4: Detail from the 1890 Divisional Map for the Stellenbosch District. The subject site is indicated by means of a dashed red circle.
(Source: UCT Digital Maps Collection).

It seems likely that this Graham was the one after whom Lynedoch was named, although the reference leads back to the same Lord Lynedoch: Thomas Graham's great-uncle, John Graham, "was commissioned in the British Army, joining the 90th Regiment of Foot, which had been raised in 1794 by his kinsman, Thomas Graham of Balgowan [Scotland] (later Lord Lynedoch)" (Robson, 2011: 238). John Graham eventually attained the rank of Major and fought in the Battle of Blaauwberg in 1806, leading to the re-occupation of the Cape by the British. He evidently acquitted himself well, as he was promoted to Lieutenant Colonel and was given charge of the Cape Regiment based at Wynberg (Robson, 2011: 283). The border wars in the Eastern Cape brought Graham to the area, and the military base he established there would grow into Grahamstown.

The establishment of a railway station was a key moment in catalysing settlement at Lynedoch. Photographs taken from the train form part of the Juritz Collection at the Cape Archives on the 19th October 1891, including at Lynedoch Station, are a rare 19th Century record of the landscape (Figure 6A, B and C).

It seems that the hotel at Lynedoch was established around 1920, with the transfer of land on both sides of the river to Mr. R. L. Kramer. By 1930, the hotel was known as "Glen Eagles", entrenching the Scottish connection to the place (Figure 7).

The SG Diagram of 1920 indicates that the land was sold to J. H. S. Hertzog in 1931, while the 1938 diagram indicates that a smaller portion of this property, centred on the hotel, was

1133

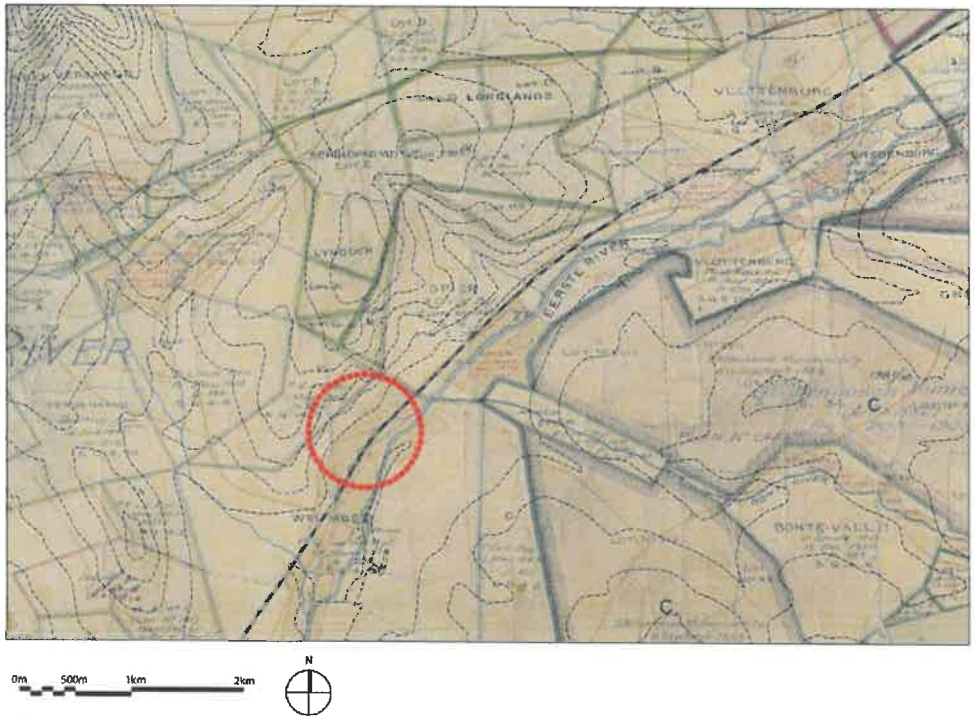


Figure 5: Detail from the 1902 map of Stellenbosch by Brink, which indicates the first use of the term "Lyndoch" adjacent to the site (indicated by means of a dashed red circle). (Source: KAB Map M4/208).

transferred to Charles Kramer in the same year. The diagram indicates the main building, some outbuildings as well as a swimming pool or dam behind, fed from a spring higher up the slope, as well as a pipeline from the reservoir – also located above the property (Figure 8).

The 1944 aerial photography for the property indicate the formal and well-treed setting for the hotel, as well as the swimming pool or dam to the west of the hotel building (Figure 9). The farm buildings to the north are also apparent at this date. Almost all the surrounding land is under cultivation.

Records at the Cape Archives indicate that in 1951, the new owner, Mr. F. Varney, applied to the Stellenbosch Council for a rezoning of the land to allow him to obtain a Liquor License for the hotel. This was approved in 1954 (KAB, 4/STB, 4/1/26: T24/108).

In 1968, the tree canopy has been thinned out and more agricultural buildings added to the north-west of the hotel, but the settlement remains a hamlet much as it did in 1938 (Figure 10). It is important to note the small dam to the south-east of the hotel in this aerial photograph – the land here is still very wet and has characteristics of the wetland.

In 1999, Stellenbosch University decided to establish its Sustainability Institute on the property. It has been run successfully since, to the extent that in 2004 an area behind the old hotel was subdivided to form a so-called "Eco Village", a community which aims to demonstrate a more sustainable model of living, both in terms of resource use and social justice/inclusivity (https://lynedochecovillage.wordpress.com). The village contains homes built entirely from alternative materials, with an internal waste management system, an on-site water and sewerage treatment system and extensive recycling (Figure 11).

The surrounding slopes have remained under cultivation with vineyards throughout, but the Municipality's recent planning documentation has indicated that the wider Lynedoch area has been included inside an urban edge (Figure 12).

The historic patterns at Lynedoch have been interpreted as Figure 13.



Figure 6A: View of the Lynedoch Station, taken on the 19th October 1891. (Source: KAB, Juritz Collection, Photo 216).

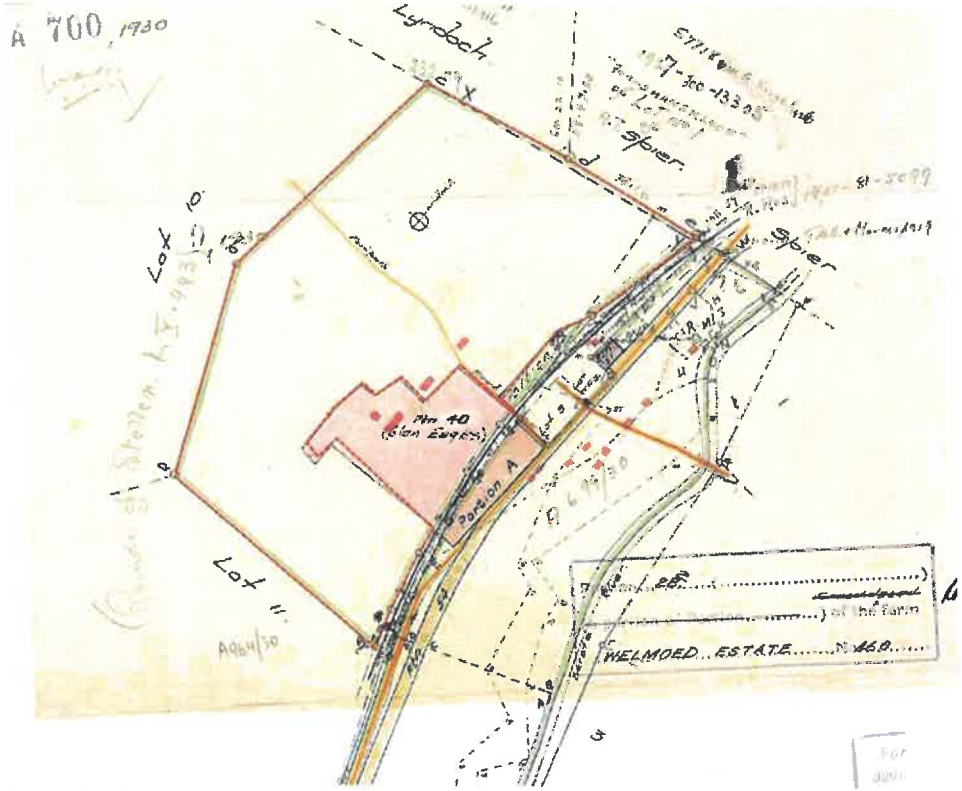


Figure 7: 1930 SG Diagram of the site, with buildings indicated, and the name "Glen Eagles" reflected for the hotel.
(Source: Surveyor General Diagram A700/1930).

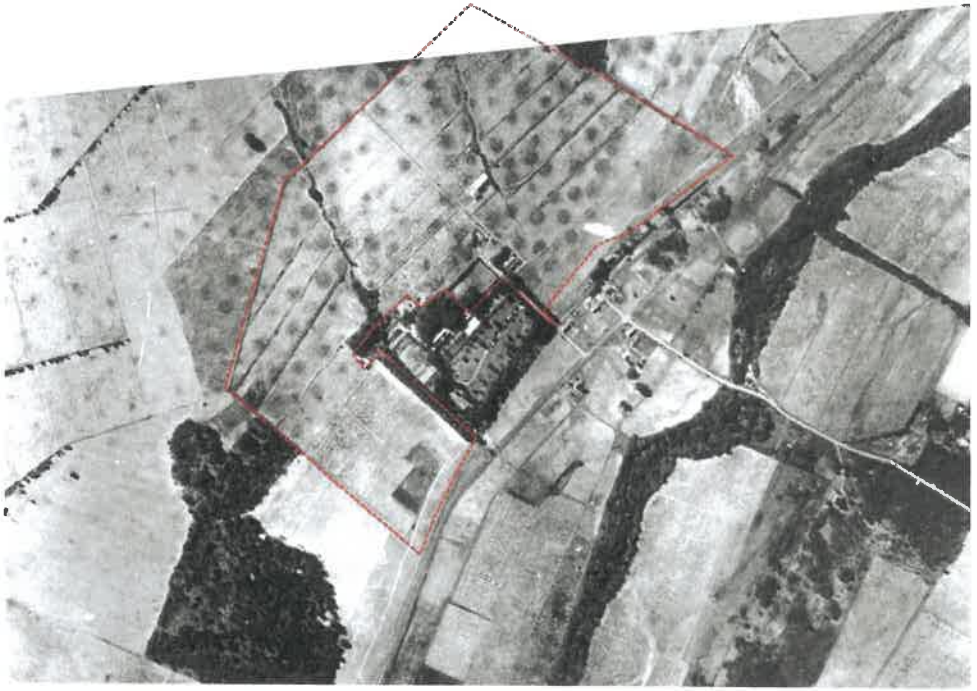


Figure 8: 1944 aerial photography for the site, indicating the landscaped gardens surrounding the hotel. (Source: NGI Mowbray).



Figure 6B: View of Klein Welmoed, taken on the 19th October 1891.
(Source: KAB, Juritz Collection, Photo 214).



Figure 6C: View of Vredenberg, taken on the 19th October 1891.
(Source: KAB, Juritz Collection, Photo 215).

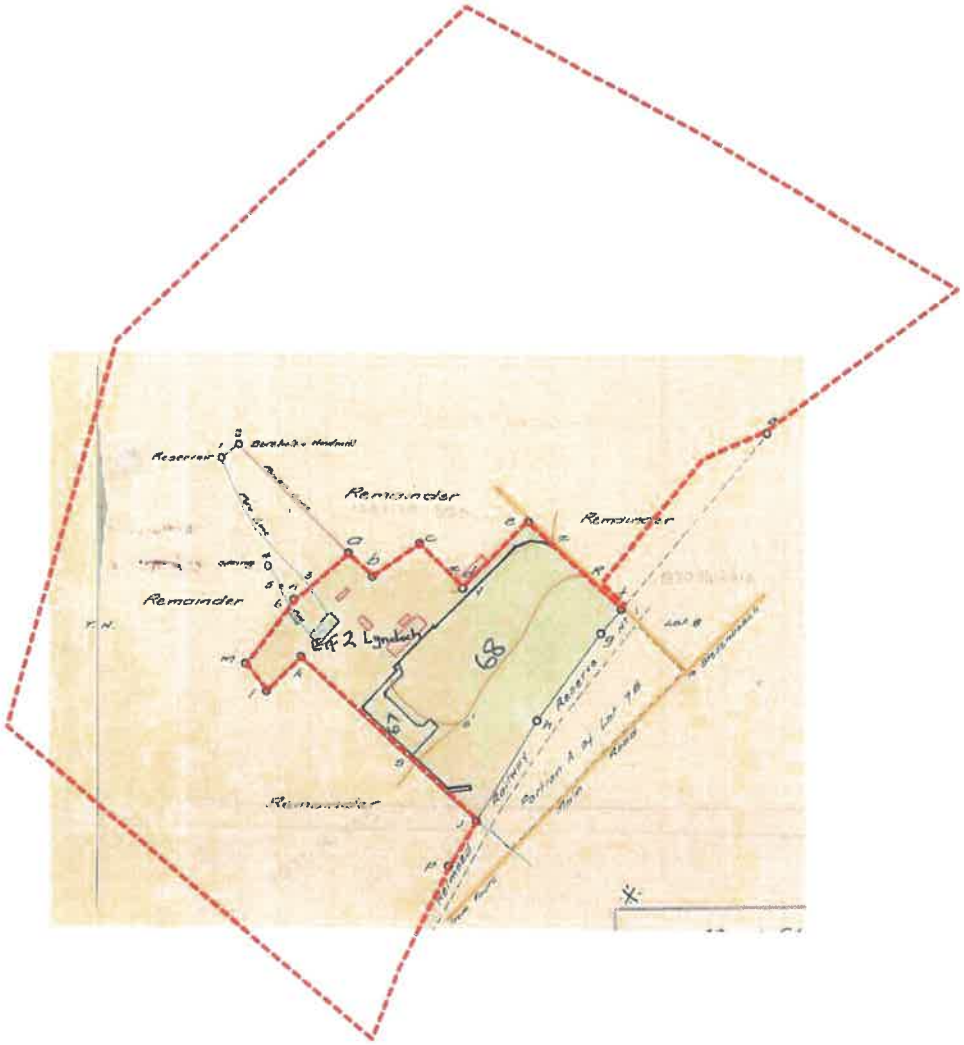


Figure 9: 1938 SG Diagram of the site, with buildings indicated, as well as water sources and roadways.
(Source: Surveyor General Diagram 2912/1938).

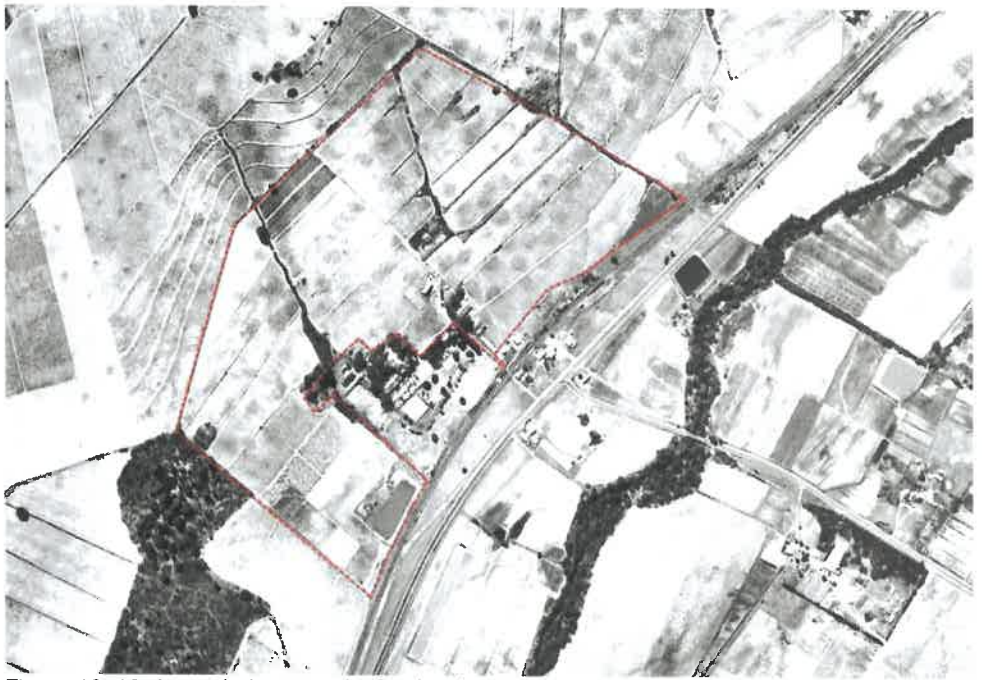


Figure 10: 1968 aerial photography for the site, indicating the landscaped gardens surrounding the hotel, with the tree canopy thinned out since 1944. The dam to the south-east of the site is also evident. (Source: NGI Mowbray).



Figure 11 (right): 2022 aerial photography for the site, indicating the new Eco Village and the Sustainability Institute development. (Source: Cape Farm Mapper).

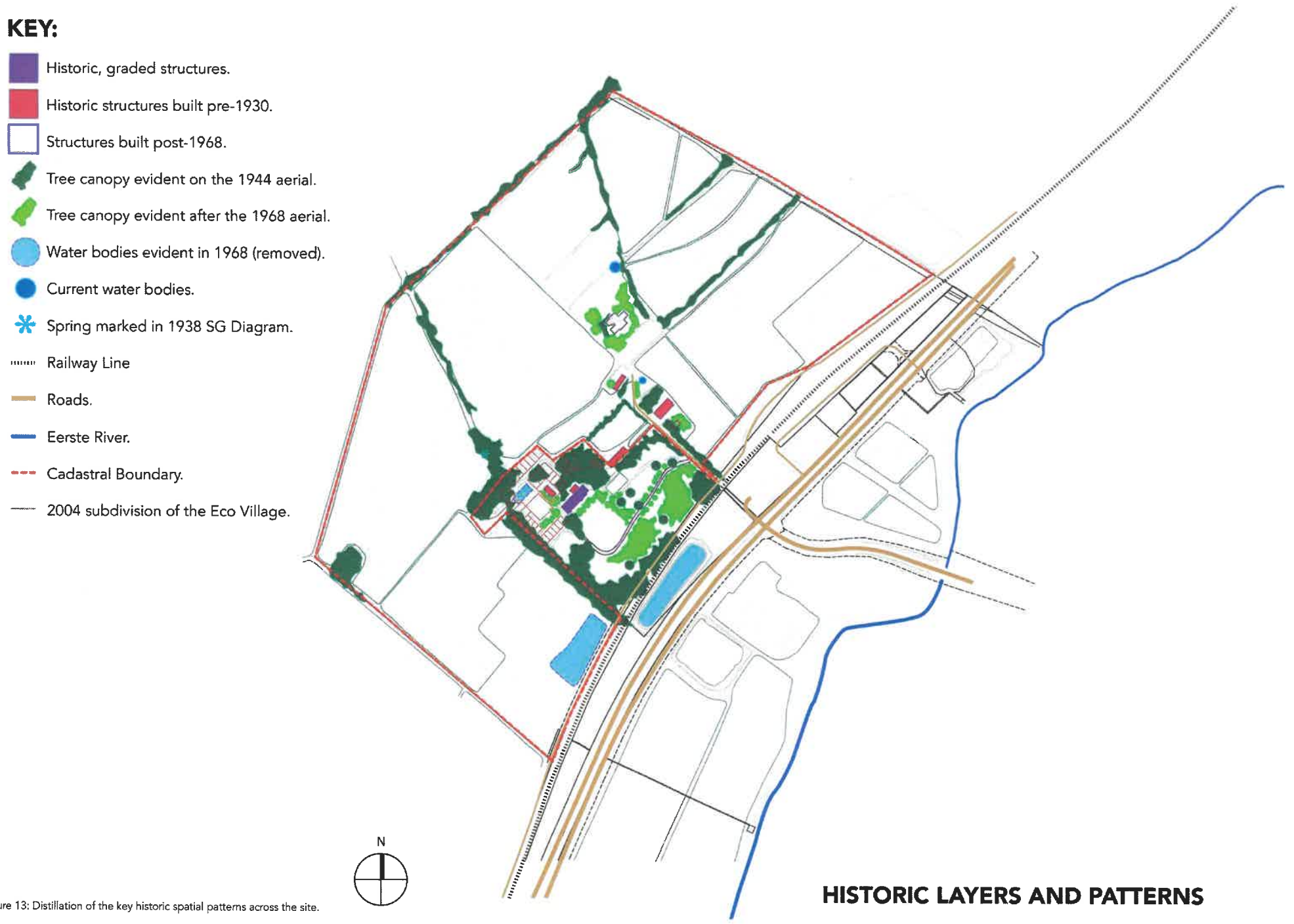


Figure 13: Distillation of the key historic spatial patterns across the site.

PLANNING FRAMEWORK AND THE URBAN EDGE

The Stellenbosch Municipality Heritage Survey consultancy group commented to the Acting Direction of Planning and Economic Development of the Stellenbosch Municipality on the 16th April 2018, and in review of the proposed urban edge at Lynedoch noted that following:

Lynedoch's layout and form has become extremely convoluted since the 'upgrading' of the R310 in the vicinity of the Annandale intersection. Historically, the western side of the settlement took direct access off the R101 across the rail line at a level crossing. This has now been closed for safety reasons.

Only direct pedestrian and cycle access is available over the rail line at Lyndedoch station. The main approach to Lynedoch village west of the rail line by road is now via Vlottenberg, some 3kms to the east, resulting in a 6km long dog leg access route.

The road access management regime imposed by the provincial department of transport along the R101 is likely to only permit direct access onto the property concerned for unsignalized full intersections (SFIs) or high volume driveways (HVDs) every 500 to 600m. The main access is likely to occur off the road. This limited access regime is likely to result in a highly inappropriate walled off-high security character to this section of the R101, completely at odds with its proposed designation as a Class III heritage route.

Furthermore, the urban geometric design and street furniture used in the recent upgrading of the section of the R101 from Lynedoch to the western municipal boundary was considered to be so out of keeping with the rural character of this section of the route that concerned stakeholders took the road upgrading project on judicial review. This resulted in there being no further extensions to the upgrading project east of Annandale road.

It should be further considered that all of the retail, public transport and education facilities at Lynedoch are on the west side of the R101. This means that any future residents on the east side of the R101 will have to cross over this rural arterial road to get to these facilities.

Sadly, and inescapably it has been the experience that pedestrian deaths from motor vehicle conclusions result when there are different land uses straddling arterial routes. Although pedestrians are meant to use pedestrian crossings it is usually too expensive to put in a sufficient number to create sufficient convenience for pedestrians not to take short cuts. Furthermore, the recent upgrading of the R101 has resulted in an increase in vehicle average speeds which, may that be a welcome result in terms of vehicle travelling times further increases the risk of pedestrian accidents. It is a sine qua non that speed kills. Thus it can be confidently, but again sadly, stated that this has been the experience of all urban areas straddling high speed rural arterials. It would be interesting to investigate the status of vehicle accidents in this vicinity since the upgrading of this section of the R101 was completed.

Taking the above into account it is now considered that urban development east of the R101 will be inappropriate, mainly for safety reasons.

Secondary, but still important, reasons include the loss of rural character that would occur at Lynedoch village, partly due to the likely access regime and partly due to the likelihood that a gated estate would be constructed due to both safety and access conditions.

This means that the Lynedoch Urban Edge should be moved westwards to lie along the R101".

(http://www.stellenboschheritage.co.za/wp-content/uploads/APPENDIX-8_Act-70-of-70-Exclusion_Heritage-Response.pdf - see page 17).

The 2019 Stellenbosch SDF entrenched the urban edge around Lynedoch, into which the subject site falls. However, the associated diagram clearly indicates that the envisioned infill development is quite contained, essentially creating an interlinking footprint of urban expansion to the north of the Sustainability Institute, which does not extend closer towards Spier than the Lynedoch Station.

The SDF identifies Lynedoch as follows:

Lynedoch is a unique settlement – named Lynedoch Eco Village – situated halfway between Khayalitsha and Stellenbosch on the R310 and at the intersection of the R310 and Annandale Road. The village is home to the Sustainability Institute, which offers a number of degree and other education and training programmes in partnership with the University of Stellenbosch and other organisations, a number of schools, guest facility, and residences.

Development commenced almost 20 years ago, managed by a non-profit company called the Lynedoch Development Company (LDC). International and local development aid funders and local banks assisted to fund the development. Technical and institutional arrangements and procedures for the development of the village were structured to meet ecological, social and economic sustainability. The Lynedoch Home Owners Association (LHOA) was established to take primary responsibility for service delivery.

Achieving social inclusivity remains a key aim. The Constitution of the LHOA imposes on all home owners severe restrictions on resale by making it compulsory that any seller of any property must first offer the property to the LHOA and only then offer it to a third party at a price that is not lower than the price proposed to the LHOA.

Further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate (Stellenbosch SDF, 2019: 94).

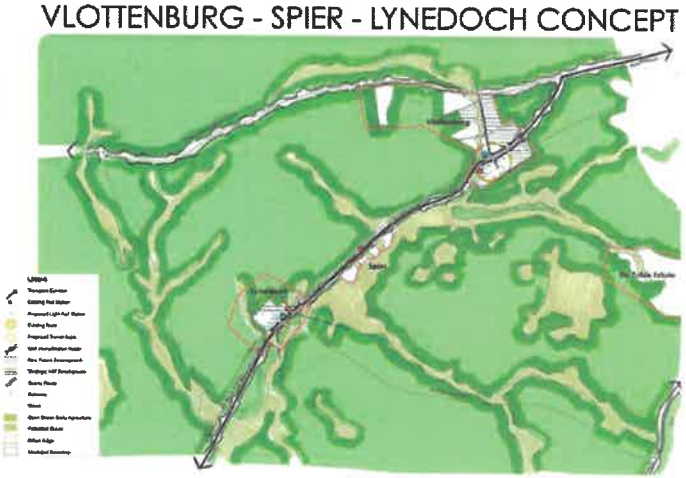
This seems to indicate that a similar model of development should be expanded at Lynedoch. Both the SDF and the comment of the Stellenbosch Municipality Heritage Survey consultancy group indicate that a gated village or security village type of development would be undesirable at this location.

See Figure 14.

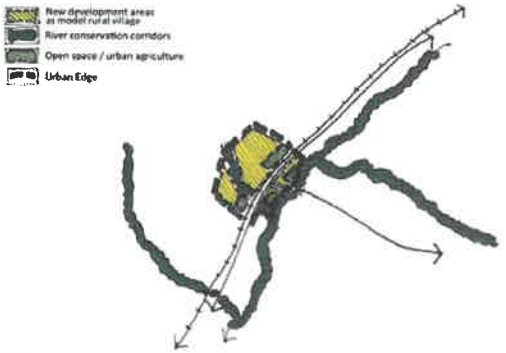
Figure 14: The Lynedoch node, as illustrated in the 2019 SDF for Stellenbosch. The urban edge is indicated via a black line, but it should also be noted that a large area is designated as "green areas retained". (SDF, 2019: 94).



VLOTTENBURG - SPIER - LYNEDOCH CONCEPT



Below: Concept from the 2009 Stellebosch Municipality Draft Spatial Development Framework, CNdV.



Lynedoch

THE UNDERLYING LANDSCAPE CHARACTER OF THE SITE.

The wider Eerste River Valley.

The Stellenbosch Municipality Heritage Survey (2018, hereafter SMHS) identifies that the Eerste River Floodplain Area… exhibits typical layering and pattern of settlement that includes historic structures at Vredenberg (C14), Troughend (C13), Vredenheim (C12), Spier, Welmoed (C11), Klein Welmoed (Usana) (C10)and Meerlust (C09). Enclosed views are found towards the Eerste River with the Helderberg beyond. A number of wetlands are found towards the river as water drains towards the lowest point in the landscape. Granite outcroppings are a typical element found on all farms, together with their composition of river and historic structures….

The area has a degree of historical, architectural, scenic, aesthetic and contextual significance.

Under strict guidelines, potential for development is found along the railway line nodes at Vlottenburg (C06 and C07) and Lynedoch (C08).

The subject site is similarly east-facing, with expansive views extending up to the mountain peaks of the Helderberg (Figure T, page 36).

The primary means of moving through this valley bottom is along the R310. After passing Welmoed, the slopes of the hill system against which Lynedoch is set become gradually visible, until shortly before Spier where a ridgeline encloses the fan-shaped valley (see Figure T). The vineyards within this valley are very old, and the pattern of fields seems to have been consistent

1139

for much of the 20th Century, with rocky granite outcrops defining natural areas of vegetation.

These elements combine in areas to form a layered and complex rural landscape of very high scenic significance: the Lynedoch hillside forms part of the backdrop for over 70% of the heritage sites in the Eerste River Valley, and so its agricultural natures gives context to historic werf spaces. Therefore the SHMS has identified this part of the R310 as a scenic route (Figure 15).

The Landscape Unit Scale.

The Stellenbosch Municipal Heritage Survey states that the Lynedoch Nodes landscape is a **fine grained scattered, yet ordered landscape** (2018):

> The Land unit features gradual south-east facing slopes with a single drainage line just off the northern boundary leading into the Eerste River. The contrast with the flat floodplains of the Eerste River elevates the scenic quality. It is visible from Baden Powell Drive as well as the Annandale road with expansive views back towards the Stellenbosch mountain range. Characteristically rural in character with a textured balance in its coloured patchwork of vineyards interlaced with vegetated edges and small pockets of settlement. Most of this pocket has high soil suitability for vineyards. The railway line forms the southern boundary to this land unit. Early Stone Age tools found were found on the slopes of this land unit, and a first freehold farm is found on a large stretch of the south-eastern boundary.
>
> The Sustainability Institute's Eco Village (with school and wetland) is a good example of integration of mixed income and use. The hamlet is situated around ESA sites recorded (Seddon 1967) the Drie Gewels Hotel, one of the finest examples of Cape Revival houses within the winelands. In the 1980's it hosted music concerts associated with the Voelvry movement (a genre of anti-apartheid Afrikaans music). The site has a degree of architectural, landmark, historical, artistic and contextual significance next to the R310. The Eco Village is situated in close proximity to Lynedoch railway station, which has a very invasive and bulky concrete pedestrian bridge over the road, and a giant strawberry is the landmark for a filling station and store.
>
> The edge of the rolling hills adds value to the to the scenic route as one enters the Cape Winelands from the N2. Its typology is of a very fine grain with a scattered, yet ordered feel. Taking into account the history and associations of this landscape unit, any form of development especially needs to challenge the current tendencies (gated exclusion) and to pioneer an integrated society.

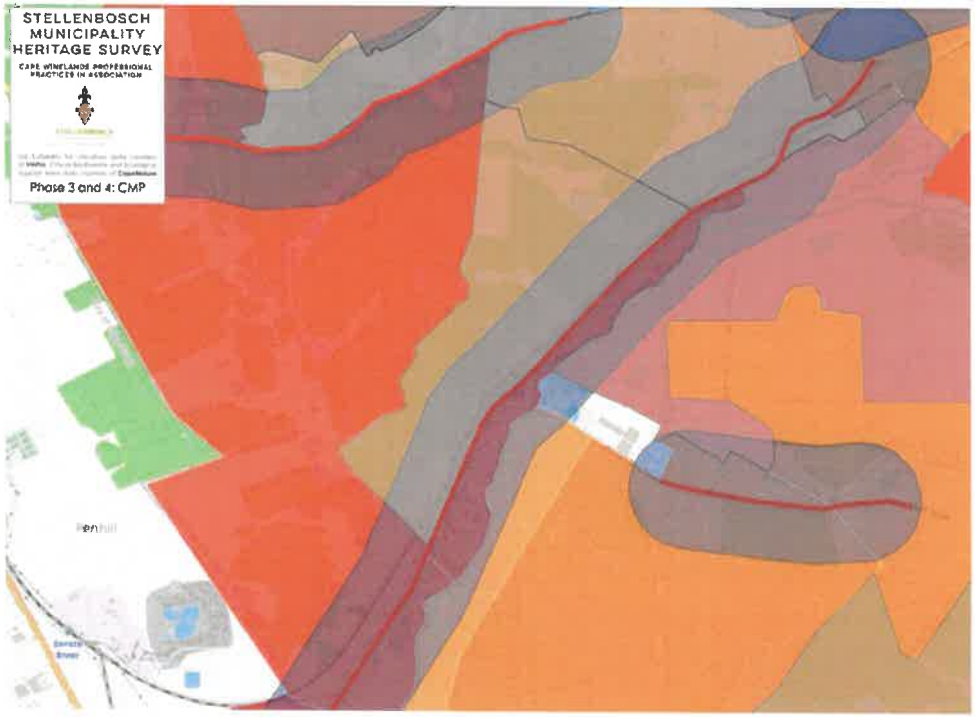


Figure 15: The SMHS CMP grading map indicates that the site falls within a Grade IIIB landscape unit, and along a Grade IIIA scenic route with a 500m buffer. (Source: http://stellenboschheritage.co.za/smhs/map/#15/-33.9804/18.7795).

The site falls within this rather "patchwork" environment and has been graded IIIB. The R310 in this area is identified as a IIIA scenic route. It additionally has over 70% visibility from within the wider Valley Basin and therefore forms part of a wider landscape of exceptional scenic qualities. The visual impact of potential development must therefore be carefully considered, as "maintenance of the green and open agricultural character" of this landscape unit is important.

The SMHS specifically noted that the following would erode landscape character here:

- Over-scaled private dwellings.
- Gated residential estates.
- Suburban development.

1140

The Site.

The landscape around Lynedoch is largely cultivated as vineyards, with a clear system of drainage furrows and windbreaks, as well as outcrops of granite that form pockets of natural vegetation. The Eerste River drains to the south, and the hilly landscape abruptly meets the flat river base, creating a series of wetland areas between the bands of infrastructure laid into this narrow, flat area between hill and river (railway line and roadways). The landscape unit is presently in transition, as the old hotel ("Gleneagles" and later "Drie Gewels") was bought by the University of Stellenbosch for their Sustainability Institute. This has seen expansion at the node, with academic and educational buildings established, as well as the Lynedoch "Eco Village". However, the growth remains modest and the settlement is still of the scale appropriate for a "hamlet", although some inappropriate development has occurred around the station.

This entire property and the south-east facing slope of the hill system has been graded IIIB.

Internally, the site retains buildings and spaces related to its agricultural uses – three barn structures as well as two houses and two circular farm dams cluster around the main driveway up from the station.

Visual Assessment Criteria in this Settling.

The landscape character of the site and its context has been extensively analysed as part of the Stellenbosch Municipality Heritage Survey (2018). In addition, the Impact Assessment Criteria identified by Obholzer in his 2005 "DEA&DP Guideline for Involving Visual and Aesthetic Specialists in EIA Processes" was consulted. The visual criteria and considerations that inform a visual impact assessment are as follows:

Visual Exposure and Viewshed Area

The visual exposure of the area is the geographic area form which the project will be visible (the "view catchment area"). It analyses the degree to which the site is visually apparent from the identified key viewpoints surrounding the site (Figure 16). Visual exposure and resultant impact tends to diminish with distance: the further away you are away from the development, the lower its visual impact. Visual exposure is defined as follows:

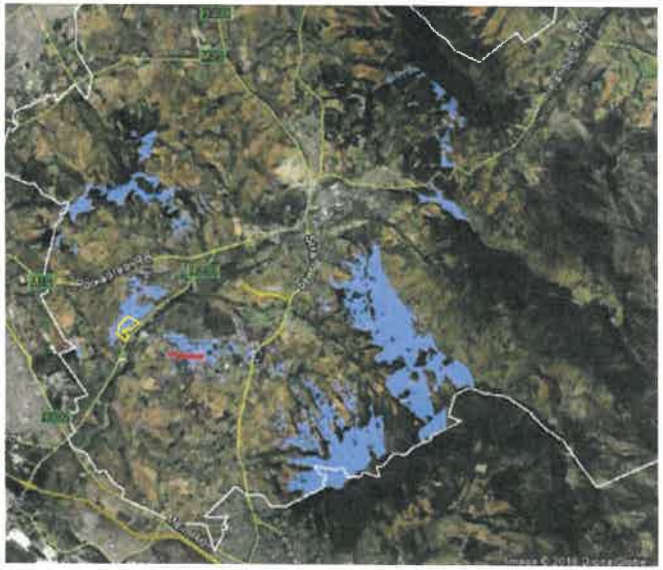
- High exposure: Dominant or clearly noticeable, visible from a large area.
- Moderate exposure: Recognizable to the viewer, visible from the intermediate area only.



Viewshed from Annandale Road, with the site in yellow.



Viewshed from the R44, with the site in yellow.



Viewshed from Annandale Road, with the site in yellow.

- Low exposure: Not particularly noticeable to the viewer, continuing the existing visual character or patterns, visible from a small area around the project site.

The subject site has a degree of visual containment at present, due to the surrounding topography (the ridgeline beyond the railway line screens the site to the north, as does the ridgeline to the south - Figure 17) and existing mature tree-planting and rocky outcrops provide further screening. Therefore, the zones of visibility are already somewhat limited in the foreground (see Figure H & I), although the site is visually exposed from the south-east, where it has been identified as a landscape parcel that forms part of the far backdrop to over 70% of the heritage sites identified within the wider Valley (Figure 18). Therefore, extensive urbanisation of this area would negatively impact the agricultural setting of many historic farmsteads and other heritage sites, some of which are of Provincial Heritage Significance. The receiving environment is thus one of "moderate visual exposure".

Figure 16: Viridian Landscaping undertook extensive viershed analysis of the Eerste River Valley from the various scenic routes identified. The Lynedoch Node and its upper hillcrests forms part of the viewshed of all of the above, idenitified views.
(Source: https://www.stellenboschheritage.co.za/wp-content/uploads/Appendix-4_Visibility-Analysis.pdf).

Visual Sensitivity of the Area and the Viewpoints

The level of visual impact considered acceptable is dependent on where the site is located in the receiving environment and the sensitivity of its location to development. Visual sensitivity can be defined as follows:

- High visual sensitivity: Highly visible and potentially sensitive areas in the landscape (seen from residential areas, natural reserves, scenic routes etc.)
- Moderate sensitivity: Moderately visible areas in the landscape (visible from typical "town" spaces, with a mixed-use and varied environment).
- Low visual sensitivity: Minimally visible areas in the landscape (for instance seen from degraded area or industrial sites)

The site has already been identified as one of high visual sensitivity on the wider scale, being part of the agricultural background to over 70% of the heritage sites identified within the Eerste River Valley.

In addition, this visual sensitivity is "blanket" and equally distributed over the landscape, rather than focussed towards landmarks.

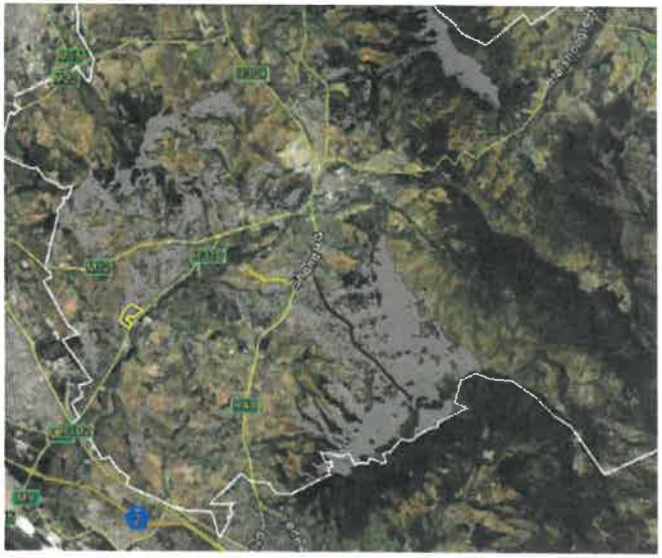
Figure 19 and 20 identify the aspect surrounding the site, and thereby identify the areas (slopes and routes) from which the site is higly visible. These then inform the more detailed view analysis which follows on pages 18 - 235, Figures A - R.



Viewshed from the R310/Baden Powell, with the site in yellow.



Viewshed from Annandale Road, entering Helderberg, with the site in yellow.



Viewshed from Blaauklippen Road, with the site in yellow.

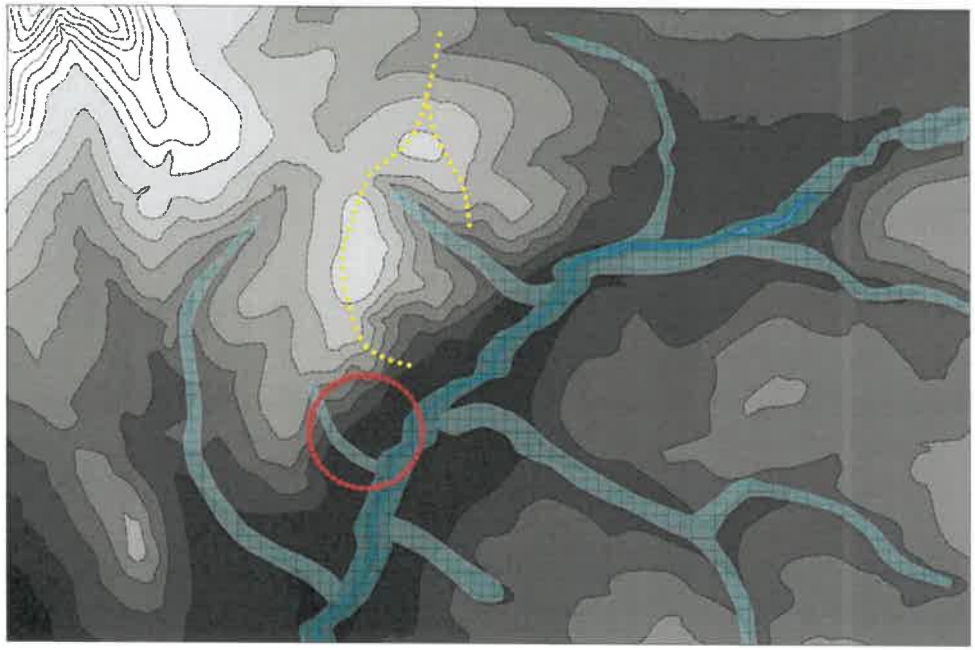


Figure 17: Indication of the topography underpinning the site (in red dashed outline) and with the encircling ridgelines indicated in yellow dots.

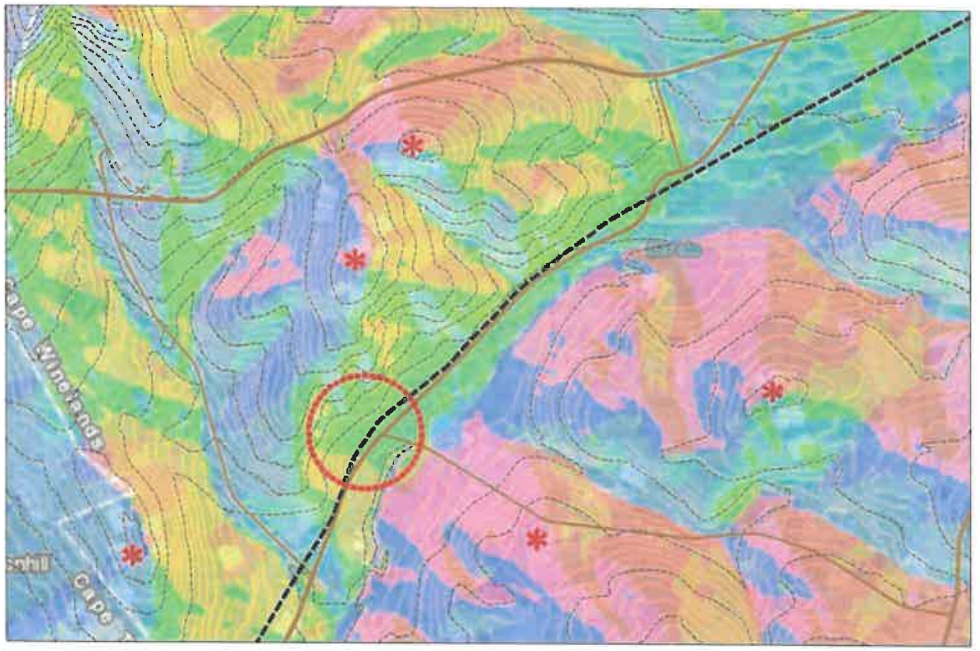


Figure 19: The aspect underpinning the site, which indicates how topography influences the visual sensitivity of the site.
(Source: Cape Farm Mapper).

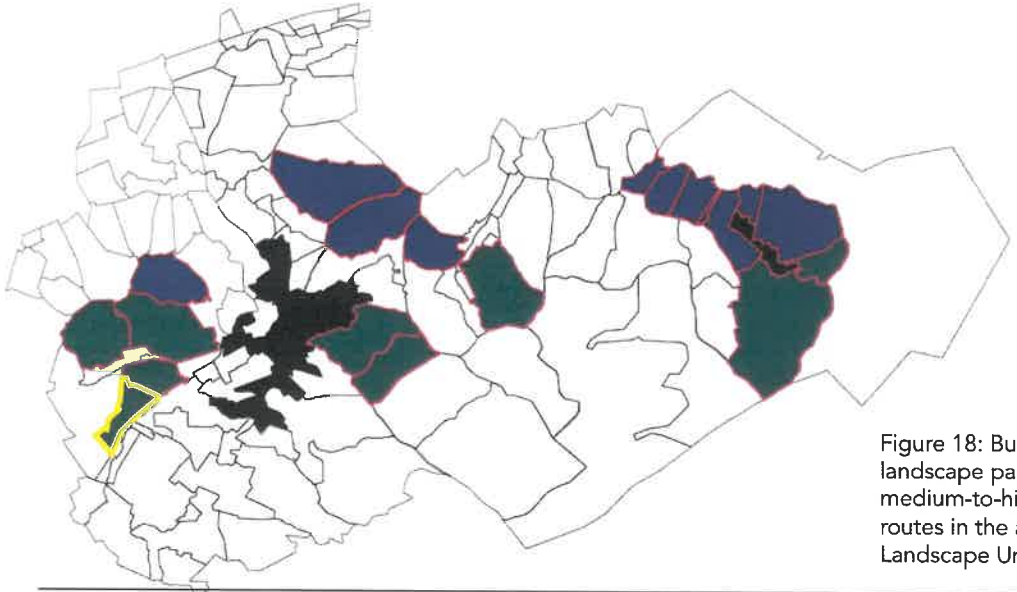


Figure 18: Building on the Viridian analysis, the SMHS identified landscape parcels with exceptional scenic quality, in that they had medium-to-high visbility from scenic routes, with over 70% of scenic routes in the area encompassing views to these areas. The Lynedoch Landscape Unit is outlined in yellow. (Source: SMHS, 2018).

1143

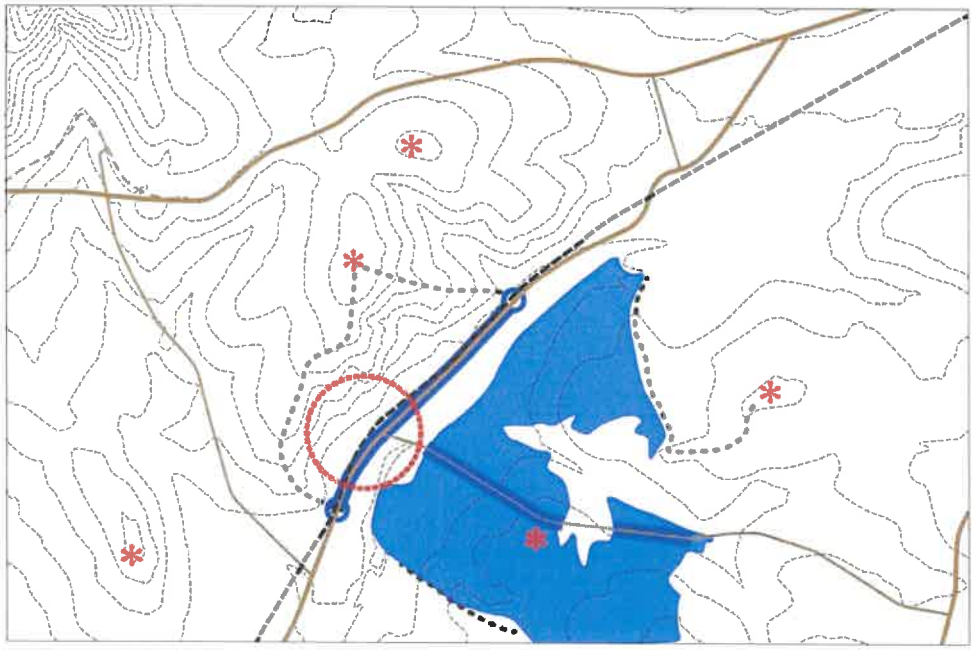


Figure 20: Analysis of the slopes and routes surrounding the site, from which the site is most visible. These are indicated in blue. The dashed lines and red stars indicate ridgelines and peaks.

Visual Absorption Capacity (VAC)

The VAC indicates the potential of the landscape to conceal the proposed development, and indicates how much of the project would be visually "absorbed" or "disappear" into the receiving environment. VAC is defined as follows:

- High VAC: Effective screening by topography and vegetation.
- Moderate VAC: Partial screening by topography and vegetation.
- Low VAC: Little screening by topography or vegetation.

The site has high VAC at the larger scale, due to the enclosing topography. It is otherwise highly visually exposed once these framing ridgelines have been passed. This has been identified on a more detailed scale in Figures A to R.

Visual Intrusion/Landscape Integrity

The visual intrusion that could potentially be caused by the proposed project is related to the level of compatibility or congruence of the proposed project with the particular qualities or sense of place of the surrounding areas. Visual intrusion relates to the concept of placing appropriate development typologies within their context to maintain landscape integrity and sense of place and is defined as follows:

- High visual intrusion: Noticeable change or conflicts with the surroundings.
- Moderate visual intrusion: Partially fits into the surroundings, but clearly noticeable.
- Low visual intrusion: Minimal change or blends in well with the surroundings.

The heritage-based design indicators developed for the site will look to ensure visual integrity of the development with its surrounds.

1144

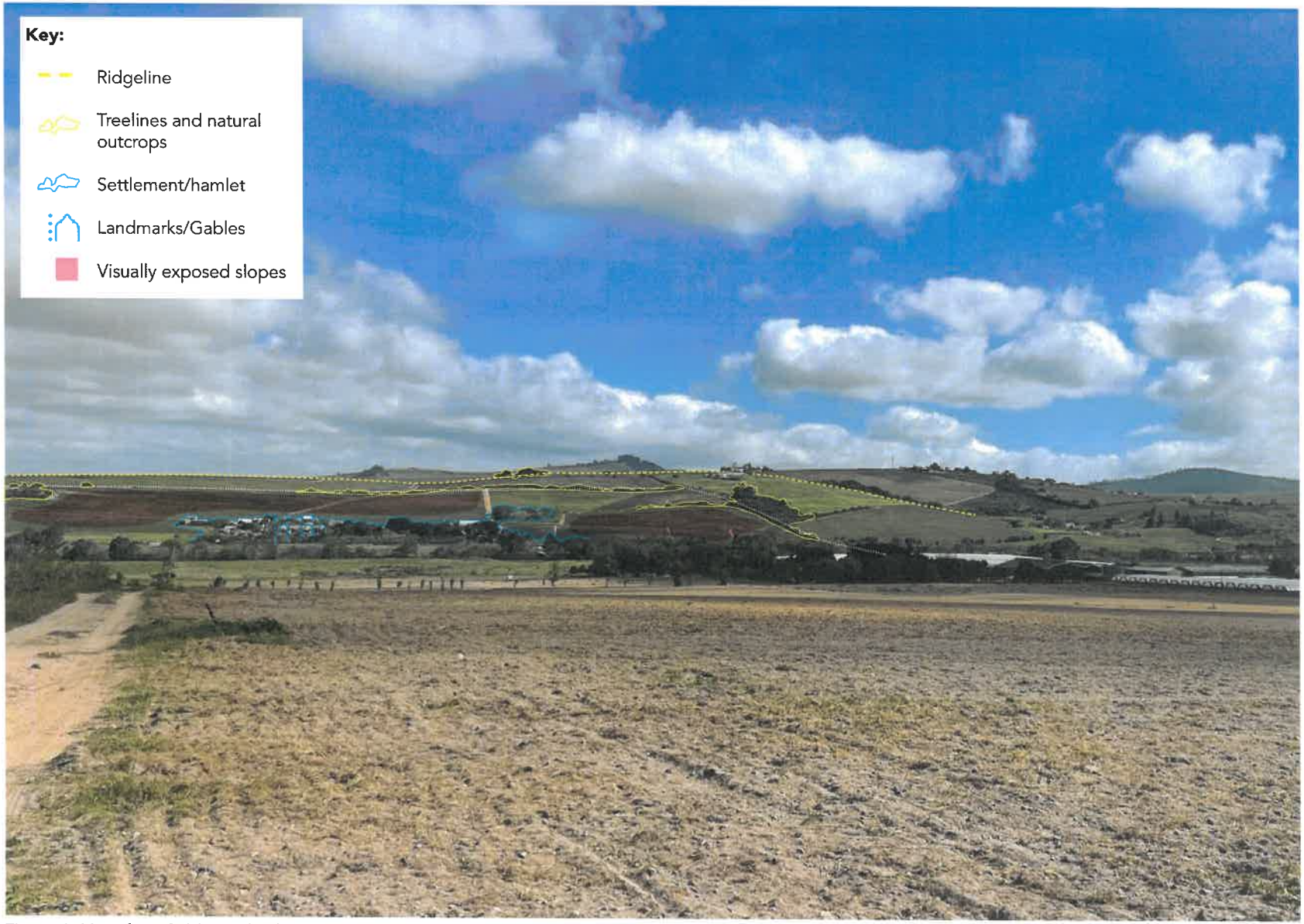


Figure A: View from fields south of Annandale Road, towards Lynedoch. White dotted line indicates approx. property boundary.

1145

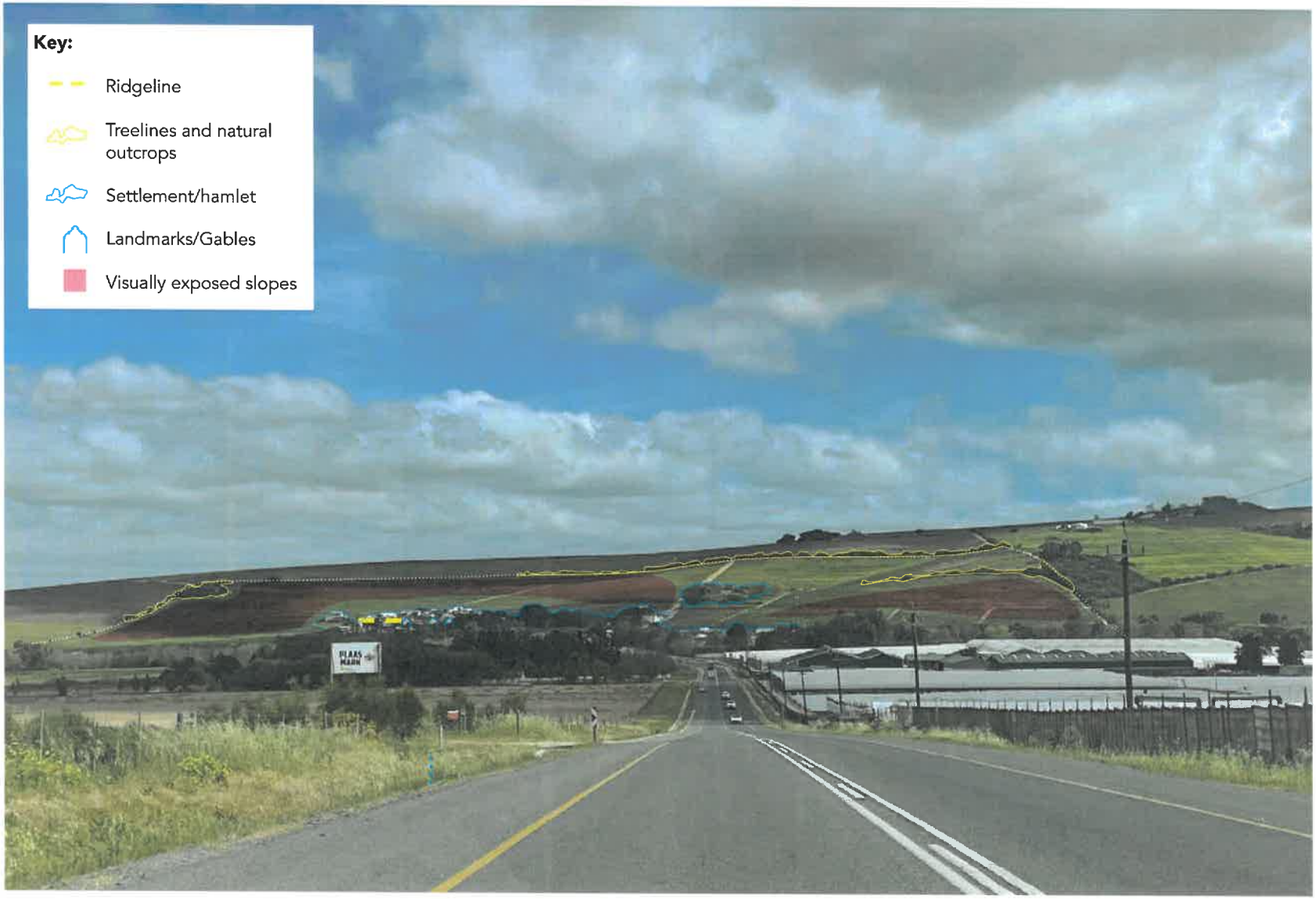


Figure B: View from the Annandale Road, above the strawberry farm, towards Lynedoch. White dotted line indicates approx. property boundary. This view indicates the high visual exposure of the upper slopes and east and west "flanks" at Lynedoch.

1146



Figure C: View from Annandale Road, towards Lynedoch, at the strawberry farm. White dots indicate approx. cadastral boundary.

1147

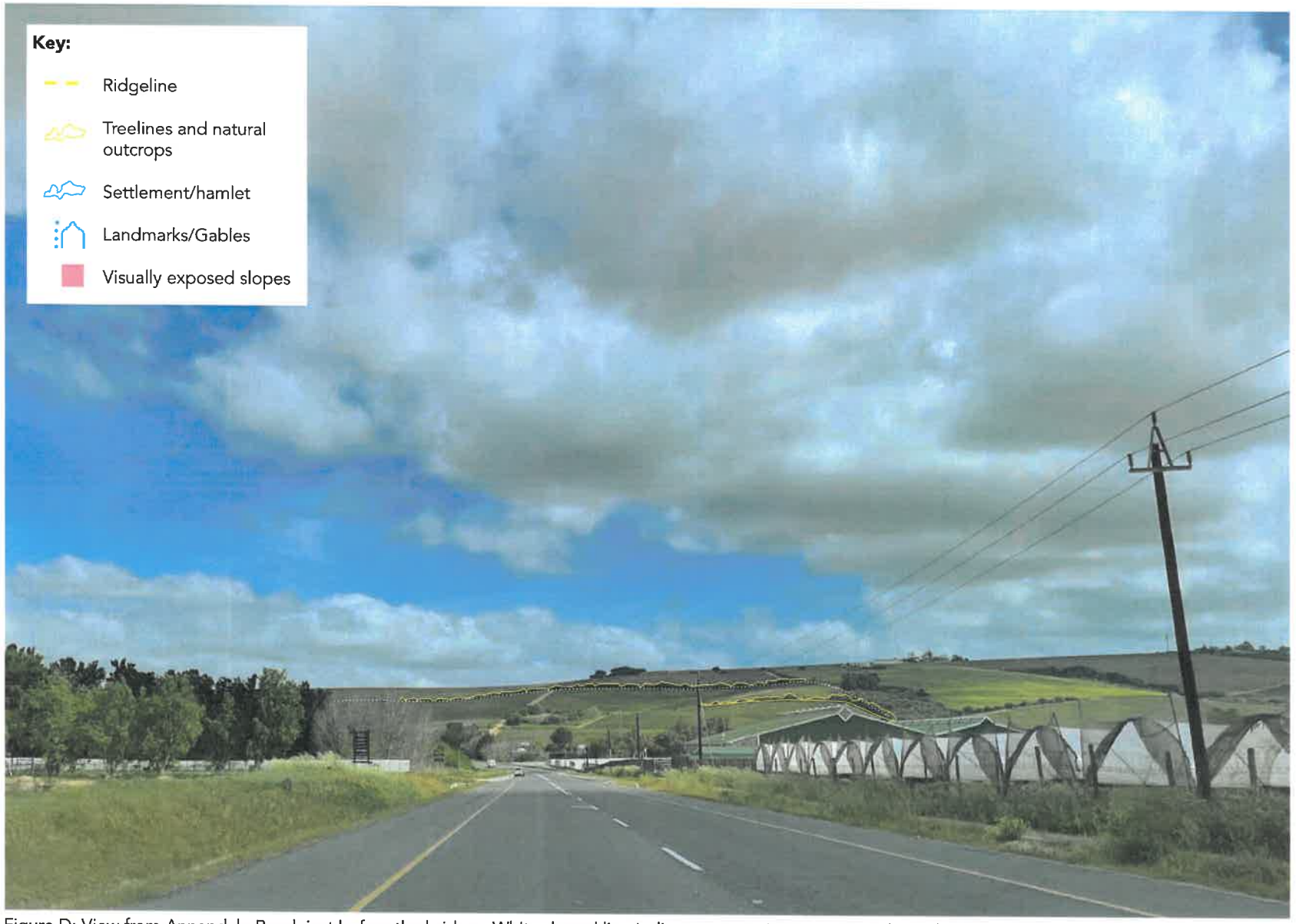


Figure D: View from Annandale Road, just before the bridge. White dotted line indicates approximate property boundary.

1148



Figure E: View from Annandale Road, towards Lynedoch, just before the bend. White dotted line indicates property boundary.

1149



Figure F: View from R310 from the south. The white dotted line indicates approximate property boundary.

1150

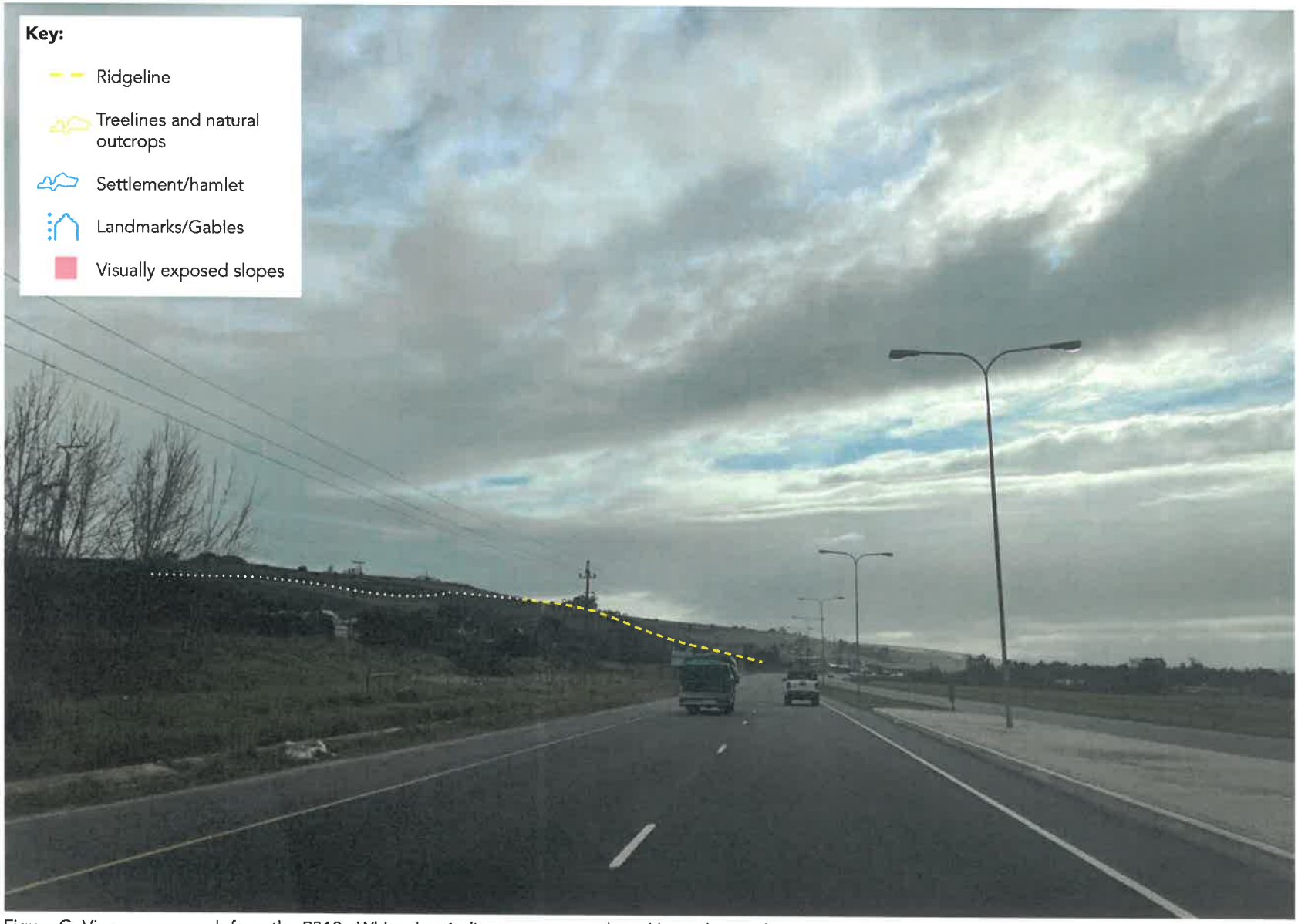


Figure G: View on approach from the R310. White dots indicate approx. cadastral boundary and coincide with the local ridge.

1151

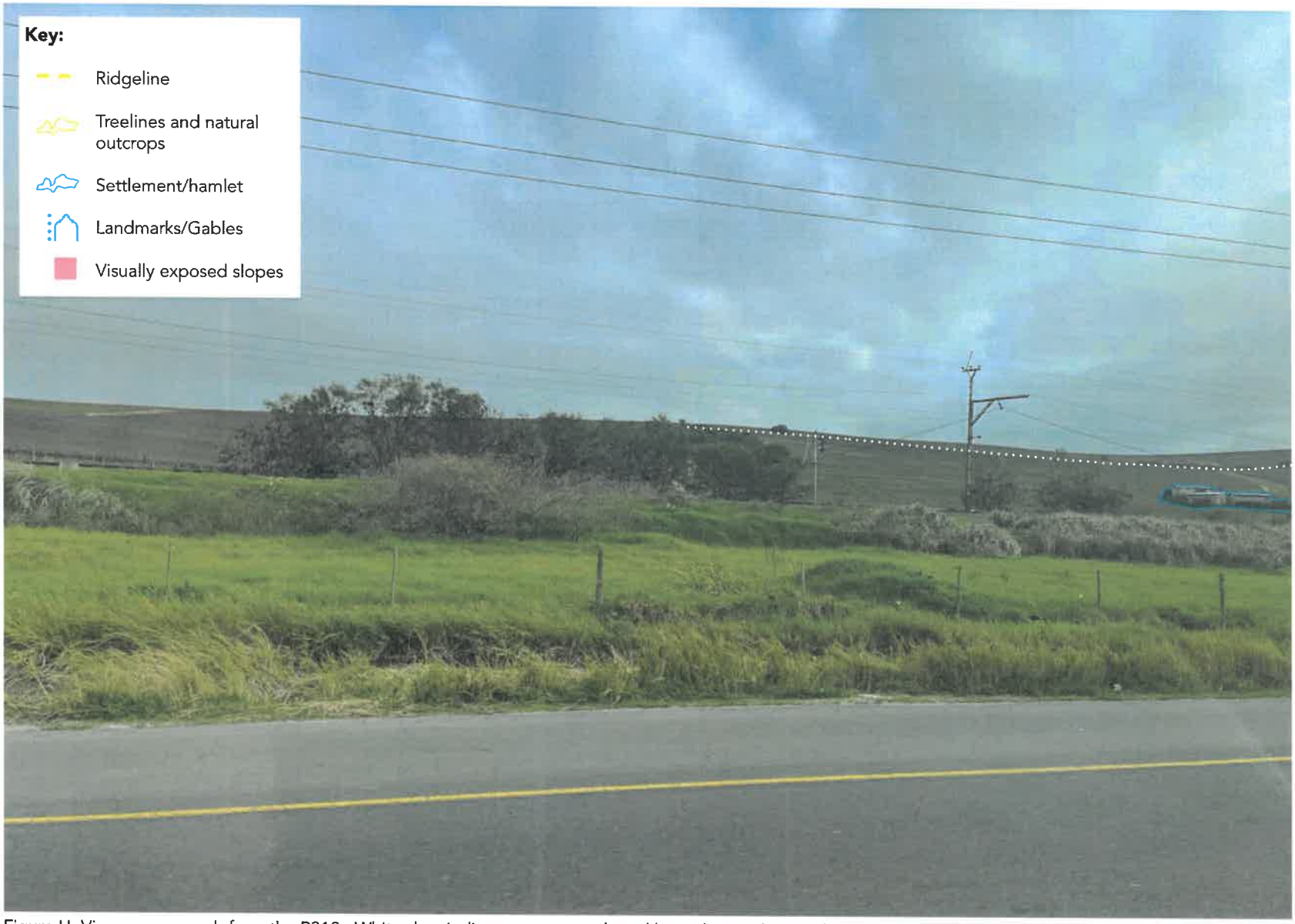


Figure H: View on approach from the R310. White dots indicate approx. cadastral boundary and coincide with the local ridge. The edhe of the Eco Village is also visible.

1152

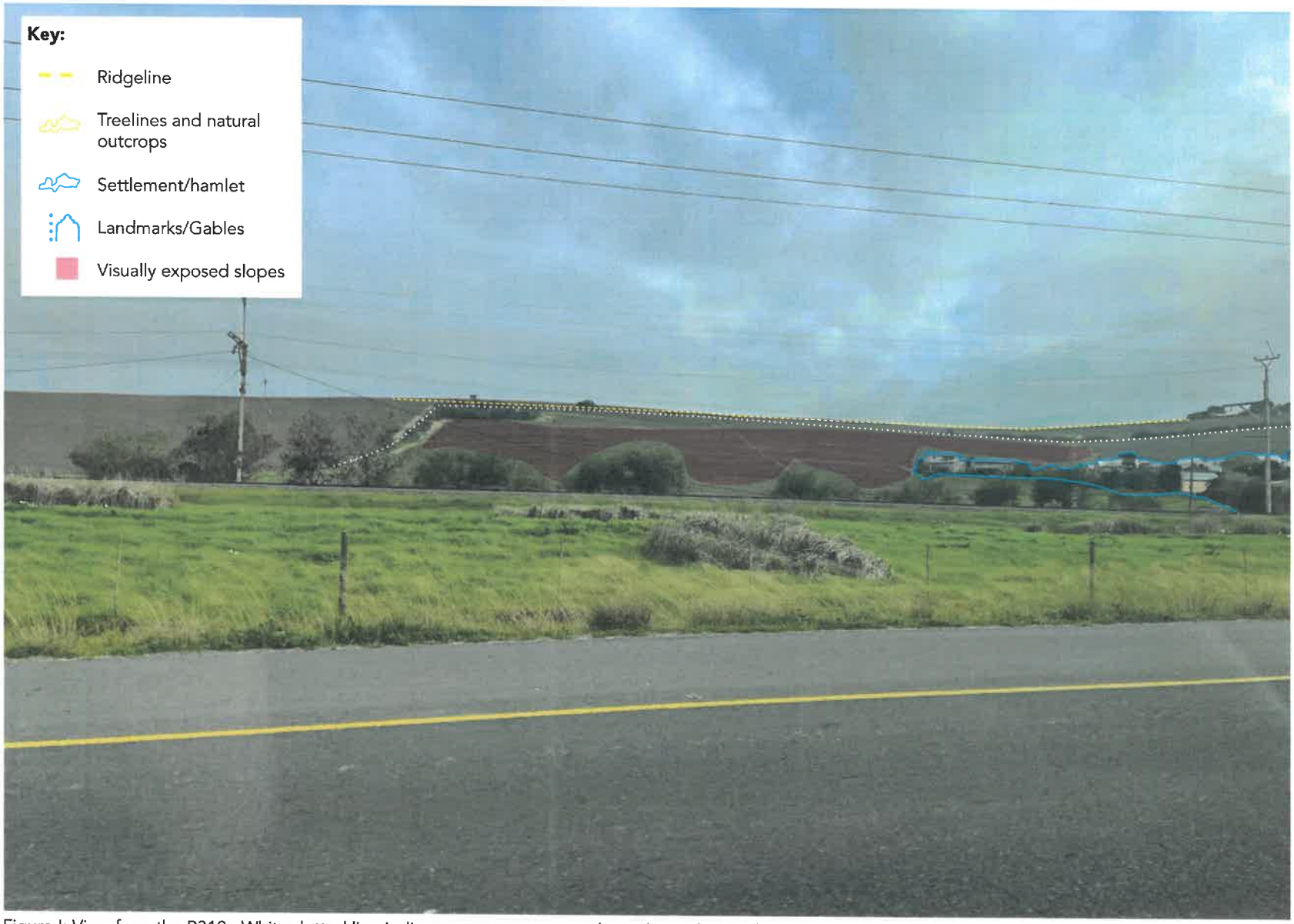


Figure I: View from the R310. White dotted line indicates approx. property boundary. The southern slopes are very exposed here.

1153



Figure J: View from the R310, just further on. The visual focus shifts to the palm trees and gables of the old hotel.



Figure K: View on approach from the R310. Palm trees & the gables dominate the view. The trees screen the slopes beyond.



Figure L: View from R310 at the intersection. The foreground clutter associated with the petrol station dominates views.

1156



Figure M: Figure L: View from R310 at the intersection. The foreground clutter associated with the petrol station dominates views.

1157

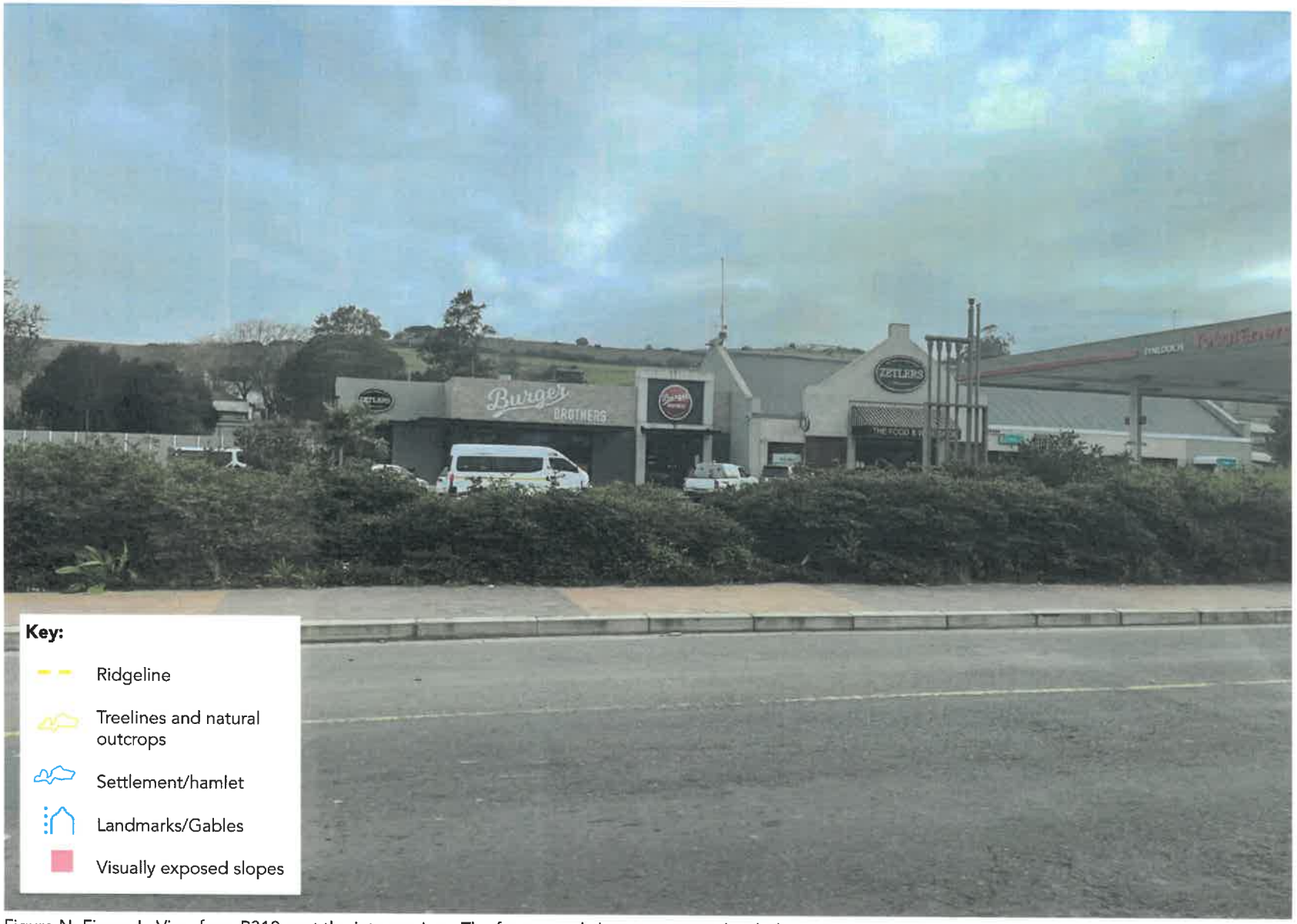


Figure N: Figure L: View from R310 past the intersection. The foreground clutter associated with the petrol station dominates views.

1158



Figure O: View on approach from the R310. The station and associated structures dominate the views.

1159

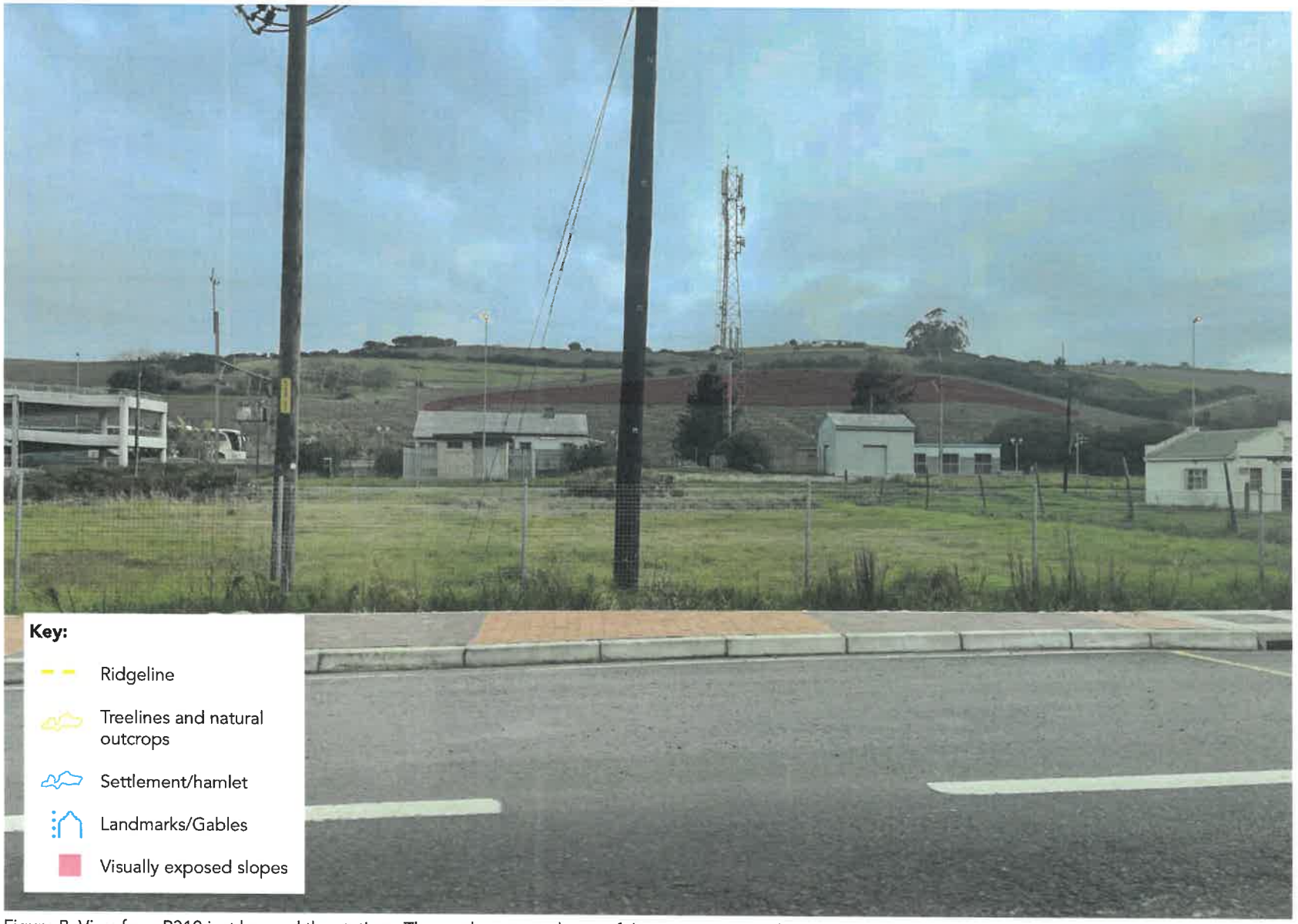


Figure P: View from R310 just beyond the station. The north-eastern slopes of the property again become visually exposed.

1160

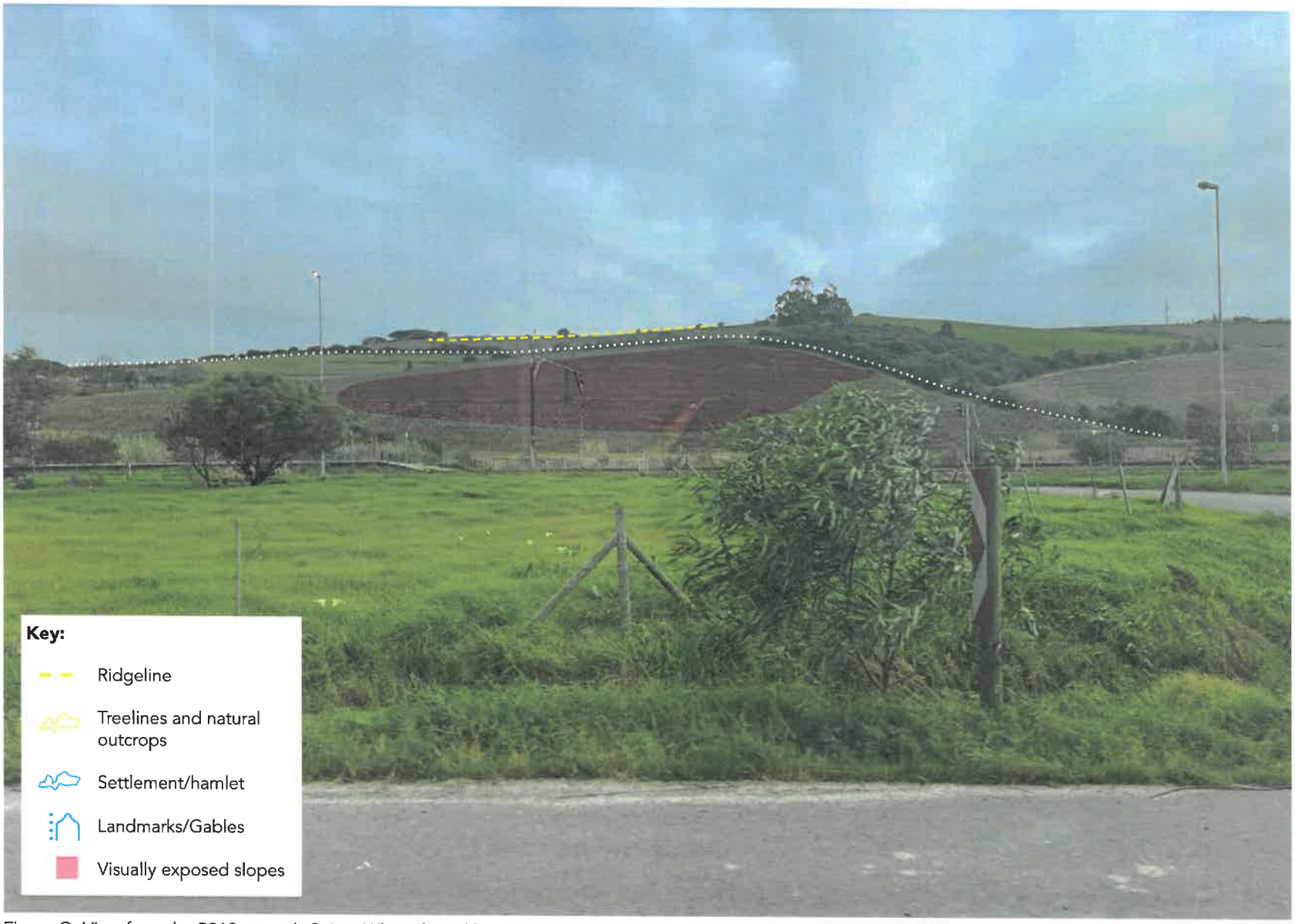


Figure Q: View from the R310 towards Spier. White dotted line indicates property boundary, with becomes the ridge line. The south-eastern slopes are highly visually exposed.

1161

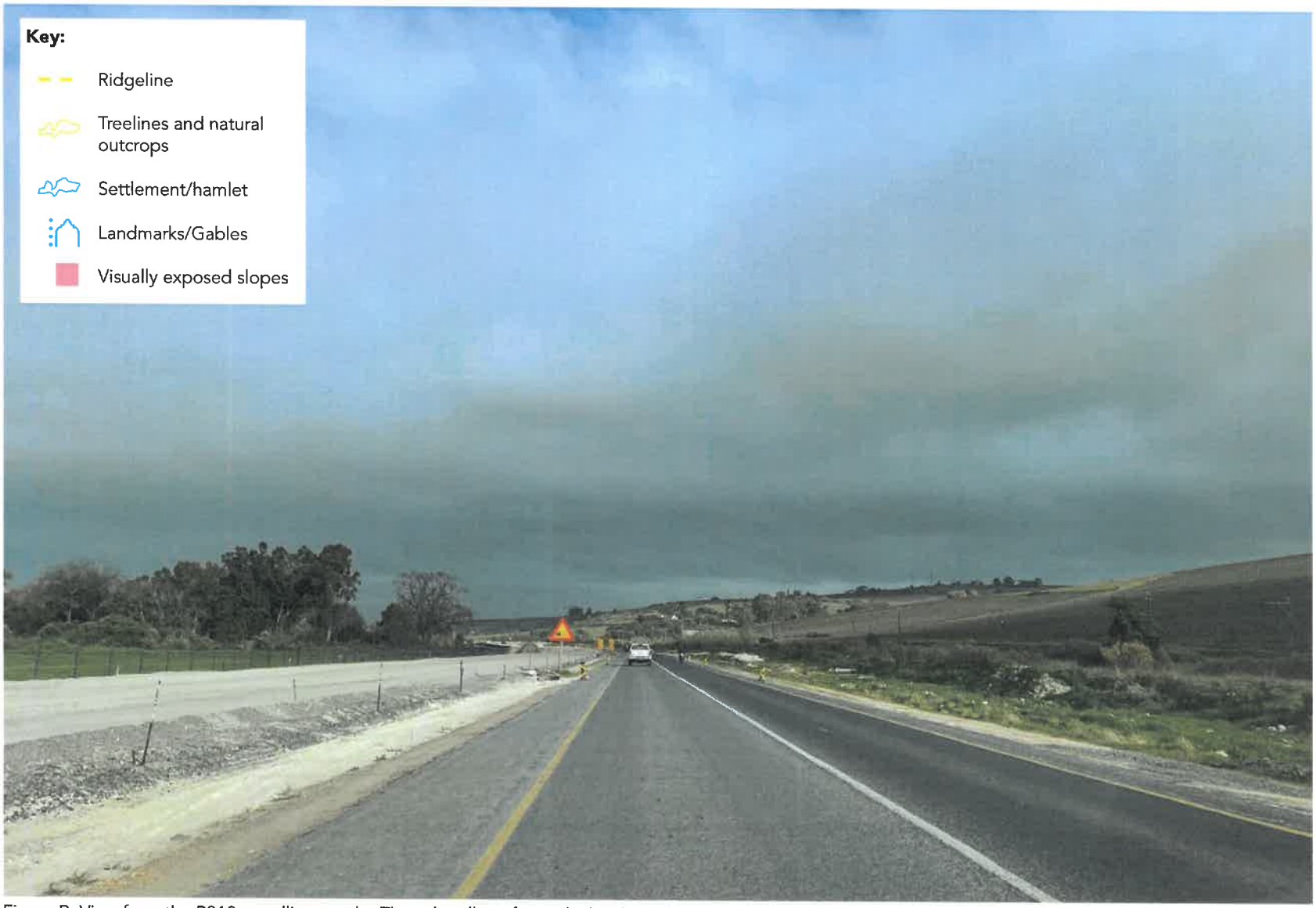


Figure R: View from the R310 travelling south. The sub-valley of Lynedoch is highly screened when moving south along the R310.

1162



Figure S: View from the internal Lynedoch Road, to the south-east of the site, looking up towards the ridgeline. Lynedoch Eco Village can be seen to the right of image.



Figure T: View from the entrance to the slightly visually sheltered "sub valley" above the railway station. The slopes to the left are visually exposed. The more modern farmhouse is further along the contour to the right of image.



Figure U: View from the slightly visually sheltered "sub valley" above modern farmhouse, seen to the centre of the image. The gum trees to the far left mark the edge of the site.

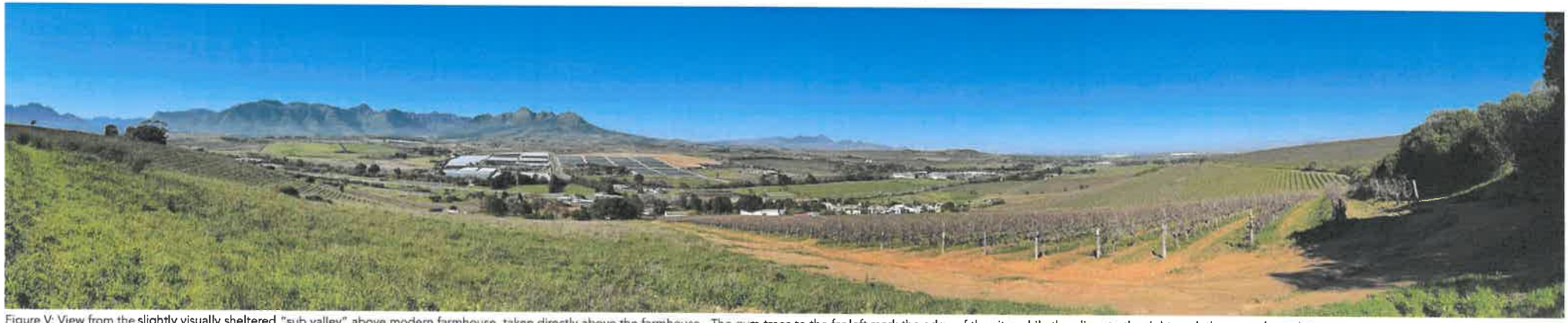


Figure V: View from the slightly visually sheltered "sub valley" above modern farmhouse, taken directly above the farmhouse. The gum trees to the far left mark the edge of the site, while the olives to the right mark the upper boundary.



Figure W: View taken direct above the Eco Village. The treed surrounds of the Lynedoch Node are evident and will provide screening directly behind the settlement.

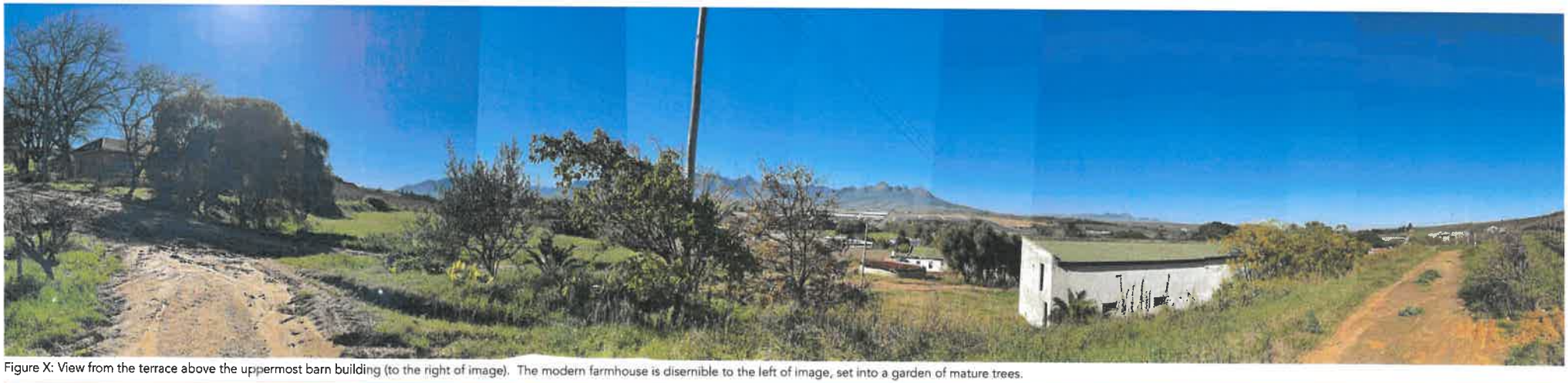


Figure X: View from the terrace above the uppermost barn building (to the right of image). The modern farmhouse is disernible to the left of image, set into a garden of mature trees.



Figure Y: View of the two agricultural barns at the first terrace above the Sustainability Institute. These should be adaptively reused.



Figure Z: View above the lower round dam, looking north towards Stellenbosch and the Lynedoch Station. The slope becomes increasingly visually exposed as one moves away from the existing village.

THE UNDERLYING "TOWNSCAPE" SETTING OF THE SITE AND SETTLEMENT NODE.

Analysis of the Patterns of Settlement-Making in the Cape Winelands

The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands. It encompasses many of the wider aspects of settlement making in the region, including:

- being positioned close to a river course and historic wagon route (as well as a railway line),
- the potential for the creation and extension of a gridded structure for agriculture into settlement,
- the hotel occupying a prominent position within the civic node (historically this role was most often performed by a church),
- and the visual setting of the whole against the surrounding hill slopes (K).

These elements are key to the historic patterns of settlement-making, as seen within the nearby villages of Jamestown and Raithby. A diagrammatic comparison of the illages indicates the various ways that the positioning of the towns relative to the watercourse and allotment gardens, church and main commonage or "village green" establishes a unique sense of place (Figure 21). Common and persistent elements include:

1. The civic "head" of the settlement, which includes a religious structure and an open, green space;
2. A movement spine that establishes the primary connection between the civic "head" and the ordinary houses;
3. Houses directly address the street, and always have associated areas for small-scale agriculture;
4. Houses tend to follow a strong architectural typology, usually of a walled architecture with a double-pitched roof, gable ends and a front stoep, which mediates the threshold between the street and the house.

The heritage indicators look to promote those urban elements that are seen to be consistent with settlement patterns in the Winelands as a whole.

The Development of a Housing Typology in the Winelands

The winelands have historically had a very strong building typology, created in part, due to the development of a building culture that relied on building traditions brought to the Cape from the VoC colonies in the East, as well as Europe (largely from Germany and Holland) in combination with vernacular traditions and materials such as the matjieshuise built by the Khoekhoen, which

Figure 21: Diagrams showing the civic structure of the nearly villages of Raithby and Jamestown.

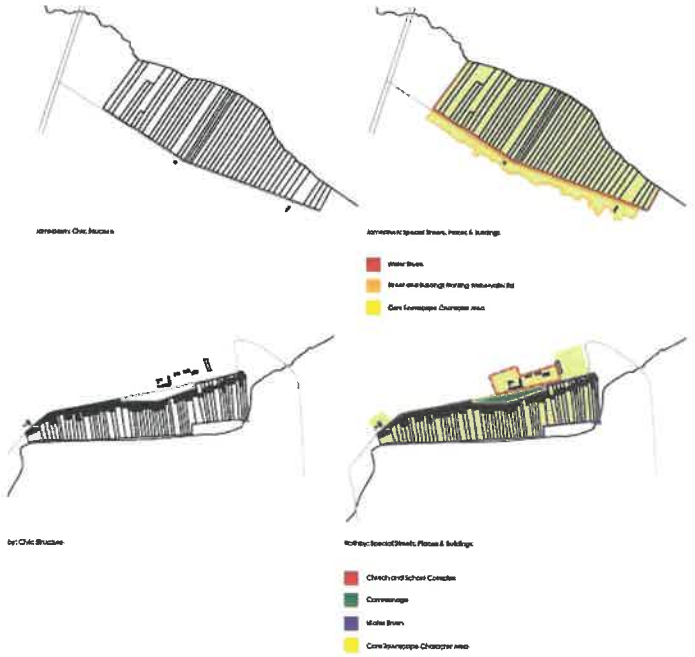


Figure 22: Typical "longhouse" structures, as documented by James Walton (VASSA).

1166

were reed-walled, domed buildings on a lattice of timberwork (Malan, 2018: 17).

Natural resources differed from those in Europe and Asia: timber was in short supply at the Cape, and there was little fuel for firing bricks and tiles. Forested areas around the Cape Peninsula were rapidly logged, and the Stellenbosch forests followed suit. It was only those builders with access to Company resources who were able to source good, long timber, hard bricks, etc. (Malan, 2018: 17). When bricks became more easily obtainable, the longhouse became the favoured structure: a narrow rectangular building, often with thatched roof (Malan, 2018: 18).

The hearth and chimney could be attached to a straight end gable. Internal walls, doors and windows were placed where required (Figure 22).

The "longhouse" should be seen as a typology and not an architectural style: it represents a built culture to which people's way of living has adapted, and a highly suburban model of housing would be foreign both culturally and spatially within the context of the site.

It is key to recognise that Lynedoch Eco Village has also introduced a typology. This is an architecture of single dwellings, but using alternative and more sustainable methods of construction, with no structure larger than two stories. There is no repetition in the design: each structure is uniquely designed for its site. Additionally, the Eco Village occupied the former terraced garden area above the old hotel, and so responds to the natural contouring of the site while also forcing densification. The village is densely treed.

It is critical that the architectural concept for the expansion of the Lynedoch hamlet avoid over-scaled private dwellings, gated residential estates, or a suburban model of development – particularly one that involves the repetition of construction of "unit types" across the landscape.

Instead, the existing, unique aspects of the site should be properly understood, and extended across the site (Fig. 23A-J).



Fig 23J: The existing Lynedoch Eco Village node, which defines the character of settlement on the site at present.
(Source: https://www.estate-living.co.za/news/lynedoch-eco-village-a-sustainable-development-unlike-any-other/).

Existing character-giving elements of the environment surrounding the site.

Figure 20 identifies those areas from which the site is highly visible. These have been documented along their routes (R310 and the Annandale Road) and the visual exposure of the various components of the site have been mapped (Fig. A-R).

1167



Fig 23A: The roads in the village are paved and well-planted.



Fig 23B: Southern elevation of the southern-most barn building



Fig 23C: Northern elevation of the northermost barn building.



Fig 23D: The "farm managers' house".



Fig 23E: The old hotel, which is a graded heritage site.



Fig 23F: The fine interior of the old Gleneagles Hotel.



Fig 23H: Detail of a projecting lead-glass bay window.



Fig 23G: The historic stoep, with fine period detailing.



Fig 23I: Detail along the edge of the stoep.

CULTURAL LANDSCAPE PATTERNS

The landscape and settlement patterns of the site and its surrounds are physical devices or spatial arrangements which enrich the built environment and ensure the appropriate relationship of component parts to each other. They suggest how the environment may be used and encompass patterns are inherited from the past.

The benefit to identifying and working within these patterns today is to enhance, in a contemporary idiom, the richness and quality of experience suggested by the inherited patterns.

Although the environment of the site has been established to be of a "patchwork" character, it is generally understood that some urban development could occur at this node.

The following positive settlement attributes of the site have been identified:

GATEWAY

The site plays a gateway role when moving towards Stellenbosch. It is one of a set of unfolding "layers" along the R310, being one of the first points where a change in topography (the hill system) can be perceived. This hill system also serves to screen the site, "tucking" it between two localised ridgelines.

The intersection of the R310 with the Annandale Road further reinforces this as a gateway point along a sequential route into Stellenbosch.

LANDMARKS

This gateway role of the site is strongly supported by the location of the old hotel, which with its three gables and tall palm trees, creates a local landmark for the site. This landmark nature has been somewhat diluted by the construction of a more modern building directly in front of, albeit below, the old hotel building.

VISTAS AND VIEWPOINTS

Because the site is located at a traffic intersection – a point of pause along the route into Stellenbosch – the open space that it provides allows for the experience of "vistas", moments within the cultural landscape which clearly directs your view into the surrounding countryside. These views are predominantly towards the Helderberg peaks to the east, and are more perceptible when travelling south than north.

LANDSCAPE PATTERNS

The rolling hill topography of the site is quite "open" and convex. Two distinct sub-valleys cut through the wider fan-shaped valley and have natural vegetation. In addition, a line of indigenous olives runs along most of the upper edge of the property, as well as along the northern edge, where a rocky outcrop provides a denser "clump" of trees.

A secondary line of olives cuts about a third of the way down the slope, marking the upper edge of a localised ridge that is visually exposed, particularly from the east.

To the south, another outcrop and line of olives along the ridge screens the sub-valley when approaching along the R310.

Other than these limited areas, the major screening elements comprise foreground planting both along the railway line and around the Sustainability Institute and farm buildings. Some trees are very mature and have a high and dense canopy that screens the site, particularly when viewed from the R310.

ROUTES

There are limited "desire line" routes bisecting the site, and in many ways the site's lack of connection to the surrounds detracts from the experience of the space. There is a footpath leading from the Sustainability Institute over the hill that is used by school pupils as well as dog walkers.

TERRACING

There is some subtle terracing that has occurred on the site over time, largely following the contours of the hillside. The banks that have been created help to screen structures below, which appear to be "tucked into" the landscape.

1169

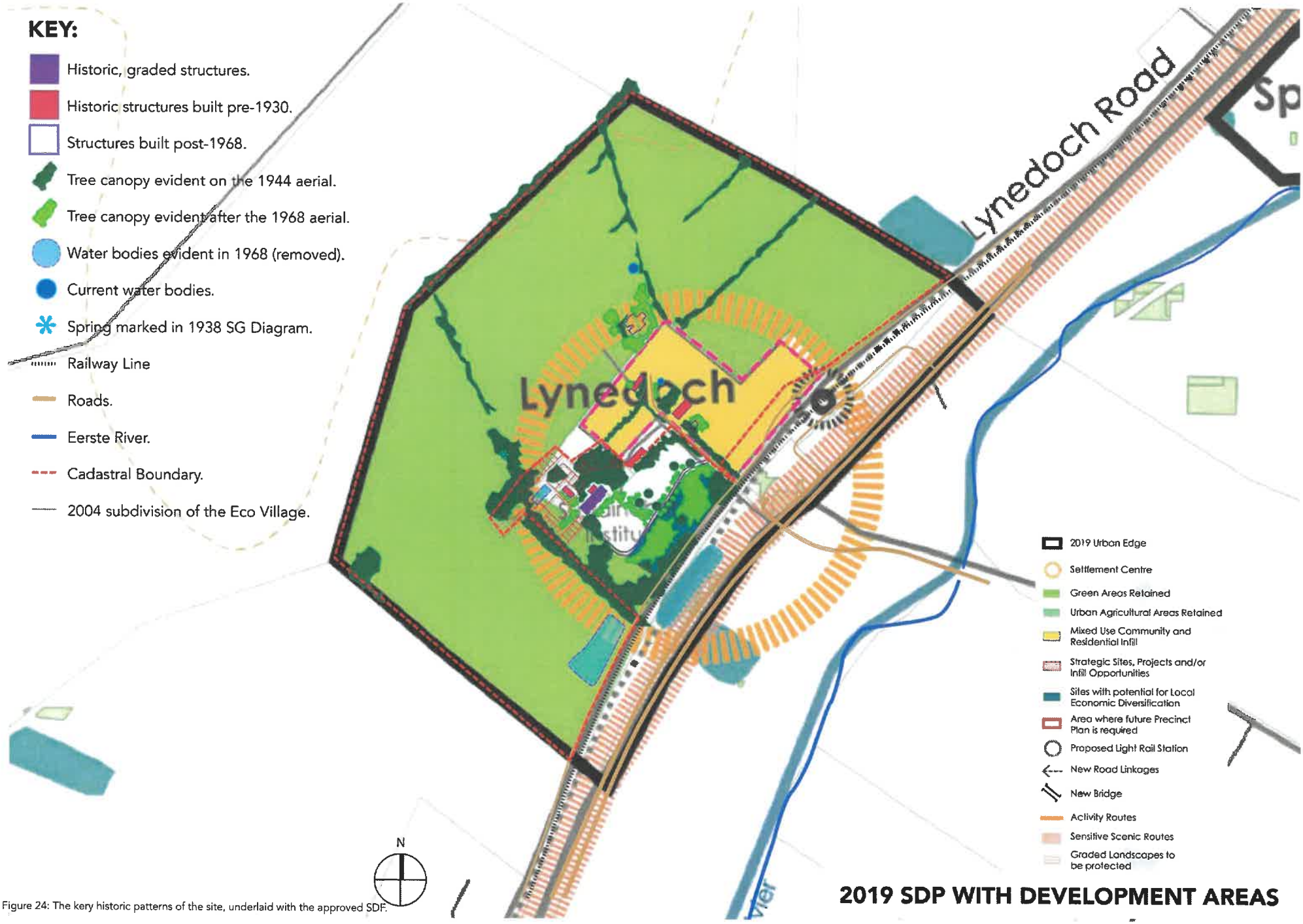


Figure 24: The kery historic patterns of the site, underlaid with the approved SDF.

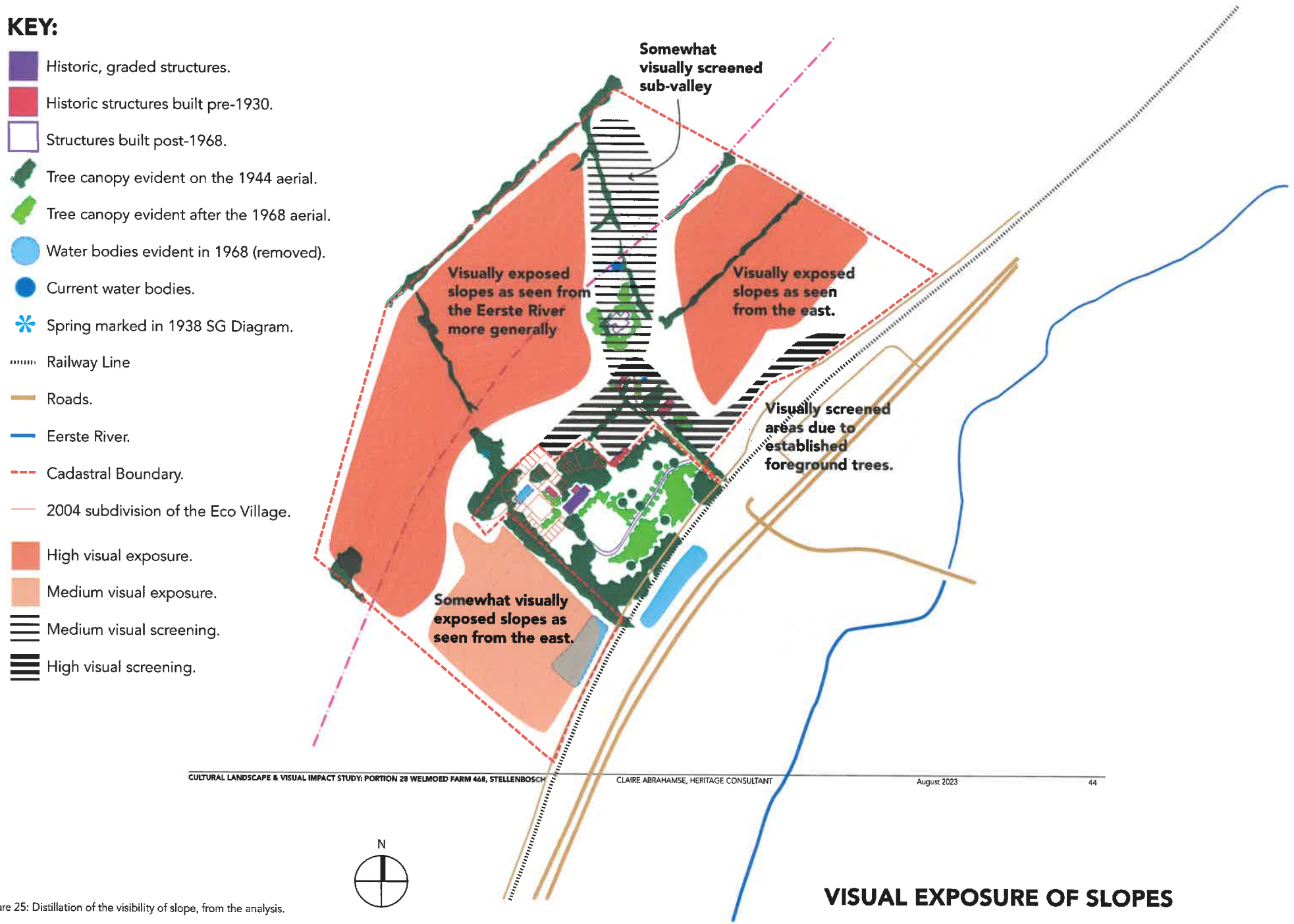


Figure 25: Distillation of the visibility of slope, from the analysis.

4. THE SITE CHARACTER

From a landscape perspective, the site has been identified as being part of a fine-grained, ordered and patchwork agricultural landscape that is very "open".

In addition, the SMHS identifies the Eco Village as a "good example of integration of mixed income and use. The hamlet is considered a positive contemporary example of development that challenges the tendencies towards gated villages and other residential schemes that reinforce exclusion and separation", often justified on the basis of security.

From a townscape perspective, Lynedoch is very much centred on the old hotel as a landmark, with the palm trees as "framing elements". The well-treed and terraced hotel garden has been subdivided to create the village plots, and so these follow the contours and are largely "tucked into" a manure, treed canopy. The entire hamlet is set against the hilly slopes, which "fan" slightly to enclose the village. The railway station and associated commercial node is very much fragmented from the village itself.

5. CONSIDERATION OF A "NO DEVELOPMENT" OPTION

The subject site is located within the approved urban edge for the area. The Spatial Development Framework also encourages the establishment of further development at Lynedoch as a development comprising the "further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate" (2019: 94 – see Figure 24). A fairly compact footprint for further expansion of this node is indicated.

Therefore, the application for further development of the land parcel in question can be supported in principle. However, this does not mean that development rights should be automatically granted.

The site is of heritage significance and sensitivity. In particular, it is located along the R310 Scenic Route and has over 70% visibility and forms part of a wider landscape of exceptional scenic qualities. The visual impact of proposed developments must be carefully considered (SHMS, 2018), and the slopes making up the site have varying degrees of visual exposure (Figure 25).

6. HERITAGE INDICTORS AND GUIDELINES FOR THE SITE.

The Cultural Landscape Study and associated Visual Study of the site have revealed a context and site of medium heritage significance but with very high scenic qualities, particularly in providing an agricultural backdrop to other heritage sites within the vicinity.

It follows that, to preserve heritage significance (especially tangible heritage significance associated with physical elements) these fundamental elements must be identified, protected, and enhanced in the course of the future development and densification of the site.

Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node (Figure 26).

1. The landmark nature of the old hotel complex must be enhanced and responded to as a prominent civic node within the wider context.
2. The historic farm barn structures and small "managers house" should be retained and adaptively re-used, ideally for educational purposes.
3. All existing areas of Fynbos and/or natural vegetation must be retained and reinforced on the site.
4. The spring course identified on the c1938 SG Diagram should be explored on site. In addition, the dam along the roadway to the south-east appears in the 1968 aerial photograph, and this area retains a wetland character that should be preserved as an asset of the site.
5. The mature trees on and around the site are higher-order landmark elements within this environment. They help to structure the space and provide some visual screening. Some trees are mature, older than 60 years, and should be retained. A plan for the staggering or replacement of mature planting must be put in place. Existing treelines should be reinforced and extended to screen the development.
6. Additional planning should be introduced on the site to provide additional visual screening and absorption within the foreground environment. The windbreaks in the wider context set up a landscape structure that can be extended into the site. These also create a potential for the extension of a structure for settlement onto the site, that responds to existing landscape elements and patterns.
7. In particular, the southern slopes are visually exposed from the east, but gently sloping and able to be easily connected to the existing village. Planting as visual screening must be used extensively here.
8. The railway station is an important potential civic asset and should be acknowledged as a higher-order element in the proposed development of the site.

9. Street Grid: The street grid should follow the contour and reinterpret the existing pattern of vineyards as much as possible. Although curvilinear streets are generally foreign to the Winelands, they have been used at Lynedoch and are key to the character of that place, where settlement is secondary to the natural, contoured landscape. The street grid should be as efficient and minimal as possible, with only the main routes being paved.
10. New buildings must follow the contour, as the existing buildings within the Lynedoch node currently do.
11. Verges/Pavements: It is preferred that verges and pavements are grassed, hard-packed soil or brick paving, and planted with trees. Brickwork and laterite surfacing should be preferred to tarmac throughout.
12. Boundary Treatments: High and solid walls are not permitted, as well as pre-cast concrete fencing, exposed blockwork, and facebrick walling. Historic boundary elements such as fences and hedges must be preserved and extended as far as possible.
13. Stoeps: Street-facing stoeps are a common feature of the buildings in the area, often with planted gardens in front. New residential development should include these elements.
14. Heights: New buildings must respond to and interpret the character-giving aspects of the site. In this environment, new buildings should predominantly be no more than double storey.
15. Materials, Colour and Architectural Detail: Building materials should be compatible with traditional materials in terms of scale, colour and texture. Historical architectural features that copy an earlier style (or introduce a foreign style) should be avoided. Rather, the underpinning principle should be that new buildings must be sympathetic to the architectural character of the area but should also be of their own time. New buildings should be of a walled architectural type. New structures should be painted a muted colour and be rectilinear in form. Corrugated roofs should be darker colours.
16. Scenic Route Restrictions within 500m of the roadway: The foreground views within the scenic route corridor is considered the most significant, and therefore all scenic routes should have a 500m buffer on either side of the road where specific development guidelines apply. The principle is that nothing will be permitted that detracts from the existing scenic value of the Landscape Unit that is being traversed by the Scenic Route. Based on the significance of the Scenic Route (its grade) and the significant character of the surrounding landscape, the following guidelines should be considered.

Foreground guidelines:

a. Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.

b. New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road-related interventions affecting its sense of fit in the landscape must be avoided.

c. Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as they detract from the rural character of the Winelands.

d. Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas.

e. Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.

f. The natural character of Fynbos vegetation, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with over-scaled entrance structures.

g. Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before they can be considered (from the list of deviated land-use documented for the Stellenbosch winelands, see CMP document):

- Farm stalls/restaurants
- Nurseries/mixed use/garden centres/timber yards
- Greenhouses, agricultural netting, chicken broilers/Strawberry fields

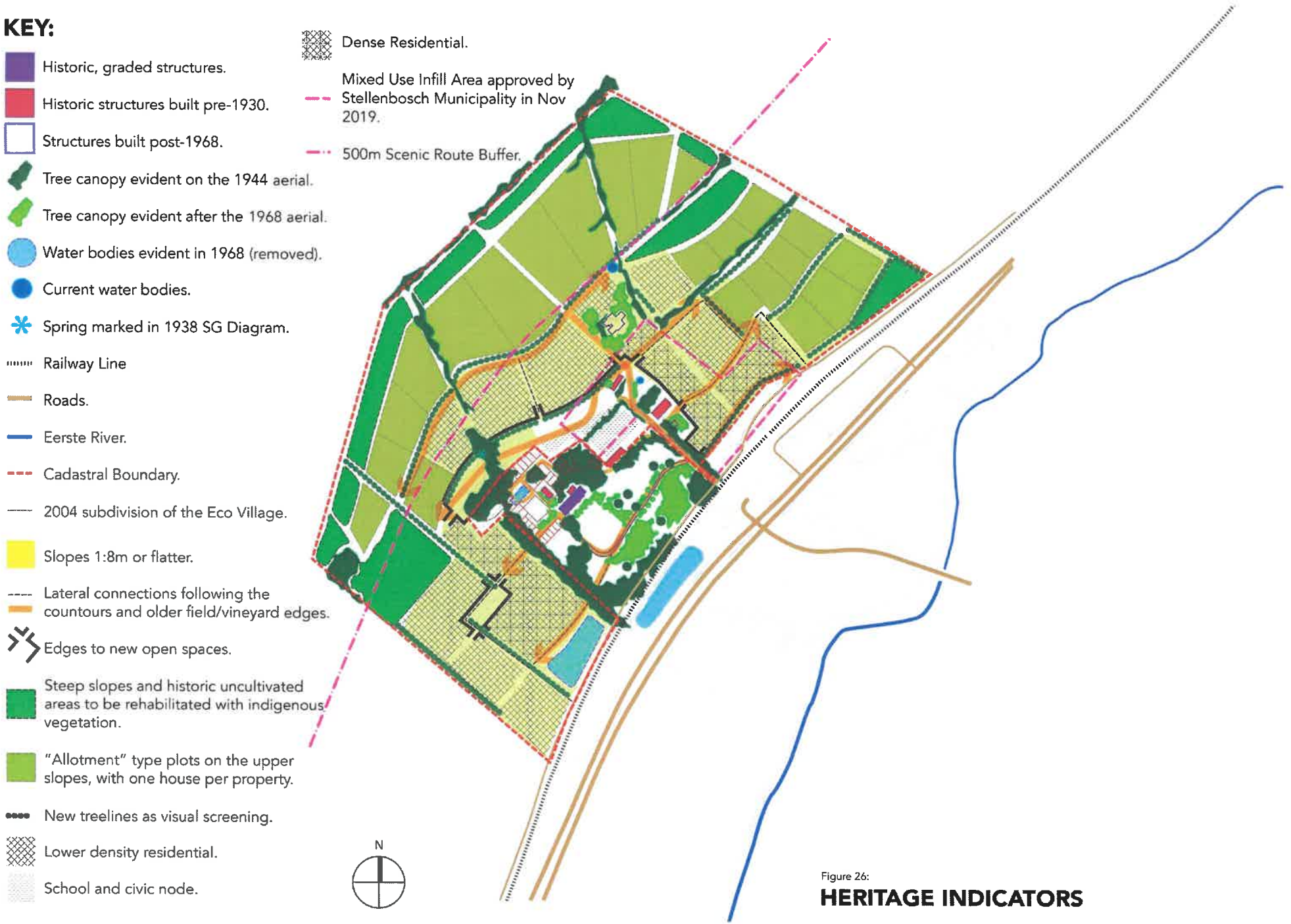


Figure 26:
HERITAGE INDICATORS

- Subdivisions, gated communities, shopping centres, business parks
- Large scale industrial structures
- Open Air Markets

It follows that the above forms of development should be avoided within the 500m buffer from the scenic route.

Background guidelines:

h. Avoid development on rocky outcrops or ridgelines, because of their high visibility and the visual sensitivity of the skyline.

i. Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines and hillcrests. Retain the integrity of the distinctive and predominantly agricultural landscape character.

j. Avoid the construction of over-scaled private dwellings and other structures in locations of high visual significance, and on visually-exposed promontories, ridges and ridgelines. Preferred locations are sites that have already been settled (at the Lynedoch node), or sites "tucked into" the landscape.

k. Respect traditional settlement patterns. This includes the backdrop of the natural landscape against which settlement is sites, as well as its spatial structure.

l. Promote urban densification within the historic node to protect the rural landscape as the main communal asset.

m. New interventions within settlements must respect the layout, scale, massing, hierarchy, alignments, access, landscaping and setting of the existing settlement pattern.

n. Prevent the gentrification of rural settlements through "lifestyle rural estates". These uneconomic plots fundamentally erode the agricultural character of the landscape. Rather, maintain larger unified areas of farming to protect larger landscape continuums that protect a unified scenic character.

o. The development of security estates and gated communities must be prevented. Encourage development that follows the pattern of, and builds on the example of, the Lynedoch eco-village. Here, a model for integrated communities with different income levels has been successfully applied and tested.



Inappropriate development: overscaled mansions.



Inappropriate development: gated villages.



Inappropriate development: large houses sited on ridges. All SMHS, 2018.

1175

7. ASSESSMENT OF VISUAL-CULTURAL LANDSCAPE IMPACT ASSESSMENT OF THE PROPOSED DEVELOPMENT.

THE DEVELOPMENT PROPOSAL.

A very conceptual plan has been provided indicating a potential development.

There is currently insufficient information provided to make a proper assessment, but the heritage-based design indicators outlined above should be used to underpin a proposed development layout and design.

ANTICIPATED VISUAL-CULTURAL IMPACTS OF THE PROPOSED DEVELOPMENT.

The site has consistently been included within the urban edge, in both heritage surveys and planning documentation.

The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley.

8. RECOMMENDATIONS

It is recommended that the heritage-based design indicators be integrated into the design proposal as far as possible, to achieve the "education focused... compact, pedestrian oriented, child friendly community" that was envisioned for this site in the 2019 Stellenbosch Municipality Spatial Development Framework.

Claire Abrahamse

August 2023.

REFERENCES

Primary Sources:

Cape Archives,

Leonard Guelke's 1987 map of "The Southwestern Cape Colony, 1657 - 1750, Freehold Grants", Department of Geography, University of Waterloo.

Topocadastral imagery from the National Geo-Spatial Information Department, Mowbray.

Surveyor General's 1900 Divisional Map of Stellenbosch, National Geo- Spatial Information Department, Mowbray.

Surveyor General's map of The South Western Districts: Sheets 1 & 13, Cape and Malmesbury (1880 - 1900), National Geo-Spatial Information Department, Mowbray.

1938, 1953, 1960, 1983, 2000 and 2016 aerial photography for the area, National Geo-Spatial Information Department, Mowbray.

Cape Farm Mapper.

Secondary Sources:

GAPP Architects and Urban Designers, Transport Futures and Built Environment Partnership. Stellenbosch Municipality Spatial Development Framework. Approved by Council on the 11th November 2011.

Guelke, L.T. "The Early European Settlement of South Africa". Unpublished Doctoral Dissertation, University of Toronto, 1974.

Malan, A. 2018. Stellenbosch Rural Survey and Inventory, Phase 2a Palaeontology and Archaeology Framework.

Oberholzer, B. April 2005. "Provincial Government of the Western Cape: Department of Environmental Affairs and Development Planning. Guideline for Involving Visual and Aesthetic Specialists in EIA Processes". Edition 1, Draft for Comment. https://www.westerncape.gov.za/text/2005/4/deadp_visual_guideline_draft_15april05.pdf.

Richardson, Deidré. 2001. Historic Sites of South Africa. Cape Town: Struik Publishers. pp 138.

Robson, L.G. "The Royal Engineers and Settlement Planning in the Cape Colony 1806 – 1872: Approach, Methodology, and Impact. Submitted in partial fulfilment of the PhD in Town and Regional Planning, University of Pretoria, 2011.

Todeschini, F. and Jansen, L. Cape Winelands Professional Practices in Association. Phase 2a Report: Preliminary Draft Heritage Inventory of Large-Scale Landscape Areas in the Rural Domain of the Stellenbosch Municipality informing Proposed Heritage Areas, REVISED, 26th January 2017.

Todeschini, F. and Jansen, L. Cape Winelands Professional Practices in Association. Phase 3 and 4 Map, Conservation Management Plan. http://stellenboschheritage.co.za/smhs/map/#15/-33.9804/18.7795. Accessed June, July and August 2023.

Van der Bijl, J. "Die Grondeienaars van Stellenbosch: Eienaars van erwe op die Dorp, 1693-ca.1860, en Eienaars van Plase in the Distrik, 1680 - ca. 1860". Unpublished study, 2000.

Vos. H. "Spier Farm: Survey of its Early History". Unpublished report complied for the owners of Spier, June 1998.

1177