



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

Application Number: LU/13722

Our File Reference Number: Erf 9536, Stellenbosch

Your Reference Number:

Enquiries: Ulrich von Molendorff

Contact No: 021 – 808 8682

Email address: Ulrich.Vonmolendorff@stellenbosch.gov.za

PER E-

Sir /Madam

APPLICATION FOR A CONSENT USE AND PERMANENT DEPARTURE ON ERF 9536, STELLENBOSCH

1. The above application refers.
2. The duly authorised decision maker has decided on the above application as follows.
 - 2.1. That the following application(s) in terms of Section 15(2) of the Stellenbosch Municipality By-law on Municipal Land Use Planning, 2023 on Erf 9536, Stellenbosch, for:
 - i. **Consent Use** in terms of Section 15(2)(o) of the said By-law in order to allow for the construction of 25m high freestanding base telecommunication station with the following associated equipment:
 - 4 x 3 sector antennae attached to the mast
 - Microwave dishes attached to the mast
 - 4 x equipment container units
 - A 2,4m high palisade fence
 - ii. **Departure** in terms of Section 15(2)(b) of the said by law in order to relax the:
 - a. Street building line (Blaauwklippen Road) 37,5m to 11,17m & 6,73m,
 - b. Street building line (Canterbury Street) 37,5m to 10,9m,
 - c. Common building line (adjacent to Erf 13113) from 37,5m to 12,55m
 - d. Common building line (adjacent to Farm No. 1457) from 37,5m to 10,43m,respectively in order to accommodate the proposed 25m high freestanding base telecommunication station and associated equipment,
 - iii. **Departure** in terms of Section 15(2)(b) of the said by law in order to exceed the prescribed height restriction for freestanding base telecommunication mast from 15m to 25m

BE APPROVED in terms of Section 60 of the said By-law.

2.2. The approval is subject to the following **conditions** imposed in terms of Section 66 of said Bylaw:

- 2.2.1. The approval applies only to the application under consideration and shall not be construed as authority to depart from any other legal prescriptions or requirements from Council.
- 2.2.2. That the following mitigation measures originating from the Visual Impact Assessment be implemented and adhered to, see attached VIA as **Annexure B**:
 - a. Signage, if essential, should be discreet and confined to entrance gates. No corporate or advertising signage should be permitted.
 - b. Avoid shiny materials in structures. Where possible shiny metal structure should be darkened or screened to prevent glare.
- 2.2.3. A site development plan indicating a 25m high monopole mast together with its associated infrastructure be submitted with the building plans for approval.
- 2.2.4. The landowner / operator shall grant the Municipality access at all reasonable times to the installation, for the purpose of monitoring inspection and compliance certification.
- 2.2.5. Only existing entry points to the property be used to access the location of the base telecommunication station site.
- 2.2.6. The mast, equipment room or any boundary enclosure shall not be utilised for outdoor advertising purposes.
- 2.2.7. No unauthorized person shall be able to come within 5m in front of the panel antennae.
- 2.2.8. Natural areas disturbed during construction must be rehabilitated with indigenous water-wise plants to the satisfaction of the municipality.
- 2.2.9. Adequate warning signs in the three official languages must be displayed on the access door or gate, defining it as a no-go zone.
- 2.2.10. If the site is decommissioned the applicant / operator to remove all site infrastructure and the site to be rehabilitated to its former state or to a condition that is in line with the land use and character of the area at the time of decommissioning to the satisfaction of the Municipality.
- 2.2.11. Access to the telecommunication infrastructure and associated equipment be strictly controlled at all times by means of a fence with a locked gate to the satisfaction of the municipality. Building plans must be approved and related occupancy certificates be issued prior to the vesting of any of the related approvals.
- 2.2.12. The applicant / operator is responsible for ongoing maintenance of the entire installation as well as all costs with respect to such maintenance or future decommissioning of the telecommunication infrastructure.

2.2.13. The consent use be restricted to the fenced compound of the mast and equipment room as depicted on the building plan referenced as Drawing No. 4000, dated 03/11/2021 (sheet 2, 3 & 4 of 8) and drawn by C Briedenhann for WPP Town Planners attached as **Annexure A**.

2.2.14. The approval granted shall not exempt the applicant from complying with any other legal prescriptions or requirements that might have a bearing on the proposed use.

2.3. The **reasons** for the above decision are as follows:

- a. The proposed use is in line with the objectives of the Stellenbosch Municipality Telecommunication mast policy (TMI).
- b. The proposed base station will increase the effectiveness and efficiency of the network in the area.
- c. The proposed mast design will fit in with the existing landscaping and environment as there are existing established trees on the property, this will also mitigate the visual appearance of the mast.

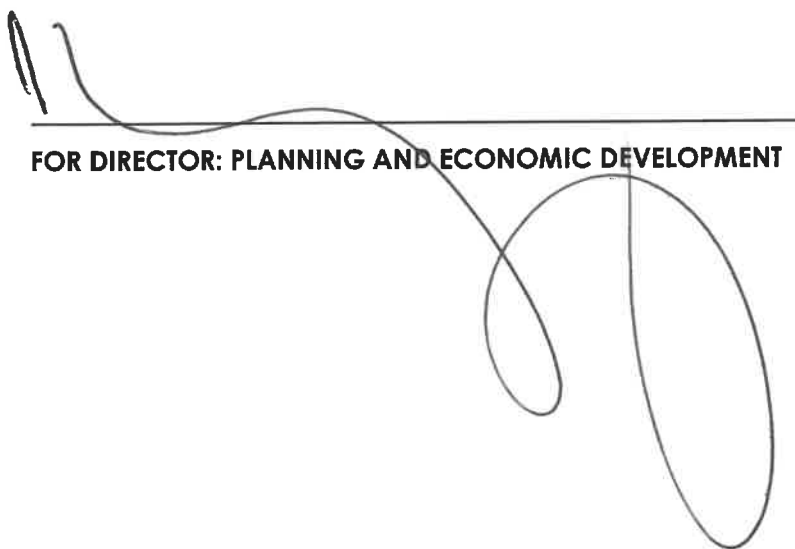
2.4. **Matters to be noted:**

2.4.1. Building plans be approved by the Municipality prior to any building work commencing.

3. You are hereby informed in terms of section 79(2) of the Stellenbosch Municipal Land Use Planning Bylaw of your right to appeal the above decision to the Appeal Authority within 21 days from the date of notification of the above decision. Please note that no late appeals or an extension of time for the submission of appeals are permitted in terms of Section 80(1)(a) of the said By-Law.
4. Appeals must be submitted by completing the required form with the prescribed information to satisfy the requirements of Section 80(2) of the said By-law, failing which the appeal will be invalid in terms of Section 81(1)(b) of the said By-Law.
5. **Appeals must be addressed to the Municipal Manager and submitted to his/ her designated official by means of e-mail at the following address: landuse.appeals@stellenbosch.gov.za**
6. Any party (applicant or other) who lodges an appeal must pay the applicable appeal fee in terms of the approved municipal tariffs and submit the proof of payment together with the appeal. The **LU** Reference number on this correspondence, or the applicable Erf/ Farm Number must be used as the reference for the payment of the appeal fee.

7. The appeal form and approved tariff structure and the banking details for the General Account can be accessed and viewed on the municipal website. For any enquiries the office can be contacted at landuse.appeals@ Stellenbosch.gov.za or 021- 808 8684.
8. An applicant who lodges an appeal must also adhere to the following requirements stipulated in terms of section 80(3) to (7) of the said By-law:
 - (a) Simultaneously serve the appeal on any person who commented on the application concerned and any other person as the municipality may determine.
 - (b) The notice by the applicant must invite persons to comment on the appeal within 21 days from date of notification of the appeal.
 - (c) The notice must be served in accordance with section 35 of the said legislation and in accordance with the prescripts or such additional requirements as may be determined by the Municipality.
 - (d) Proof of serving the notification must be submitted to the Municipality at the above E-mail address within 14 days of serving the notification.
9. Kindly note that no appeal right exists in terms of Section 62 of the Local Government Municipal Systems Act, No 32 of 2000.
10. Kindly note the above decision in the case of any approval, is suspended, and may therefore not be acted on, until such time as the period for lodging appeals has lapsed, any appeal has been finalised and you've been advised accordingly.

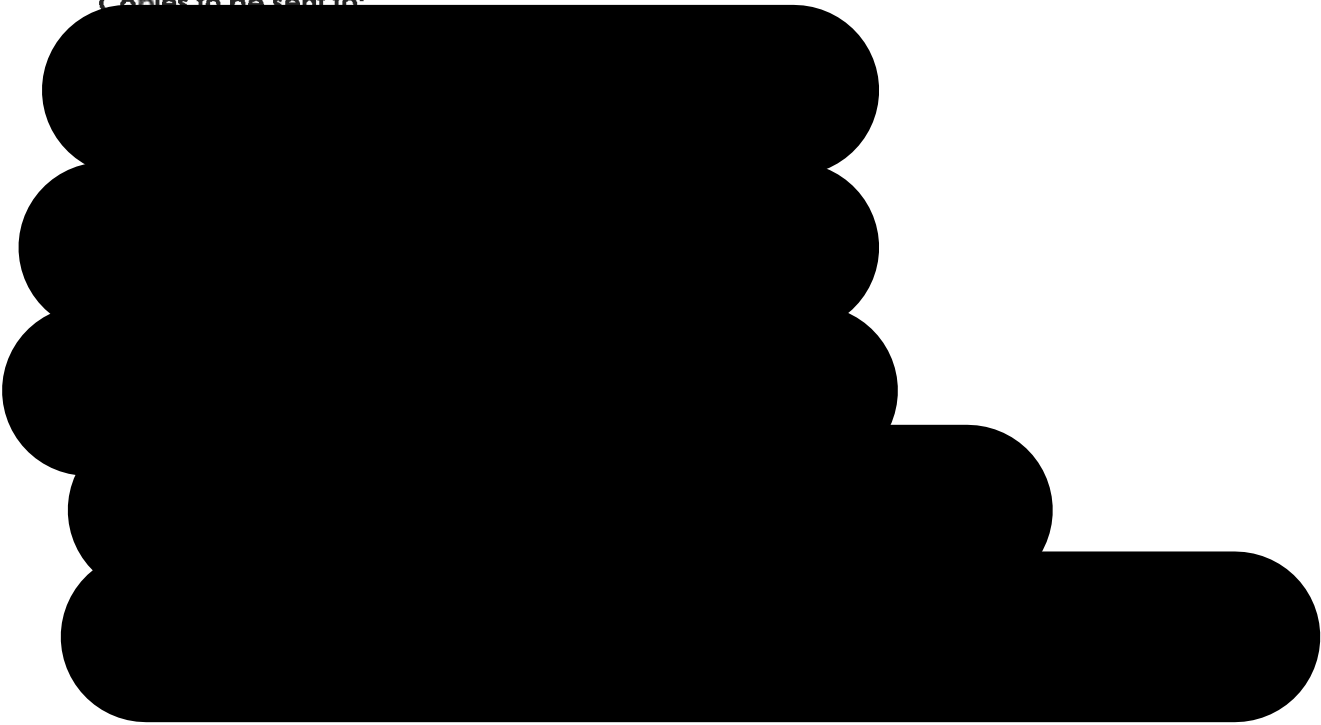
Yours faithfully



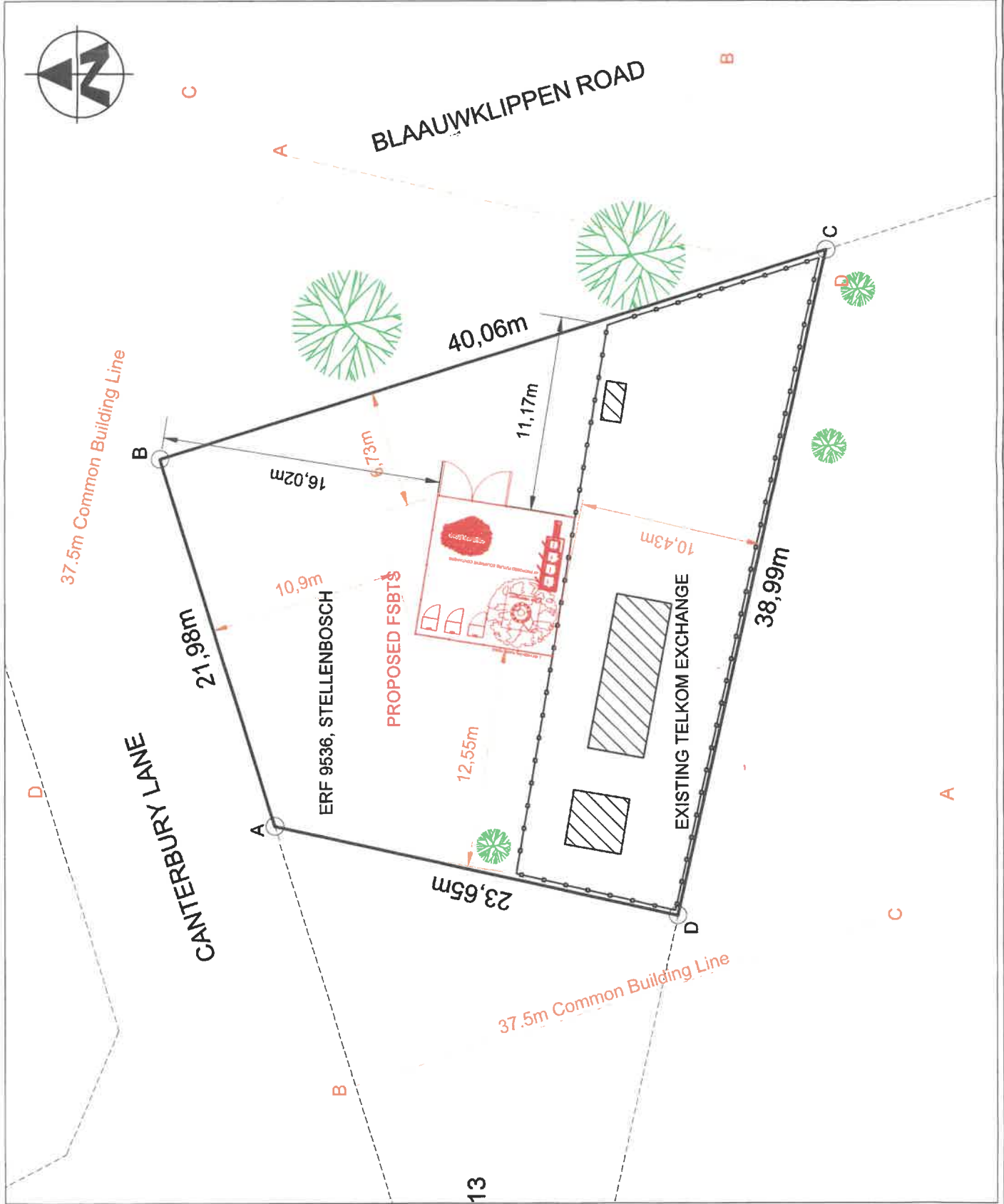
FOR DIRECTOR: PLANNING AND ECONOMIC DEVELOPMENT

29/11/2024
DATE

Copies to be sent to:



Site Plan



Gyro

GYRO SITE ID: WR4000

GYRO SITE NAME: WEBERSVALLEI OF

PROPERTY DESCRIPTION:

ERF 9536, STELLENBOSCH

ADDRESS: BLAAUWKLIPPEN ROAD, WEBERSVALLEI

CO-ORDINATES: Lat: -33.964894° Long: 18.852321° ELEVATION: 143m

WATER

PROPOSED NEW GYRO 25m TREE MAST WITH 8m X 8m BASE STATION

APPROVED MAST: 25m TREE MAST

NOTES:

- A) NEW 25m TREE MAST
- B) CUSTOM BASE STATION
- C) 2.4m PALISADE FENCE
- D) SITE SIZE: SITE SHAPED TO FENCE WITH FENCE
- E) BASE STATION: CHIP STONE SURFACE
- F) ZONING: UTILITY SERVICES ZONE
- G) OWNER: TELKOM SA SOC LTD
- H) STREET BUILDING LINE: 1.5 X 25H = 37.5M STREET BUILDING LINE
- I) COMMON BUILDING LINE: 1.5 X 25H = 37.5M STREET BUILDING LINE

DATE	DESCRIPTION	REVISION
03-11-2021	1st Issue	0
08-03-2022	INCL. BUILDING LINES	1

DRAWING NUMBER: 4000 SHEET: 2 OF 8

DRAWING TITLE: SITE PLAN

DRAWN: C. BRIEDENHANN SCALE: 1:300

DATE: 08-03-2022 REVISION: 1



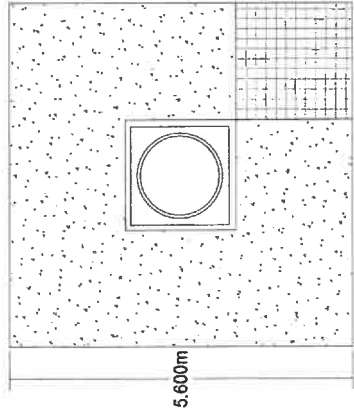
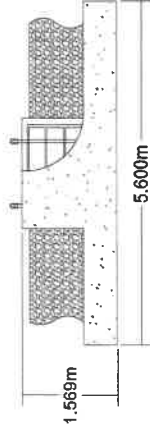
Gyro



- A) NEW 25m TREE MAST
- B) CUSTOM BASE STATION
- C) 2.4m PAUSADE FENCE
- D) SITE SIZE: SITE SHAPED TO FENCE WITH FENCE
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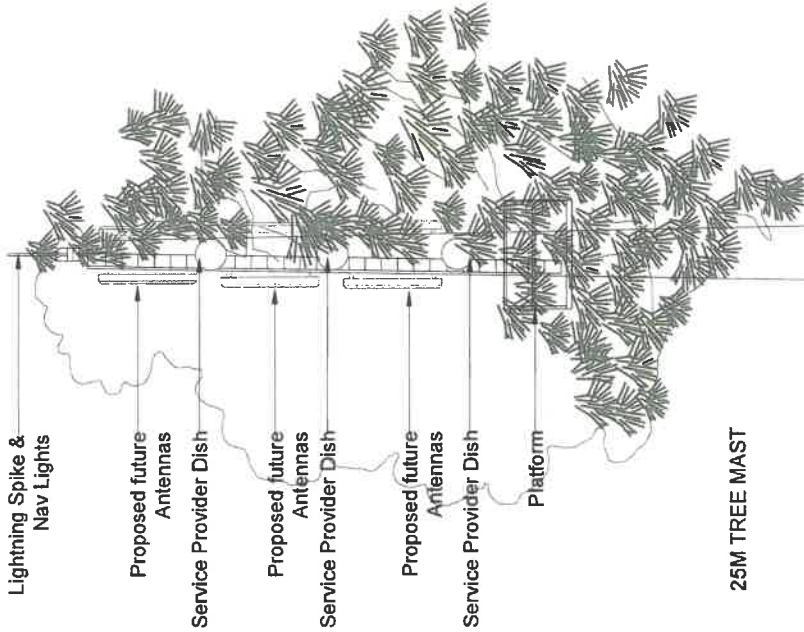
DATE	DESCRIPTION	REVISION
03-11-2021	1st Issue	0
08-03-2022	INCL. BUILDING LINES	1
DRAWING NUMBER: 4000		SHEET: 3 OF 8
DRAWING TITLE: TOP VIEW		
DRAWN: C. BRIEDENHANN		SCALE: 1:75
DATE: 08-03-2022		REVISION: 1

Elevation

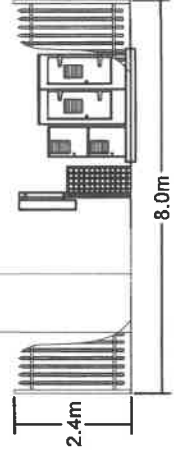


25m TREE
MAST FOUNDATION

NOTE:
Advisory or warning signage including a pictogram may be a requirement for TMI. Such signage shall identify the property and the TMI and shall warn the general public as required. Such signage shall be to the City's satisfaction and may not be larger than 400mm x 500mm.



4X PROPOSED FUTURE EQUIPMENT CONTAINERS
2.4M HIGH PALISADE FENCE



Gyro

GYRO SITE ID: WR4000

GYRO SITE NAME: WEBERSVALLEI_GF

PROPERTY DESCRIPTION:

ERF 9536, STELLENBOSCH

ADDRESS:
BLAAUWKLIPPEN ROAD, WEBERSVALLEI

CO-ORDINATES:
Lat: -33.964894°
Long: 18.852321°
ELEVATION:
143m



PROPOSED NEW GYRO 25m TREE MAST WITH 8m X 8m BASE STATION

APPROVED MAST:
25m TREE MAST

NOTES:

- A) NEW 25m TREE MAST
- B) CUSTOM BASE STATION
- C) 2.4m PALISADE FENCE
- D) SITE SIZE: SITE SHAPED TO FENCE WITH FENCE
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- F) ZONING: UTILITY SERVICES ZONE
- G) OWNER: TELKOM SA SOC LTD
- H) STREET BUILDING LINE: 1.5 X 25H = 37.5M STREET BUILDING LINE
- I) COMMON BUILDING LINE: 1.5 X 25H = 37.5M STREET BUILDING LINE

DATE	DESCRIPTION	REVISION
03-11-2021	1st Issue	0
08-03-2022	INCL. BUILDING LINES	1
DRAWING NUMBER: 4000		
DRAWING TITLE: ELEVATION		
DRAWN: C. BRIEDENHANN		
SCALE: NTS		
DATE: 08-03-2022		
REVISION: 1		

Annexure B:
VIA



**PROPOSED DEVELOPMENT OF A TELECOMMUNICATION BASE
STATION ON ERF 9536, STELLENBOSCH, WESTERN CAPE PROVINCE**

Visual Impact Assessment

April 2023

Prepared for:



Prepared by:

Ms Nicolene Hellstrom
nicolene@enviroworks.co.za

Reviewed by:

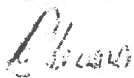
Mr Christoff Du Plessis
christoff@enviroworks.co.za

Today's Impact | Tomorrow's Legacy



QUALITY AND REVISION RECORD

1.1 QUALITY APPROVAL

	Capacity	Name	Signature	Date
Author	Visual Specialist	Nicolene Hellstrom	-	11/05/2023
Reviewer	Review Visual Specialist	Christoff Du Plessis		12/05/2023

This report has been prepared in accordance with Enviroworks Quality Management System.

1.2 REVISION RECORD

Revision Number	Objective	Change	Date
Version 1	Determine the Visual Impact of the Proposed Stellenbosch Mast, Western Cape Province.	-	12/05/2023

1.3 DISCLAIMER

Even though every care is taken to ensure the accuracy of this report, Visual Impact Assessment studies are limited in scope, time and budget. Discussions are to some extent made on reasonable and informed assumptions built on bona fide information sources, as well as deductive reasoning. Since Visual Impact Assessment studies deal with dynamic natural systems additional information may come to light at a later stage during the impact assessment phase. The Author does not accept responsibility for conclusions made in good faith based on own databases or on the information provided. Although the Author exercised due care and diligence in rendering services and preparing documents, he accepts no liability, and the Proponent, by receiving this document, indemnifies the Author against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by the authors and by the use of this document. This report should therefore be viewed and acted upon with these limitations in mind."

2 EXECUTIVE SUMMARY

Enviroworks has been appointed by WPP to compile the Visual Impact Assessment (VIA) for the proposed Stellebosch Mast in order to determine the Visual Impact of the proposed telecommunication base station. This VIA Report was compiled in accordance with the Guidelines for involving a Visual and Aesthetic Specialist in the EIA process (DEA&DP, 2005). This Guideline was developed by the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) to be implemented as best practise.

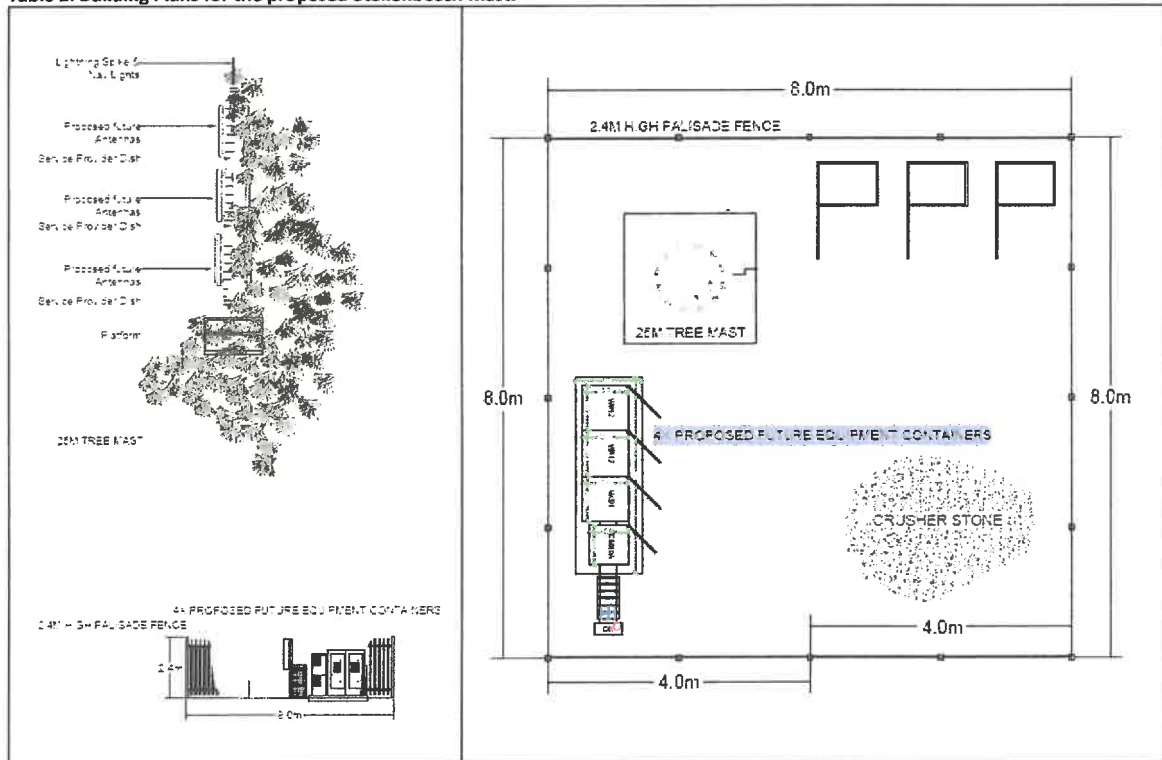
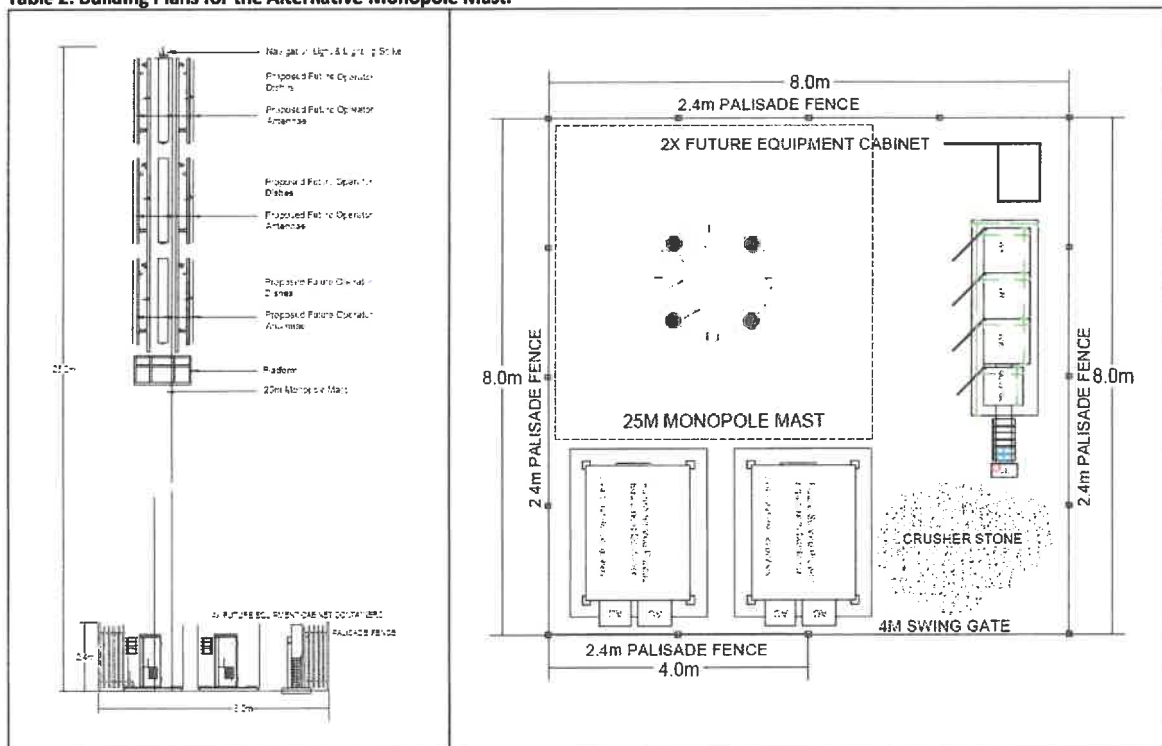
2.1 PROJECT DESCRIPTION

The proposed project entails the development of a twenty-five metre (25 m) Tree Mast on Erf 9536, Stellenbosch, Western Cape Province. Attached to the mast will be 12 antennae with a lightning spike and navigation light attached to the top of the mast. At ground level four (4) telecommunication equipment containers will be installed, with a combined footprint of three-square metres (3m²), as well as three (3) utility services containers. The total development footprint for the proposed project is roughly 64 m² surrounded by a two point four-meter (2.4 m) palisade fence. Power will be obtained from the Local Municipality.

Cellular service providers are taking steps to improve their network by keeping abreast with the advances in communication technology and providing increased capacity in terms of coverage in the areas where there is an increased demand. Gyro strive to make this technology available to the wider spectrum of the population. Newer technology like LTE provides faster internet to more users which alleviate the pressure on the base station, but its range is very limited.

A single old generation GSM voice based base station can cover dozens of kilometres (kms). The new LTE base stations have a maximum coverage range of five hundred metres (500 m) depending on the number of users. The congestion of existing sites together with a decrease in its coverage range necessitates that the distance between base stations decrease resulting in the construction of new freestanding and rooftop cellular base stations.

It is calculated that cellular network operators in South Africa will build two thousand eight hundred (2800) new base stations in the next five (5) years. The proposed site is located at a nominal point as identified by network planners. By utilizing sites located at the network's nominal point the number of future base stations are limited and an effective service network can be developed.

Table 1: Building Plans for the proposed Stellenbosch Mast.**Table 2: Building Plans for the Alternative Monopole Mast.**

2.2 SITE ALTERNATIVES

The preferred property and site alternative is on Erf 9536, Stellenbosch, Western Cape Province. The proposed site is within a residential neighbourhood on a site that has utility services already installed and is not situated within any sensitive environments and has completely been transformed.



Figure 1: Locality of the Proposed Development.

The Applicant provided only one (1) possible location on the property where the mast can be placed. Alternative locations were investigated during the early planning stages of the project. The identified location alternative was the only one (1) provided to the Visual Specialist. Other location alternatives were disregarded due to the physical and geographical characteristics, visual obtrusions, optimum range of signal, space availability, suitability and landowner willingness to erect a base station. The location provided is based on best suitability in terms of visual impact as well as impact on the receiving, natural environment. The site offers adequate visual coverage in order to camouflage the mast and the proposed location has an existing access road.

The preferred site location was chosen on the fact that recent research conducted has indicated that there is a current lack of cellular infrastructure to provide optimal and efficient data/voice coverage to the surrounding community. As identified by the TMIP the coverage radius/footprint for cellular telecommunication technology has been reduced due to the introduction of LTE and additional need for increased data speed and voice quality. The proposed development will provide nearby residence, farming community and tourists with 4G connectivity ensuring fast broadband services within the area.

RF Engineers identify sites by utilizing a specific set of engineering rules and principles, Erf 9536, Stellenbosch, was identified as a prime position on the following premises:

- Property and specific location offer the optimal position situated between existing and planned base stations to provide efficient data and voice coverage;

- Surrounding Geographical aspects are in line with the requirements;
- Minimised physical, natural and visual impact;
- Ability to reduce the number of base stations on the surrounding areas;
- Ability to provide sufficient security to the equipment;
- Capacity to share infrastructure with majority of the operators; and,
- Sufficient space to erect a freestanding base telecommunication station.

The Visual Specialist assessed the surrounding environment and found that other sites will have the same limitations than the identified site. A monopole- and tree- mast will be acceptable as numerous trees exist throughout the environment and the property is surrounded by residential buildings and agricultural features (please refer to Section 21 for photos of Erf 9536). It must be noted that a tree mast will have the least possible impact on the urban landscape, surrounding building heights, development pattern and land use character.

Erf 9536 is currently zoned as Utility Service Zone and therefore a freestanding telecommunication base station is permitted as a consent use according to the Stellenbosch Municipality.

2.3 DESIGN ALTERNATIVES

Two design alternatives are proposed, as detailed below.

2.3.1 ALTERNATIVE 1: CONSTRUCTION OF A TWENTY-FIVE METER (25 M) TREE MAST - PREFERRED OPTION

The Tree Mast is a singular tube measuring in at twenty-five meters (25 m) in height, with the antennas mounted on the upper end of the tower. A Tree Mast has a slim line design like a Monopole Mast; however, the antennae will be covered with tree branches and the pole will be camouflaged to resemble a tree trunk. The mast will provide for co-location, allowing multiple operators to use the same mast as a base station. This will reduce the demand for base stations in the same location. It is widely accepted that tree masts should be considered in residential areas where trees are an important landscape feature or within natural areas with definite vegetation cover.



Figure 2: Visual Impression of a Tree Mast.

2.3.2 ALTERNATIVE 2: CONSTRUCTION OF A TWENTY-FIVE METER (25 M) MONOPOLE MAST

The Monopole Mast is a singular tube measuring in at twenty-five meters (25 m) in height, with the antennas mounted on the upper end of the tower. A Monopole Mast has a slim line design in order to minimise the visual exposure. The mast will provide for co-location, allowing multiple operators to use the same mast as a base station. This will reduce the demand for base stations in the same location. As stated within the City of Cape Town's Telecommunication Mast Infrastructure Policy, Monopole Mast's should be used in urban areas if vegetation cover can't support a tree mast and/or where no buildings provide sufficient height.



Figure 3: Visual Impression of a Monopole Mast.

2.4 CONCLUSION AND RECOMMENDATIONS

The highest visual impact within the short distance zone will occur within the first (1st) 196 metres. A high permanent visual impact will occur from the residential estate situated 40 metres towards the northwest, the residential dwellings along Blaauwklippen Road situated 62 metres towards the northeast as well as the residential dwellings situated 73 metres towards the southeast of the proposed development. Within this radius of 192 metres a temporary high visual impact will occur from Blaauwklippen Road traversing from north to south within this area. A temporary visual impact is assigned as motorists will only travel through the area momentarily. This temporary high visual impact will; furthermore, occur from the vineyard situated 31 metres towards the southwest of the proposed development. Beyond the 192-metre radius visual exposure will occur towards the south, southwest and west; however, due to the built-up environment, undulating topography of the study area and the moderate vegetation cover the visual impact will be restricted towards the north, northeast, east and southeast.

Within the short to medium distance zone the proposed development will only be visible from the R44 situated one point one kilometres (1.1 km) towards the southwest. It must be noted that no visual impact will occur towards the southeast and northwest within the short to medium distance zone due to the undulating topography of the study area. Two (2) vantage points (Photo Position 8 & 9) were inspected within the town of Stellenbosch and it was found that the proposed development will not be visible from either of these points.

Within the medium to long distance zone seven (7) vantage points were inspected and the proposed development will only be visible from one (1) of these. The proposed development will be visible from Photo Position 6 situated four kilometres (4 km) towards the northwest. The proposed development will be visible from the Hottentots-Holland Mountain Catchment Area; however, a low temporary visual impact will occur from this vantage point as observers will remain within the area temporarily. It must be noted that from this vantage point the observer will not experience a change in the aesthetic value of the study area given that from this distance a tree mast will blend in with the moderate vegetation cover of the study area. Except for these two (2) instances listed the visual impact will be restricted by the high VAC of the study area.

Visibility beyond five kilometres (5km) from the proposed Stellenbosch Mast is expected to be negligible due to the distance between the object and the observer. As per the viewshed analysis the proposed development will be visible within the long-distance zone from the Hottentots-Holland Mountain Catchment Area situated six kilometres (6 km) towards the south. From this vantage point a low and temporary visual impact is expected due to the limited number of observers that will traverse through the area coupled with the high VAC.

Both a Monopole- and Tree Mast will be acceptable alternatives for development; however, a monopole mast will have a higher visual impact than that of a tree mast due to the fact that it has a lower landscape compatibility. A tree mast will have a high landscape compatibility as it will blend in with the surrounding vegetation cover within the environment and the mountainous terrain in the background. The proposed development will be visible at night as the navigation light at the top will be clearly definable. A monopole mast will have a moderate-high visual impact within the short distance zone; however, a tree mast will have a moderate visual impact as it will have a higher landscape compatibility.

Construction Phase:

- Access roads are to be kept clean;

- Site offices and structures should be limited to one location and carefully situated to reduce visual intrusions; Roofs should be grey and non-reflective;
- Construction camps as well as development areas should be screened with netting;
- Lights within the construction camp should face directly down (angle of 90°);
- Vegetation clearance should be limited to the development footprint only;
- Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact;
- All areas disturbed by construction activities must be subject to landscaping and rehabilitation;
- All spoil and waste will be disposed to a registered waste site and certificates of disposal provided;
- The project must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;
- Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact;
- Signage, if essential, should be discrete and confined to entrance gates. No corporate or advertising signage should be permitted.
- Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; and,
- Mitigation of visual impacts associated with the construction phase would entail proper planning, management and rehabilitation of the construction site. Mitigation measures include the following:
 - Reduce the time of construction through careful planning of logistics and ensure the productive implementation of resources;
 - Limit disturbance of the environment
 - to the development footprint; and,
 - Limit construction activities to business hours (07:00 – 17:00).

Operation Phase:

- Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare;
- Mitigation to minimise lighting impacts include the following:
 - Shielding the sources of light by physical barriers (walls, vegetation or structures itself);
 - Limit mounting heights of lighting fixtures, or alternatively using foot-lights or bollard level lights);
 - Make use of downward directional lighting fixtures;
 - Make use of minimum lumen or wattage in lights;
 - The navigation light at the top of the mast must be shielded to prevent disturbance to adjacent landowners; and,
 - Use motion sensors to activate lighting ensuring light is available when needed.

- If a Tree Mast is developed it should be designed to resemble trees that are indigenous to the area;
- If a Monopole Mast is developed, the mast must be painted grey or white as illustrated within the Visual Impression to ensure that the mast blend in with the backdrop of sky;
- Rehabilitation and Post-closure measures:
 - All above-ground structures should be removed, safely disposed of or possibly recycled for use elsewhere; and,
 - The affected area should be regarded to pre-development topographic conditions, unless the area is required for new specific uses.

3 DECLARATION OF THE SPECIALIST

I, Nicolene Hellstrom, ID 9310280064084, declare that I:

- am an Environmental Specialist at Enviroworks;
- act as an independent Specialist Consultant in the field of Visual Impacts;
- am assigned as Specialist Consultant by Gyro for this proposed project;
- I do not have or will not have any financial interest in the undertaking of the activity other than remuneration for work as stipulated in the terms of reference;
- remuneration for services by the proponent in relation to this proposal is not linked to approval by decision-making Authorities responsible for permitting this proposal;
- the consultancy has no interest in secondary or downstream developments as a result of the Authorisation of this project.
- have no and will not engage in conflicting interests in the undertaking of the Activity;
- undertake to disclose to the Proponent and the Competent Authority any material, information that have or may have the potential to influence the decision of the Competent Authority required in terms of the Environmental Impact Assessment Regulations 2017, as amended; and,
- will provide the Proponent and Competent Authority with access to all information at my disposal, regarding this project, whether favourable or not.

Nicolene Hellstrom

Environmental Specialist

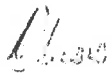
4 DECLARATION OF THE REVIEW SPECIALIST

I, Christoff du Plessis, ID 911126 5012 084, declare that I:

- am an Environmental Specialist at Enviroworks;
- act as an independent Specialist Consultant in the field of Visual Impacts;
- am assigned as Specialist Consultant by Gyro for this proposed project;
- I do not have or will not have any financial interest in the undertaking of the activity other than remuneration for work as stipulated in the terms of reference;
- remuneration for services by the Proponent in relation to this proposal is not linked to approval by decision-making Authorities responsible for permitting this proposal;
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- have no and will not engage in conflicting interests in the undertaking of the Activity;
- undertake to disclose to the Proponent and the Competent Authority any material, information that have or may have the potential to influence the decision of the Competent Authority required in terms of the Environmental Impact Assessment Regulations 2017, as amended; and,
- will provide the Client and Competent Authority with access to all information at my disposal, regarding this project, whether favourable or not.

Christoff du Plessis

Environmental Specialist



5 SPECIALIST CV AND DETAILS

Business name of Specialist:	Enviroworks
Specialist Name:	Nicolene Hellstrom
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Nicolene Hellstrom

Relevant Qualifications

- BSc Hons Biodiversity and Ecology: University of Stellenbosch (2016)
- BSc Biodiversity and Ecology: University of Stellenbosch (2015)

Work Experience– 5 Years

July 2017 –March 2019:	Field and Laboratory Assistant – Protea Research (Postdoctoral Student, SU)
April 2019 – March 2021:	National Research Foundation Intern – Parasitology, Soil Ecology, Invasion Ecology (SU)
April 2021 – November 2022:	Part-Time Independent Environmental Consultant
December 2021 – April 2022:	Field Operations Officer- Census 2022 (Statistics South Africa)
November 2021 – November 2022:	Part-Time Environmental Control Officer (Ecologic Environmental Services)
November 2022 – Present:	Environmental Consultant (Enviroworks)

Field Assistant:

- Vegetation and growth surveys
- Site preparation
- Plant physiology measurements
- Data collection and analyses

National Research Foundation Intern

- Parasitology research – remove, identify, and mount parasites from different species of mice and rats
- Soil ecology research – Soil chemical analyses, plant surveys and chemical analyses of plants
- Invasion ecology research – vegetation surveys, setting up and monitoring of experimental plots, catch and release methods to establish mouse population density and diversity

- Research and Admin Assistant Gathering and filtering through academic papers, developing database populated with research articles, Research for systematic literature review paper
- Laboratory manager – Stock takes and order, scheduling student time on laboratory equipment, general upkeep, and maintenance

Environmental Control Officer (ECO)

- Photographic, film shoots and running events at various environmentally sensitive locations around Cape Town (Ecologic Environmental Services) – 2021-2022.
- Proposed Development of a Thirty Metre (30m) Telecommunication Mast on Portion 24 Of Olyven Boomen Farm Number 83, Malan Valley, Wellington, Western Cape Province (SBA Tower (Pty) Ltd) – 2022
- Proposed development of the Bottlery/R300 electricity cabling route, City of Cape Town, Western Cape Province **(In progress)**

Water Use Licenses

- Proposed Water Use Licence application and registration water use on the farm Wanganella no. 994, Free State Province. **(In Progress)**
- Full Water Use Licence for the Adler's Nest Retirement Village on Portion 196 of the Farm Vyf-Brakke-Fontein No. 220, Aalwyndal, Mossel Bay, Western Cape Province. **(In Progress)**
- Water Use License for the proposed development of the Bottlery/R300 electricity cabling route, City of Cape Town, Western Cape Province - 2023
- Water Use License Application for the proposed upgrade of the Bayside Canal, City of Cape Town, Western Cape Province. **(In Progress)**
- General Authorization application for Portion 205 of Farm 559, Hangklip, Western Cape Province. **(In Progress)**
- Water Use License Application for Karan Beef, Nigel, Gauteng Province. **(In Progress)**
- Water Use License Application for the proposed development of fifteen (15) resort units on Portion 12 of the Farm Riet Valley No. 452, Hessequa Local Municipality, Western Cape Province. **(In Progress)**
- Water Use License Application for the proposed development of Mapungubwe National Park Orientation Centres and Overnight Facilities, Limpopo Province - 2023
- Water Use License Application for the proposed refurbishment of the Hartswater WWTW, Northern Cape Province. **(In Progress)**
- Water Use License Application for the operations of Sparta Baby Beef (Pty) Ltd. on numerous farm portions near Marquard, Free State Province. **(In Progress)**
- Water Use License Application for the proposed construction of Oxidation Pond system and two sewer lines of the Schweizer-Reneke WWTW, North West Province. **(In Progress)**
- Water Use License for the proposed development of a twenty five meter (25m) monopole telecommunications mast on portion 1 of the Farm No. 1284, Stellenbosch Primary School, Western Cape - 2023
- Water Use License for the Coligny WWTW development, Coligny, North West Province. **(In Progress)**
- Water Use License for the Itsekeng WWTW development, Itsekeng, North West Province. **(In Progress)**
- Water Use License for the Itsoseng WWTW development, Itsoseng, North West Province. **(In Progress)**
- Water Use License for the Lichtenburg WWTW development, Lichtenburg, North West Province. **(In Progress)**
- Water use licence application for the Britstown WWTW development, Britstown, Northern Cape Province. **(In Progress)**
- Water Use License Application for the water uses of the Sparta operations near Marquard, Free State & General Authorisation for the water uses of the Sparta operations near Marquard, Free State. **(In Progress)**
- The proposed abstraction of water from two boreholes, Molate City, North West, Province. **(In Progress)**

- General Authorisation application for the development of a dwelling unit on ERF 1341, Greyton, Western Cape Province. **(In Progress)**
- Water use licence application for the proposed expansion of accommodation and event venue on farm 321, Caledon, Western Cape Province. **(In Progress)**
- Water use licence application for the proposed Khauta Solar Photovoltaic Cluster and associated grid connections, Riebeeckstad near Welkom, Free State Province. **(In Progress)**
- Water use licence application for the water uses of the Quantum Foods operations on Kaalfontein Farm, Bronkhorstspuit, Gauteng Province. **(In Progress)**
- Eskom Lethabo Power Station Water Use License Application and Amendment, Viljoensdrif, Free State Province. **(In Progress)**
- Water Use License Application for the proposed drying beds of The Raisin Company, Marchand, Northern Cape Province. **(In Progress)**

Basic Assessments

- The proposed development of a new access road in Sonskynvallei housing development, Mossel Bay, Western Cape. **(In Progress)**

Waste Management License

- Proposed installation of an incinerator on the Quantum Foods Atlantis facility, Atlantis, Western Cape Province. **(In Progress)**

Visual Impact Assessment

- Visual Impact Assessment for Stellenbosch Telecommunication mast, Stellenbosch, Western Cape. **(In Progress)**

Other Experience

- Small business owner - Small artisanal cake and sweet deserts business (Confection Connection) – 2021-present
- Elize Botha Women in leadership short course- NQF Level: 6 (Stellenbosch University) - February – May 2016
- Kanonkop District Rover Crew Member – charged with assisting the community and Scouting movement providing training to youth and assistance where required. (Scouts South Africa) - 2013 - 2018

6 REVIEW SPECIALIST CV AND DETAILS

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Christoff du Plessis

Relevant Qualifications

Baccalaureus Scientiae (B.Sc) in Environmental Geography: University of the Free State (2014)

Work Experience

January 2015 – Present: Environmental Specialist at Enviroworks

Key Specialist Experience

Visual Impact Assessment (VIA):

- Phalaborwa Wildlife Activity Hub, Kruger National Park, Limpopo Province (SANParks).
- 4.9ha Sand Mine on Portion 5 of the Farm Doornekraal No. 830, Western Cape Province (Greenmined).
- Proposed development of the Harvard Powerline, Bloemfontein, Free State Province (Centlec).
- Proposed development of the 35 m Buffeljagsrivier Monopole Mast, Buffeljagsrivier, Western Cape Province (Coast to Coast Towers).
- Proposed development of the 25 m Robertson Monopole Mast, Robertson, Western Cape Province (Coast to Coast Towers).
- Proposed development of the Klein Mooimaak Rest Camp Facility, West Coast National Park (SANParks).
- Proposed development of a Sand Mine near Malmesbury, Western Cape Province (Greenmined).
- Proposed upgrade of the R27 Gate and Geelbek Restaurant, West Coast National Park, Western Cape Province (SANParks).
- Proposed development of the 25 m Roodekrans Monopole Mast, Krugersdorp, Gauteng Province (Coast to Coast Towers).
- Proposed development of a 25 m Monopole Mast on Portion 25 of the Farm Klein Bottelary No. 17, Brackenfell, Western Cape Province (Coast to Coast Towers).
- Proposed development of a Landfill Site on Portion 3 of the Farm Katbosch No. 93, Sasolburg, Free State Province (Metsimaholo Landfill).
- Proposed development of numerous visitor information centres at Schroda and Mapungubwe Hill, Mapungubwe National Park, Limpopo Province (SANParks).
- Proposed development of a 35 m Monopole Mast on Portion 13 of the Farm Van Aries Kraal No. 455, Grabouw, Western Cape Province (Coast to Coast Towers).
- Proposed development of a 25 m Monopole Mast on Erf 532, Gansbaai, Western Cape Province (Coast to Coast Towers).
- Proposed development of a 35 m Lattice Mast on Portion 7 of the Farm Jagersvlakte No. 292, Grabouw, Western Cape Province (Warren Petterson Planning).
- Proposed development of a 35 m Lattice Mast on Erf 532, Stanford, Western Cape Province (Warren Petterson Planning).

- Proposed development of a 15 m Lattice Mast on Portion 4 of the Farm No. 53, Genadendal, Western Cape Province (Warren Petterson Planning).
- Proposed development of a 25 m Monopole Mast on Portion 8 of the Farm Delta No. 1003, Groot Drakenstein, Western Cape Province (Coast to Coast Towers).
- Proposed development of a 30 m Tree Mast on Portion 87 of the Farm Langverwacht No. 241, Kuils River, Western Cape Province (Warren Petterson Planning).
- Proposed development of a 20 m Tree Mast on Erf 679, Gouda, Western Cape Province (Atlas Towers).
- Proposed development of an IPP 400kV Power Line from Grommis to Aggeneys, Northern Cape Province (Eskom).
- Proposed development of a 30 m Lattice Mast on Erf 2819, Caledon, Western Cape Province (Atlas Towers).
- Proposed development of a 54 m Lattice Mast on Portion 7 of the Farm Haane Kuil No. 335, Beaufort West, Western Cape Province (Star Towers).
- Proposed development of a 25 m Monopole Mast on Erf 1035, Caledon, Western Cape Province (Atlas Towers).
- Proposed development of a 25 m Tree Mast on Erf 47, Birkenhead, Western Cape Province (Atlas Towers).
- Proposed development of a 25 m Monopole Mast on Erf 1201, Van Dyks Bay, Western Cape Province (Atlas Towers).
- Proposed development of a 20 m Tree Mast on Erf 1671, Melkbosstrand, Western Cape Province (Atlas Towers).
- Proposed development of a 15 m Tree Mast on Erf 740, Klein Brak River, Western Cape Province (Atlas Towers).
- Proposed Upgrades to the Alpha 1 Recreational Lounge, Robben Island, Western Cape Province (Robben Island Museum).
- Proposed development of a 25 m Tree Mast on Erf 969, Picaltsdorp, Western Cape Province (Atlas Towers).
- Proposed development of a 25 m Tree Mast on Erf 20601, George, Western Cape Province (Atlas Towers).
- Proposed development of a 25 m Monopole Mast on Erf 571, Dellville Park, Western Cape Province (Atlas Towers).
- Proposed development of a 15 m Tree Mast on Portion 113 of the Farm Ruygte Vally No. 205, Sedgfield, Western Cape Province (Atlas Towers).
- Proposed development of a 15 m Dome Mast on Erf 8281, Mossel Bay, Western Cape Province (Atlas Towers).
- Proposed development of a 35 m Tree Mast on Portion 42 of the Farm Harkerville No. 428, Plettenberg Bay, Western Cape Province (Atlas Towers).
- Proposed development of a 25 m Monopole Mast on the Remaining Extent of the Farm No. 790, Philippi, Western Cape Province (Atlas Towers).

- Proposed development of a 15 m Tree Mast on Portion 3 of the Farm No. 452, Grabouw, Western Cape Province (Atlas Towers).
- Proposed development of a 15 m Tree Mast on the Remainder of Erf 3331, Vredenburg, Western Cape Province (Atlas Towers).
- Proposed development of a 40 m Lattice Mast on Portion 24 of the Farm Olyven Boomen No. 83, Malan Valley, Western Cape Province (Atlas Towers).
- Proposed development of the Lendlovu Lodge, Addo Elephant Park, Eastern Cape Province (SANParks).
- Proposed development of a 25 m Tree Mast on Erf 2, Villiersdorp, Western Cape Province (Atlas Towers).
- Proposed development of a 25 m Tree Mast on Erf 270, Franschhoek, Western Cape Province (Galaxy Palms).
- Proposed development of a 25 m Lattice Mast on Erf 9, Nuwerus, Western Cape Province (Atlas Towers).
- Proposed development of the Karoo Power Reserve, Prieska, Northern Cape Province (Greenbox Consulting).
- Proposed development of the Khauta Solar PV Cluster (Three 100 MW PV Plants) near Welkom, Free State Province (WKN Windcurrent).
- Proposed development of the 25 m Monopole Mast on Erf 3266, Onrusrivier, Western Cape Province (Gyro)
- Proposed development of a 15 m Tree Mast on Erf 16 608, Zwelithemba, Western Cape Province (Gyro)

Wetland Delineation Studies:

- Wetlands Delineation study for the development of 13 borrow pits along National Road 8, Ladybrand, Free State Province (SANRAL).
- Wetland Delineation study for the development of a 12.5ha cemetery on Erf 4233, Western Cape Province (Theewaterskloof Local Municipality).
- Wetland Delineation study for the proposed development of an Agri-Hub near Cederville, Eastern Cape Province (Femplan).
- Wetland Delineation study for the proposed development of an Agri-Hub near Lambasi, Eastern Cape Province (Femplan).
- Wetland Delineation study for the proposed development of the Blue Hills Curro Castle, Midrand, Gauteng Province (Curro Holdings).

Stormwater Management Plans:

- Stormwater Management Plan for the Agri-World Recycling Plant, Swellendam, Western Cape Province (Agri-World Recycling Plant).
- Stormwater Management Plan for the Klaasvoogds Granite Mine, Springbok, Northern Cape Province (Greenmined Environmental).
- Stormwater Management Plan for the Moreson Poultry Project, Brandfort, Free State Province (Moreson Poultry).

- Stormwater Management Plan for the Sintier Poultry Project, Bronkhorstspuit, Gauteng Province (Sintier Poultry).
- Stormwater Management Plan for the maintenance and extending of a canal near Karatera, Western Cape Province (Eden Municipality).
- Stormwater Management Plan for Layer Hen Houses on the Remaining Extent of Portion 1 of the Farm Elandsfontein No. 21, Moloti City, North West Province (Bramakama Poultry).
- Stormwater Management Plan for the Proposed Installation of Battery Energy Storage Systems on Erf 2202, Ashton, Western Cape Province (Eskom).

7 ABBREVIATIONS

AMSL	-	Above Mean Sea Level
CBA	-	Critical Biodiversity Area
DEA&DP	-	Department of Environmental Affairs & Development Planning
DEM	-	Digital Elevation Model
DFFE	-	Department of Fisheries, Forestry and the Environment
DTM	-	Digital Terrain Model
EIA	-	Environmental Impact Assessment
ESA	-	Ecological Support Area
GIS	-	Geographical Information System
Km	-	Kilometre
LTE	-	Latest Cellular Technology
M	-	Metre
MAP	-	Mean Annual Precipitation
MAT	-	Mean Annual Temperature
RF	-	Radio Frequency
USGS	-	United States Geological Survey
UTM	-	Universal Transverse Mercator
VAC	-	Visual Absorption Capacity
VIA	-	Visual Impact Assessment

8 REQUIREMENTS OF A SPECIALIST REPORT

Appendix 6 of Government Notice Regulation 326 of 7 April 2017 outlines the basic requirements of a Specialist Report. Please refer to Table 3 below of all requirements.

Table 3: Requirements of a Specialist Report as set out in GN R. 326 of 07 April 2017.

REQUIREMENTS	SECTION
A Specialist report prepared in terms of these Regulations must contain –	
a. Details of –	4
i. The Specialist who prepared the report; and,	
ii. The expertise of that Specialist to compile a specialist report including a curriculum vitae;	
b. A declaration that the Specialist is independent in a form as may be specified by the Competent Authority;	3
c. An indication of the scope of, and the purpose for which, the report was prepared;	8
i. An indication of the quality and age of base data used for the Specialist Report;	
ii. A description of existing impacts on site, cumulative impacts of the proposed development and levels of acceptable change;	
d. The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	10
e. A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	8 & 10
f. Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	15
g. An identification of any areas to be avoided, including buffers;	15
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 buffers;	11
i. A description of any assumptions made and any uncertainties or gaps in knowledge;	9
j. A description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	15 & 18
k. Any mitigation measures for inclusion in the EMP'r	18 & 19
l. Any conditions for inclusion in the Environmental Authorisation;	19
m. Any monitoring requirements for inclusion in the EMP'r or Environmental Authorisation;	19
n. A reasoned opinion –	19
i. Whether the proposed activity, activities or portions thereof should be authorised;	
ii. If the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMP'r, and where applicable, the closure plan;	
o. A description of any consultation process that was undertaken during the course of preparing the specialist report;	N/A
p. A summary and copies of any comments received during any consultation process and where applicable all responses thereto; and,	N/A
q. Any other information requested by the Competent Authority.	T.B.C

9 VISUAL IMPACT EVALUATION CRITERIA CHECKLIST

As per the Provincial Government of the Western Cape Guideline for involving Visual and Aesthetic Specialists in the EIA Process (DEA&DP, 2005), a high-quality visual impact assessment should include the following criteria:

Table 4: Requirements of a Visual Impact Assessment.

REQUIREMENTS	SECTION
Meet the minimum requirements for a visual assessment;	10
Is appropriate to the nature and scale of the proposed development;	15
Provides a full description of the environment and the project;	16
Considers the project within its wider context;	18
Provides a clear methodology using accepted conventions for visual assessment;	12
All sources of information and references are given;	22
Graphics, including maps and visual simulations, are clear;	10, 11, 12, 13, 14, 15, 16, 17 & 18
Include both quantitative and qualitative criteria;	17, 18, 19 & 20
Cumulative visual impacts have been considered;	20
An evaluation of alternatives has been made;	20 & 21
An explanation of significance ratings, related to bench-marks, is given;	19
Recommendations for visual mitigation are sensible and practical;	20 & 21
Recommendations for monitoring programmes have been outlined;	21
The best practical environmental option has been considered;	21
All the visual issues raised in the scoping have been addressed;	N/A at this stage
A clear summary of mitigation measures, including essential and optional measures, is given.	21

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10 STUDY APPROACH

10.1 METHODOLOGY

The study was undertaken using Geographical Information System (GIS) software as a tool to generate a viewshed analyses and to apply relevant spatial criteria to the proposed development. A detailed Digital Elevation Model (DEM) for the study area (S34E18, S34E19, S35E18 & S35E19) was obtained from the National Aeronautic Space Administration (NASA). The methodology utilised to identify issues to the visual impact include the following activities:

- The creation of a detailed digital terrain model of the potentially affected environment;
- The identification of sensitive environments upon which the proposed Telecommunication Base Station could have a potential impact on; and,
- The creation of viewshed analyses from the proposed Stellenbosch Tree Mast in order to determine the visual exposure and the topography's potential to absorb the potential visual impact. The viewshed analysis considers the dimension of the proposed Stellenbosch Mast and was calculated at a height of 25 m.

This Report (Visual Impact Assessment) sets out to identify and quantify the possible visual impacts related to the proposed Stellenbosch Mast, as well as offer potential mitigation measures where required. The following methodology has been adopted for the assessment of the Visual Impact Assessment:

- **Determine the Potential Visual Exposure**
The visibility or visual exposure of any structure or activity is the point of departure for the VIA. It stands to reason that if the proposed infrastructure was not visible, no impact will occur. Viewshed analyses of the proposed structures indicate the potential visibility.
- **Determine Visual Distance/Observer Proximity to the facility**
In order to refine the visual exposure of the proposed Tree Mast on surrounding areas/receptors, the principle of reduced impact over distance is applied in order to determine the core area of visual influence for the structures.
Proximity radii for the proposed facility are created in order to indicate the scale and viewing distance of the structures and to determine the prominence of the structures in relation to their environment. The visual distance theory and the observer's proximity to the Stellenbosch Mast are closely related, and especially relevant, when considered from areas with a high viewer incidence and a predominantly negative visual perception of the proposed infrastructure.
- **Determine Viewer Incidence/Viewer Perception**
The number of observers and their perception of a structure determine the concept of visual impact. If there are no observers, then there would be no visual impact. If the visual perception of the structure is favourable to all observers, the visual impact would be positive.
It is therefore necessary to identify areas of high viewer incidence and to classify certain areas according to the observer's visual sensitivity towards the proposed infrastructure. It would be impossible not to generalise the viewer incidence and sensitivity to some degree, as there are many variables when trying

to determine the perception of the observer; regularity of sighting, cultural background, state of mind, and purpose of sighting which would create a myriad of options.

➤ **Determine the Visual Absorption Capacity of the Natural Vegetation**

This is defined as the capacity of the receiving environment to absorb the potential visual impact of the proposed development. The VAC is primarily a function of the vegetation, and will be high if the vegetation is tall, dense and continuous. Conversely, low growing sparse and patchy vegetation will have a low VAC.

The VAC will also be high where the Environment can readily absorb the structure in terms of texture, colour, form and light/shade characteristics of the structure. On the other hand, the VAC for a structure contrasting markedly with one or more of the characteristics of the environment will be low. The VAC generally increases with distance, where discernible detail in visual characteristics of both environment and structure decreases.

The Digital Terrain Model utilised in the calculation of the visual exposure of the proposed Tree Mast does not incorporate the potential VAC of the natural vegetation of the region. It is therefore necessary to determine the VAC by means of the interpretation of the vegetation cover, supplemented with field observation.

➤ **Determine the Visual Impact Index**

The results of the above analyses are merged in order to determine where the areas of likely visual impact would occur. These areas are further analysed in terms of the previously mentioned issues (related to the visual impact) and in order to judge the magnitude of each impact.

➤ **Determine the Impact Significance**

The potential visual impacts identified and described are quantified in their respective geographical locations in order to determine the significance of the anticipated impact. Significance is determined as a function of the extent, duration, magnitude and probability.

10.2 PROJECTIONS

Projected coordinate systems are defined by ArcGIS Resource Centre (The developers) as *“a flat, two dimensional surface. Unlike a geographical coordinate system, a projected coordinate system has constant lengths, angles, and areas across the two dimensions. A projected coordinate system is always based on a geographic coordinate system that is based on a sphere or spheroid”*. Projected Coordinates systems are world based and thus the larger the area the larger the distortion. To minimise the distortion the Universal Transverse Mercator (UTM) coordinate reference system divides the Earth into 60 equal zones that are all 6 degrees wide in longitude from East to West. Stellenbosch is situated within the thirty fourth degree (34°) UTM Zone, thus the WGS84/UTM S34 (32734) was used as projection.

11 ASSUMPTIONS AND LIMITATIONS

- Information is assumed to be the latest available information.
- Visual impact studies and assessments depend, to some extent, on subjective judgements. The subjectivity, of the analysis relates to the value driven nature of VIA. However, to deal with subjectivity, the methodology of this VIA is explained and rating categories clearly defined.
- It is assumed that site alternatives have been investigated by Gyro and the most suitable recommended by their acquisition Specialists.

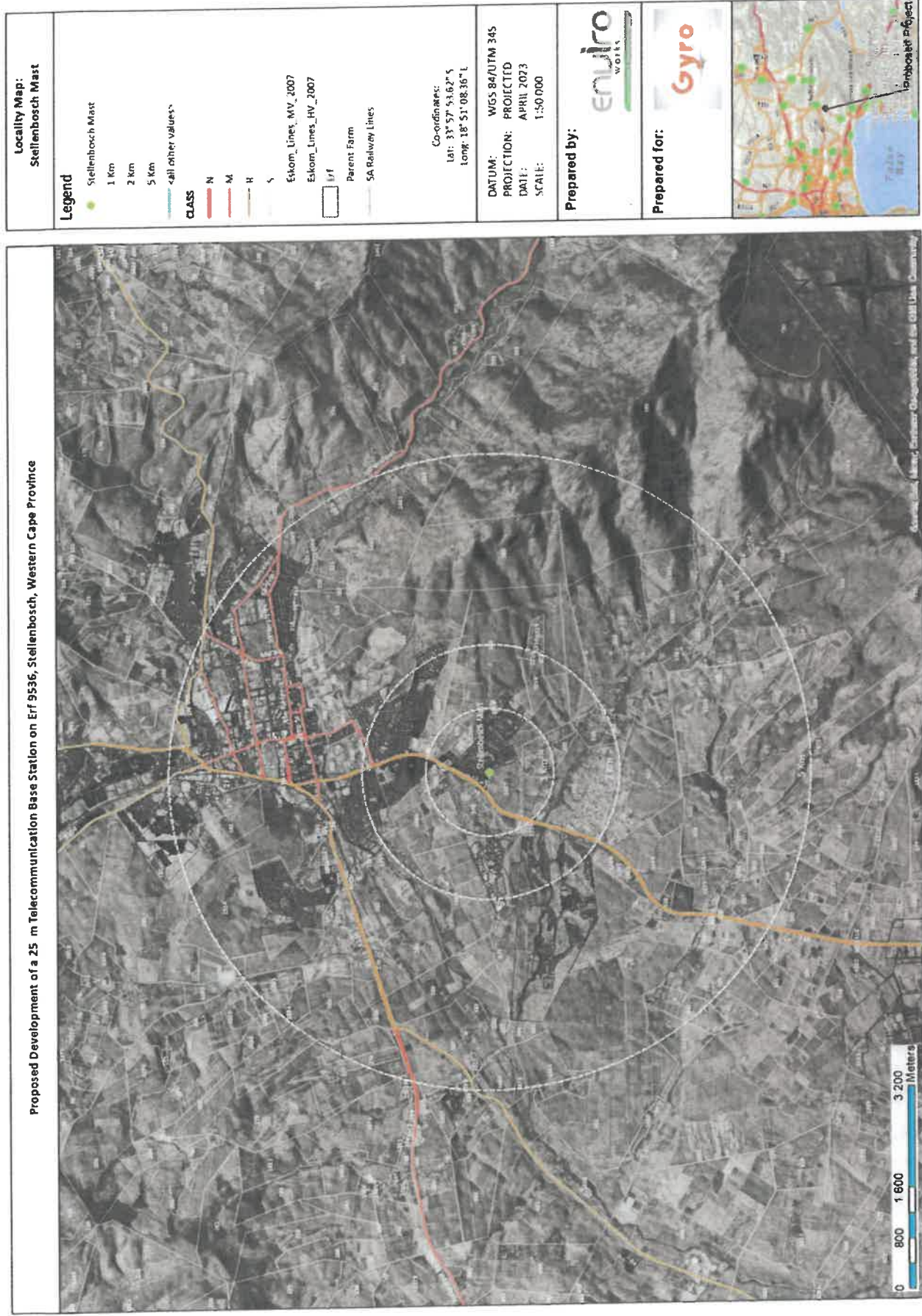


Figure 4: Locality Map of the Proposed Stellenbosch Mast, Western Cape Province.

12 SCOPE OF WORK

The determination of the potential visual impacts is undertaken in terms of nature, extent, duration, magnitude, probability and significance of the construction and operation phases of the proposed project. The study area for the visual assessment encompasses a geographical area of 130 km² (extent of the maps) and includes a ten-kilometre (10 km) buffer zone from the proposed Stellenbosch Mast. The study area constitutes of local tourist attractions, residential areas, and natural- environments. The proposed development will be situated on the outskirts of Stellenbosch.

Anticipated issues related to the potential visual impact of the proposed Stellenbosch Mast include the following:

- The visibility of the Mast to, and potential visual impact on, observers travelling along the R44, Blaauwklippen Road, Serruria Road, Speciosa Road, Cynaroides Road and Canterbury Lane;
- The visibility of the facility to, and potential visual impacts on tourists visiting tourist attraction near Stellenbosch (Stellenbosch Golf Club, Blaauwklippen Wine Farm and Family Market, Root 44 Market and Wine Emporium, Klein Dasbosch Wine Estate, Coetzenburg MTB and Hiking Trails, Stellenbosch University Botanical Garden and campuses, Dorp street Restaurants, Museums, Hotels and Artisanal Shops, Restaurants and numerous bed and breakfasts in the surrounding area);
- The visibility of the facility to, and potential visual impact on observers residing within Stellenbosch and the surrounding environment;
- The visual absorption capacity of natural or planted vegetation as well as man-made topographical features;
- Potential visual impacts associated with the construction- and operational phase; and,
- The potential to mitigate visual impacts.

It is anticipated that the issues listed above may constitute a visual impact at a local scale.

13 THE AFFECTED ENVIRONMENT

The proposed Stellenbosch Tree Mast will be situated on Erf 9536, Stellenbosch, Western Cape Province. The study area constitutes of urban residential areas, agricultural farmland and recreational activities (Stellenbosch Golf Club, Blaauwklippen Wine Farm and Family Market, Root 44 Market and Wine Emporium, Klein Dasbosch Wine Estate, Coetzenburg MTB and Hiking Trails, Stellenbosch University Botanical Garden and campuses, Dorp Street Restaurants, Museums, Hotels and Artisanal Shops, Restaurants and numerous bed and breakfasts in the surrounding area).

13.1 TOPOGRAPHY, VEGETATION AND HYDROLOGY

13.1.1 VEGETATION

The study area is described by Mucina & Rutherford, 2006, as moderate foot slopes and undulating plains supporting a mosaic of grasslands/herblands and medium dense, microphyllous shrublands dominated by renosterbos. Groups of small trees and tall shrubs are associated with “heuweltjies” and rock outcrops. The boundary with FfG 2 Boland Granite Fynbos is diffuse and patchy. This is a critically endangered vegetation unit of which almost 80 % has already been transformed due to prime quality of the land for agriculture (vineyards, olive orchards, pastures) and urban sprawl.

13.1.2 GEOLOGY

The Geology predominantly consists of coarse sandy to loamy soils of a variety of forms ranging from Glenrosa and Mispah, to prismaeutanic and pedocutanic diagnostic horizons to red-yellow apedal soils – all derived from Cape Granite. The soils can contain a considerable volume of moisture in winter and spring. Land types mainly include Fa, Ca, Db and Ac.

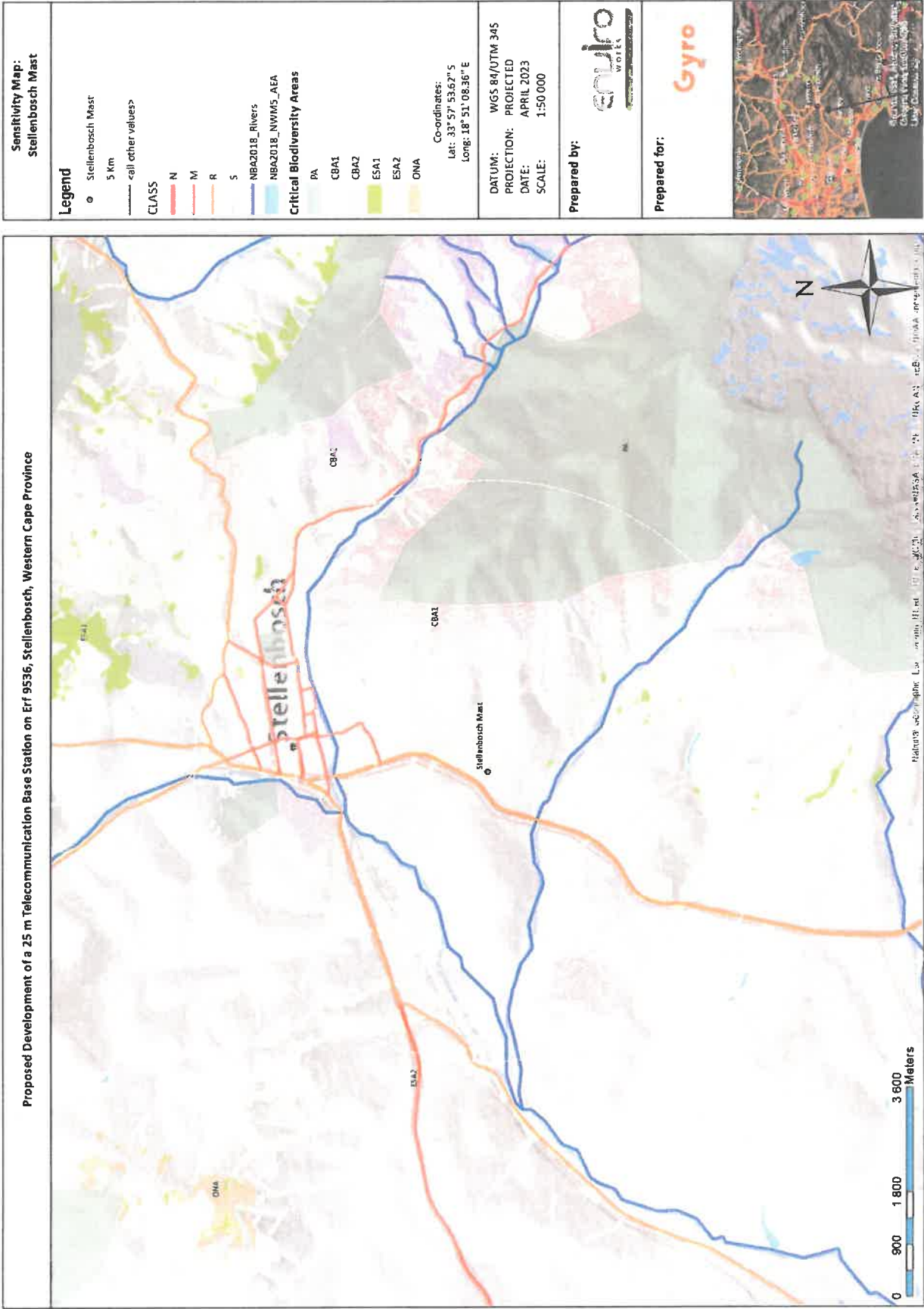


Figure 5: Sensitivity Map of the Study Area.

13.1.3 CLIMATE

The proposed project will be situated within the Swartland Granite Renosterveld bio-region. The Mean Annual Precipitation (MAP) of the study area is 520 mm occurring predominantly during the winter months between May and August (Mucina & Rutherford, 2006). The Mean Annual Temperature (MAT) recorded for the study area is 16.3° C with summer temperatures averaging at twenty-six degrees Celsius (26° C).

FRg 2 Swartland Granite Renosterveld

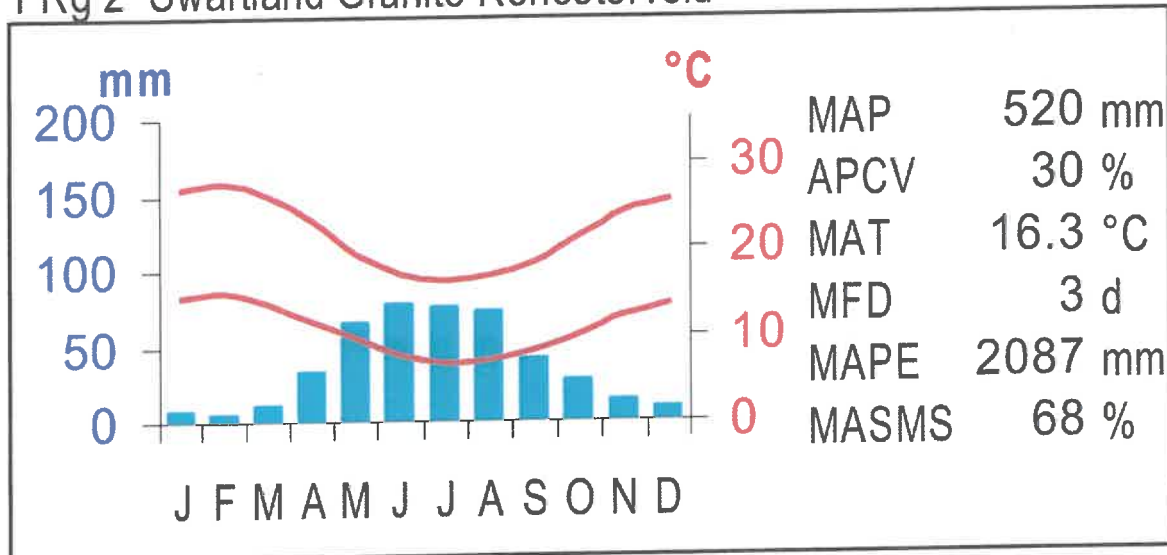


Figure 6: Climate Diagram for the Swartland Granite Renosterveld Vegetation.

14 RELEVANT LEGISLATION AND GUIDELINES

The following legislation and guidelines have been considered in the preparation of this report:

- This Visual Impact Assessment was undertaken in accordance with the Guidelines for Involving Visual and Aesthetic Specialists in EIA Processes, as issued by the Department of Environmental Affairs and Development Planning (DEA&DP).
- The Environmental Impact Assessment Regulation as outlined in Government Notice Regulation 326 of 7 April 2017.

15 DEVELOPMENT CATEGORY

As per the Guidelines for Involving Visual and Aesthetic Specialists in EIA Processes, the development categories are as follow:

Table 5: Development Categories.

Category 1	<p>Items listed in this category include:</p> <ul style="list-style-type: none"> ➤ Nature reserves; ➤ Nature related recreation; ➤ Camping; ➤ Picnicking; and, ➤ Trails and minimal visitor facilities.
Category 2	<p>Items listed in this category include:</p> <ul style="list-style-type: none"> ➤ Low-key recreation/resort/residential type developments; ➤ Small scale agriculture/nurseries/narrow roads; and,

	<ul style="list-style-type: none"> ➤ Small scale infrastructure
Category 3	<p>Items listed in this category include:</p> <ul style="list-style-type: none"> ➤ Low density residential/resort type development; ➤ Golf or polo estates; and, ➤ Low to medium-scale infrastructure.
Category 4	<p>These include:</p> <ul style="list-style-type: none"> ➤ Medium density residential development; ➤ Sport facilities; ➤ Small-scale commercial facilities/office parks; ➤ One-stop petrol stations; ➤ Light industry; ➤ Medium scale infrastructure.
Category 5	<p>These include:</p> <ul style="list-style-type: none"> ➤ High density township/residential developments; ➤ Retail and office complexes; ➤ Industrial facilities; ➤ Refineries; ➤ Treatment plants; ➤ Power stations; ➤ Wind energy farms; ➤ Powerlines; ➤ Freeways; ➤ Toll roads; ➤ Large scale infrastructure generally; ➤ Large scale development of agriculture land and commercial tree plantations; ➤ Quarrying and mining activities with related processing plants.

Derived from Table 5, the proposed project falls within Category 3 (Low to medium-scale infrastructure). From the aforementioned, Table 6 was compiled in order to determine the Visual Impact of any proposed development.

Table 6: Expected Visual Impact of the Proposed Development.

Type of Environment	Type of Development				
	Category 1	Category 2	Category 3	Category 4	Category 5
Protected/wild areas of international or regional significance.	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected	Very high visual impact expected
Areas or routes of high scenic, cultural, historical significance.	Minimal visual impact expected.	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected

Areas or routes of medium scenic, cultural or historical significance.	Little or no visual impact expected	Minimal visual impact expected.	Moderate visual impact expected	High visual impact expected	High visual impact expected
Areas or routes of low scenic, cultural or historical significance/disturbed.	Little or no visual impact expected	Little or no visual impact expected	Minimal visual impact expected.	Moderate visual impact expected	High visual impact expected
Disturbed or degraded sites/run-down urban areas/wasteland.	Little or no visual impact expected	Little or no visual impact expected	Little or no visual impact expected	Minimal visual impact expected.	Moderate visual impact expected

From the table above, it is anticipated that the proposed Stellenbosch Mast will have a high visual impact on the surrounding areas. Stellenbosch is considered to have areas or routes of high scenic, cultural and historical significance as numerous proclaimed National Parks, Proclaimed Heritage Structures and Scenic Routes are evident in the surrounding environment. The aim of this report will be to determine the accuracy of Table 6, the visual impact of the proposed development and the level of compatibility thereof with the surrounding landscape.

16 DESCRIPTION OF THE RECEIVING ENVIRONMENT

Landscape character is defined by the U.K Institute of Environmental Management and Assessment (IEMA) as the “*distinct and recognizable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soil, vegetation, land use and human settlement*” (GLVIA, 2002). According to DEA&DP Guideline Section 9.2, information describing the current state of the affected environment, as well as trends in the area, is required for visual input into the EIA process. The receiving environment was determined using the 2013-2014 South African National Land-Cover data as provided by the National Department of Environmental Affairs (DEA) and field observation conducted on 25 April 2023.

16.1 SENSE OF PLACE

The term sense of place captures the identity of places we recognize. It embraces natural and cultural features, the distinctive sights, sounds and experiences to the people residing in or nearby that place. Places with a strong sense of place have a clear identity and character that is recognisable by inhabitants and visitors alike.

Sense of place differs from place attachment by considering the social geographical context of place bonds and the sensing of place, such as aesthetic and a feeling of dwelling. An impact on the sense of place is one that alters the visual landscape to such an extent that the user experiences the environment differently, and more specifically, in a less appealing or less positive light.

Stellenbosch is currently the most well-known town in South Africa. History, culture, natural beauty, sport, education and wine has made the name Stellenbosch resonate around the globe as one of South Africa's premier tourist, wine, business and education attractions. Stellenbosch's history dates back to 1679 when Simon van der Stel gave this name to a small island on the Eerste River. After the discovery of Stellenbosch it was quickly

identified as an area in which to settle and rich in agricultural resources. The climate and rich soil allowed farmers to produce vegetables for the passing ships enroute to the other Dutch Colonies in the east (.

Skilled vintners were sent to the area and soon after Stellenbosch saw its hills and valleys transform into vineyards, a fact evident to this day as Stellenbosch is still world renowned for its wine. With the rich agricultural pickings, the area soon became a bustling town with the earliest building dating back to 1689 and can still be viewed on the farm Muratie. In the town itself, solid, white-plastered buildings arose and the streets were planted with oak trees. The rich educational heritage of Stellenbosch was cemented in 1859 with the opening of a theological seminary. The University of Stellenbosch was founded in 1918 and to this day remains an internationally recognized university (University of Stellenbosch, Unknown).

In 1971 Stellenbosch became the first wine region in South Africa to establish its own wine route an organised network which today consist of more than 150 wineries. The Route includes 5 sub-routes which each have their own characteristics in terms of prominent wine styles, climates and geographical location (University of Stellenbosch, Unknown).

The following tourist attractions can be visited in Stellenbosch:

- Waterford Estate;
- Spier Wine Farm;
- Delaire Graff Estate;
- Stellenbosch University Botanical Garden;
- House of J.C. Le Roux;
- Eagle Encounters, Stellenbosch;
- Uva Mira Mountain Vineyards;
- Lanzerac Wine Estate;
- Dylan Lewis Sculpture Garden;
- Tokara Wine Estate;
- Ernie Els Wines;
- Neethlingshof Estate;
- Delheim;
- Muratie;
- Thelema Mountain Vineyards;
- Haskell Vineyards;
- Bergkelder;
- Quoin Rock;
- The Cape Wine Academy;
- Stellenbosch Half Day E-Bike & Wine Tour;
- Vineyard Horse Trail Ride; and,
- Walking Tour of Stellenbosch.

The following buildings and facilities of historical value can be observed within Stellenbosch:



Figure 7: Stellenbosch University (Source: Tripadvisor).



Figure 8: Dutch Reform Church (Source: Tripadvisor).



Figure 9: Stellenbosch Town Hall (Source: Tripadvisor).



Figure 10: Rhenish Mission Church (Source: Tripadvisor).



Figure 11: Pniël Museum (Source: Tripadvisor).



Figure 12: Fick House (Source: Tripadvisor).



Figure 13: Saxenhof Stellenbosch (Source: Volschenk).



Figure 14: Paul Roos School Hall.

Given the rich heritage of Stellenbosch a High Visual Impact is expected.



Figure 15: Land Cover Map of the Area.

17 RESULTS

17.1 POTENTIAL VISUAL EXPOSURE (PREFERRED MAST POSITION)

The combined result of the viewshed analysis for the proposed Stellenbosch Monopole Mast is displayed on the map below (Figure 20). The visibility analysis was undertaken at the height of the Mast measuring in at twenty-five metres (25 m), in order to simulate the view from the mast and to indicate prominence of the structures within the landscape. Furthermore; Figure 20 indicates proximity radii from the proposed Stellenbosch Mast as a reference to determine the Visual Absorption Capacity. It must be noted that the Digital Terrain Model (DTM) utilised from the viewshed analysis does not include the effect of vegetation cover and built structures. These features may influence the visual exposure to some degree.

17.2 STELLENBOSCH PREFERRED MAST POSITION

17.2.1 0 KM – 1 KM (SHORT DISTANCE)

The highest visual impact within the short distance zone will occur within the first (1st) 196 metres. A high permanent visual impact will occur from the residential estate situated 40 metres towards the northwest, the residential dwellings along Blaauwklippen Road situated 62 metres towards the northeast as well as the residential dwellings situated 73 metres towards the southeast of the proposed development. Within this radius of 192 metres a temporary high visual impact will occur from Blaauwklippen Road traversing from north to south within this area. A temporary visual impact is assigned as motorists will only travel through the area momentarily. This temporary high visual impact will; furthermore, occur from the vineyard situated 31 metres towards the southwest of the proposed development. Beyond the 192-metre radius visual exposure will occur towards the south, southwest and west; however, due to the built-up environment, undulating topography of the study area and the moderate vegetation cover the visual impact will be restricted towards the north, northeast, east and southeast. A moderate temporary visual impact will occur from the R44 situated 462 metres towards the west as well as the Stellenbosch Golf Club situated at metre 608 respectively as observers will reside within the area temporarily. Furthermore, a moderate temporary visual impact will occur from the Blaauwklippen Farm and Family Market due to the distance between the proposed development and the observer. From this distance a tree mast will blend in with the surrounding vegetation to some degree.

17.2.2 1 KM – 2 KM (SHORT TO MEDIUM DISTANCE)

Within the short to medium distance zone the proposed development will only be visible from the R44 situated one point one kilometres (1.1 km) towards the southwest. From this vantage point a low temporary visual impact will occur given the distance between the proposed development and the observer coupled with the moderate vegetation cover of the study area. Furthermore, motorists will only traverse through the area momentarily and therefore the temporary visual impact. It must be noted that no visual impact will occur towards the southeast and northwest within the short to medium distance zone due to the undulating topography of the study area. Two (2) vantage points (Photo Position 8 & 9) were inspected within the town of Stellenbosch and it was found that the proposed development will not be visible from either of these points.

17.2.3 2 KM – 5 KM (MEDIUM TO LONG DISTANCE)

Within the medium to long distance zone seven (7) vantage points were inspected and the proposed development will only be visible from one (1) of these. The proposed development will be visible from Photo

Position 6 situated four kilometres (4 km) towards the northwest. From this vantage point a low temporary visual impact will occur from the R310; however, the impact will be permanent from the Asara Wine Estate and Goedvertrouw Farm. A low visual impact is assigned due to the distance between the proposed development and the observer coupled with the undulating topography of the study area and moderate vegetation cover. The proposed development will be visible from the Hottentots-Holland Mountain Catchment Area; however, a low temporary visual impact will occur from this vantage point as observers will remain within the area temporarily. It must be noted that from this vantage point the observer will not experience a change in the aesthetic value of the study area given that from this distance a tree mast will blend in with the moderate vegetation cover of the study area. Except for these two (2) instances listed the visual impact will be restricted by the high VAC of the study area. The high VAC is predominantly influenced by the undulating topography of the study area coupled with the moderate vegetation cover and built-up environment.

17.2.4 GREATER THAN 5 KM (LONG-DISTANCE)

Visibility beyond five kilometres (5km) from the proposed Stellenbosch Mast is expected to be negligible due to the distance between the object and the observer. As per the viewshed analysis the proposed development will be visible within the long-distance zone from the Hottentots-Holland Mountain Catchment Area situated six kilometres (6 km) towards the south. From this vantage point a low and temporary visual impact is expected due to the limited number of observers that will traverse through the area coupled with the high VAC. The high VAC is predominantly influenced by the undulating topography of the study area, moderate vegetation cover, built-up environment and the distance between the proposed development and the observer.

17.2.5 CONCLUSION

The highest visual impact within the short distance zone will occur within the first (1st) 196 metres. A high permanent visual impact will occur from the residential estate situated 40 metres towards the northwest, the residential dwellings along Blaauwklippen Road situated 62 metres towards the northeast as well as the residential dwellings situated 73 metres towards the southeast of the proposed development. Within this radius of 192 metres a temporary high visual impact will occur from Blaauwklippen Road traversing from north to south within this area. A temporary visual impact is assigned as motorists will only travel through the area momentarily. This temporary high visual impact will; furthermore, occur from the vineyard situated 31 metres towards the southwest of the proposed development. Beyond the 192-metre radius visual exposure will occur towards the south, southwest and west; however, due to the built-up environment, undulating topography of the study area and the moderate vegetation cover the visual impact will be restricted towards the north, northeast, east and southeast.

Within the short to medium distance zone the proposed development will only be visible from the R44 situated one point one kilometres (1.1 km) towards the southwest. It must be noted that no visual impact will occur towards the southeast and northwest within the short to medium distance zone due to the undulating topography of the study area. Two (2) vantage points (Photo Position 8 & 9) were inspected within the town of Stellenbosch and it was found that the proposed development will not be visible from either of these points.

Within the medium to long distance zone seven (7) vantage points were inspected and the proposed development will only be visible from one (1) of these. The proposed development will be visible from Photo Position 6 situated four kilometres (4 km) towards the northwest. The proposed development will be visible

from the Hottentots-Holland Mountain Catchment Area; however, a low temporary visual impact will occur from this vantage point as observers will remain within the area temporarily. It must be noted that from this vantage point the observer will not experience a change in the aesthetic value of the study area given that from this distance a tree mast will blend in with the moderate vegetation cover of the study area. Except for these two (2) instances listed the visual impact will be restricted by the high VAC of the study area.

Visibility beyond five kilometres (5km) from the proposed Stellenbosch Mast is expected to be negligible due to the distance between the object and the observer. As per the viewshed analysis the proposed development will be visible within the long-distance zone from the Hottentots-Holland Mountain Catchment Area situated six kilometres (6 km) towards the south. From this vantage point a low and temporary visual impact is expected due to the limited number of observers that will traverse through the area coupled with the high VAC.

Both a Monopole- and Tree Mast will be acceptable alternatives for development; however, a monopole mast will have a higher visual impact than that of a tree mast due to the fact that it has a lower landscape compatibility. A tree mast will have a high landscape compatibility as it will blend in with the surrounding vegetation cover within the environment and the mountainous terrain in the background. The proposed development will be visible at night as the navigation light at the top will be clearly definable. A monopole mast will have a moderate-high visual impact within the short distance zone; however, a tree mast will have a moderate visual impact as it will have a higher landscape compatibility.

17.3 ELEVATION OF THE AREA

Section 17.3 and Section 18 must be read in conjunction with Section 17.2. The graphs illustrated below provide a visual reference of the capability of the landscape to absorb the visual impact associated with the proposed Stellenbosch Mast. The graphs have been compiled within a five-kilometre (5 km) radius in the four major wind directions from the proposed development.

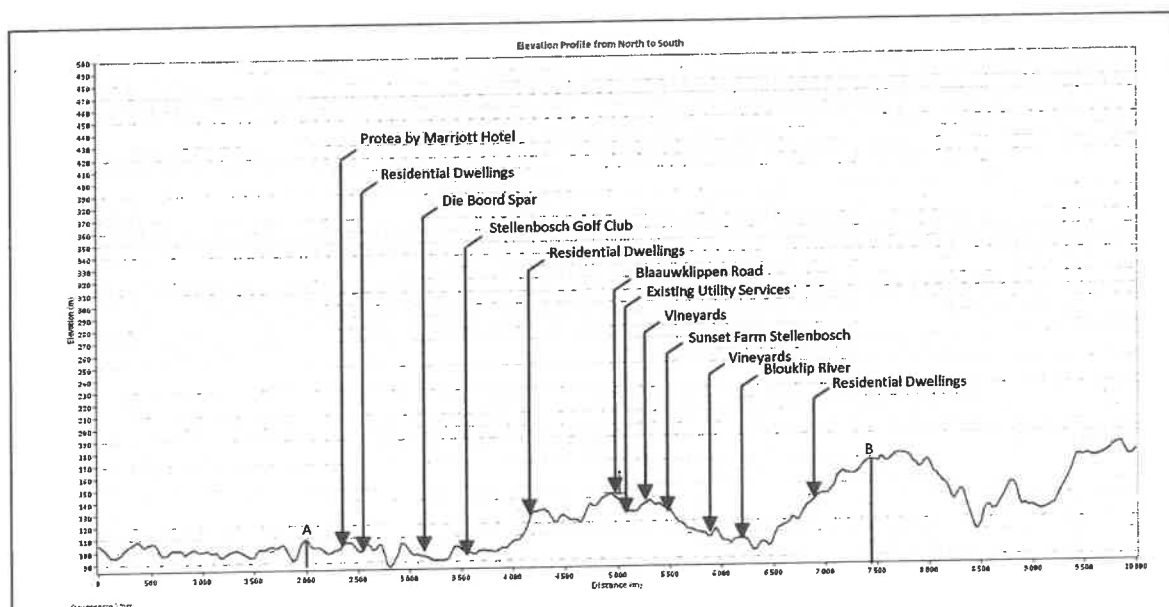


Figure 16: Elevation Profile from North to South of the study area.

Figure 16 illustrates the elevation profile of the study area from north to south. Towards the north, the proposed development will be temporarily visible from Blaauwklippen Road situated at metre 89 since motorists will only traverse through the study area. The study area between metre 154 and metre 435 consist

of residential dwellings from where the visual impact will be permanent as observers reside within the area. Furthermore, from metre 845 to kilometre one point two (km 1.2) there will be no visual impact due to the undulating topography of the landscape. The study area between kilometre one point two (km 1.2) and kilometre two point two (km 2.2) consist of residential dwellings from where the visual impact will be permanent as observers reside within the area permanently. Furthermore, a temporary visual impact is expected at kilometre two and a half (km 2.5) as the area consist of The Boord Spar from where observers will spend a period of time doing shopping. A temporary visual impact is expected at kilometre two point seven (km 2.7) as the area consist of The Protea Marriott Hotel, which attracts many tourists for a set period of time. No visual impact will occur beyond kilometre three point four (km 3.4) due to the undulating topography of the study area as illustrated by Point A in Figure 16 and the Viewshed Analysis (Figure 20). Towards the south the proposed development between metre zero (m 0) and metre 20 will have a permanent visual impact. Furthermore, from metre 20 to metre 550 there is agricultural farmland (vineyards) bordered by Blaauwklippen road and the R44 thus the proposed development will be temporarily visible as motorists will only traverse through the area. The proposed development will be permanently visible from the residential dwellings on Sunset Farm Stellenbosch situated at metre 550. A temporary visual impact will occur between metre 550 and metre 930 given that the study area consists of agricultural farmland (vineyards) from where observers will remain within the area for a set time per day. Between metre 930 and kilometre one point two (km 1.2) a temporary visual impact will occur as the area predominantly consists of agricultural farmland (vineyards) from where the proposed development will be temporarily visible to farm personnel. The only area from where a permanent visual impact will occur within the aforementioned distance is from the farmstead situated at metre 930. The Blouklip River is situated at kilometre one point two (km 1.2) from where a temporary visual impact will occur. The study area between kilometre one point two (km 1.2) and kilometre two point three (km 2.3) consist of residential dwellings from where the visual impact will be permanent as observers reside within the area permanently. No visual impact will occur beyond kilometre two point three (km 2.3) due to the undulating topography of the study area as illustrated by Point B in Figure 16 and the Viewshed Analysis (Figure 20).

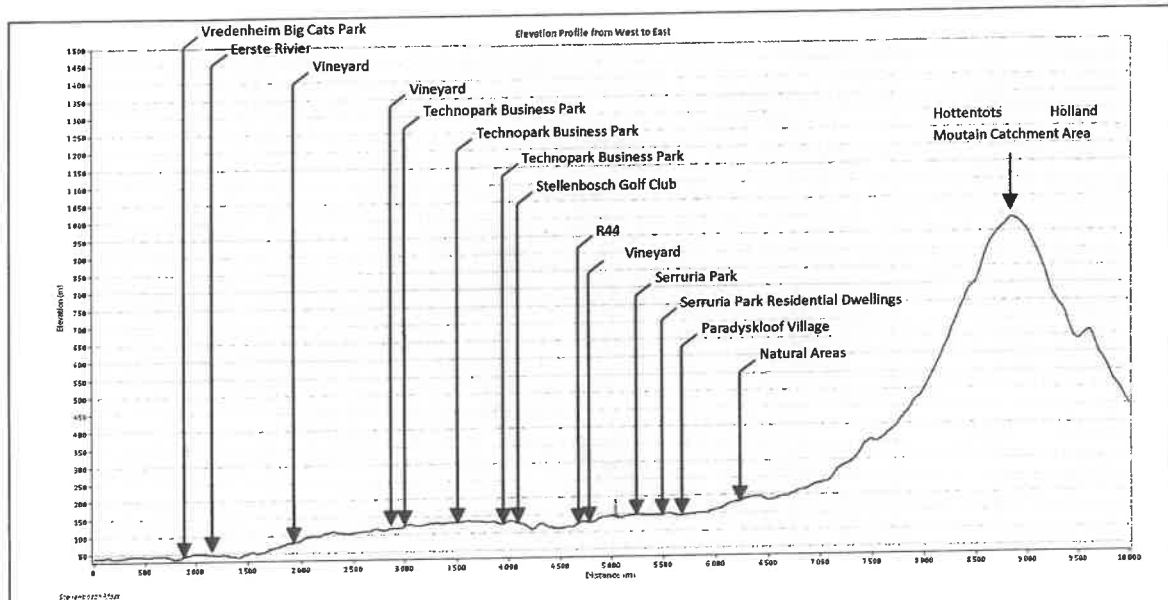


Figure 17: Elevation Profile from West to East of the study area.

Figure 17 illustrates the elevation profile of the study area from west to east. The highest visual impact is expected towards the west as it includes the built-up environment of the town of Stellenbosch. The proposed development will be permanently visible from the built-up environment evident over the first (1st) one hundred and eighty metres (180 m) towards the west; however, a temporary visual impact will occur between metre 180 and metre 360 as the study area consist of vineyard from where limited observations will occur. Furthermore, a temporary visual impact will occur from the R44 situated at metre 380 as motorists will temporarily traverse through the area. A temporary visual impact will occur from the Stellenbosch Golf Club situated between metre 390 and kilometre one point two (km 1.2) as observers only spend limited time in the area. Techno Business Park is situated between kilometre one point two (km 1.2) and kilometre two point one (km 2.1) from where the proposed development will have a temporary visual impact as observers will remain within the area for a set period of time per day. Furthermore, no visual impact will occur beyond kilometre two point one (km 2.1) to the west due to the undulating topography of the landscape. Towards the east, the proposed development will be permanently visible from the residential areas evident over the first (1st) 680 metres; however, a temporary visual impact will occur at metre 260 as the study area consist of the Serruria Park. No visual impact will occur beyond kilometre one point three (km 1.3) to the east as the area consists of the Hottentots Holland Moutain Catchment Area with little signs of observer presence.

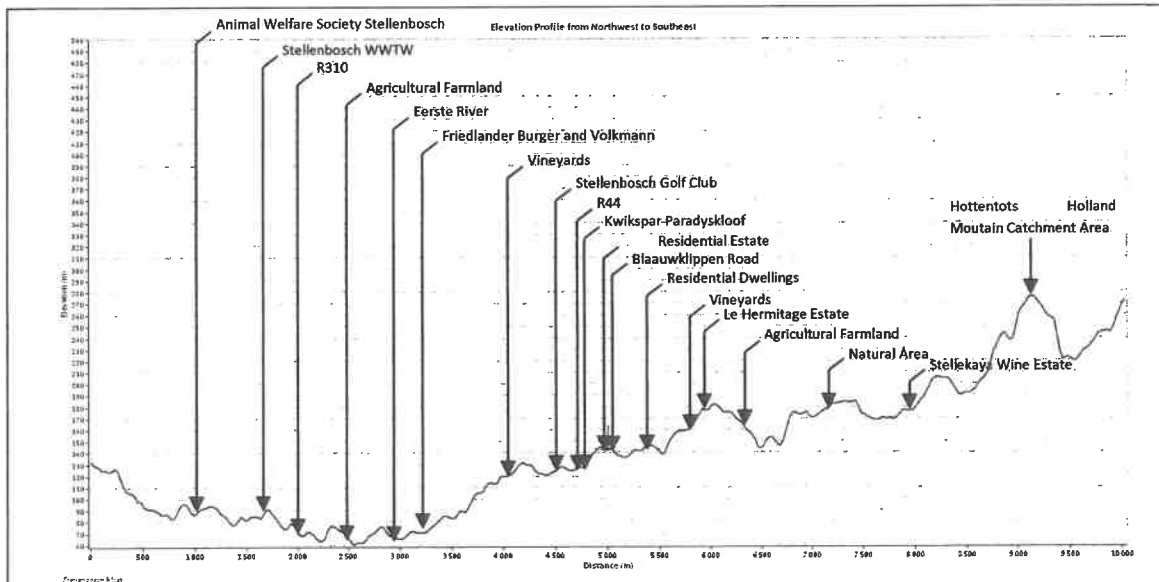


Figure 18: Elevation Profile from Northwest to Southeast of the study area.

Figure 18 illustrates the elevation profile of the study area from Northwest to Southeast. Towards the northwest the proposed development will be temporarily visible from Canterbury Lane situated at metre 21.89 as motorists will only traverse through the area. A permanent visual impact will occur from the residential dwellings/estate situated at metre 88 as observers will reside within the area permanently. It must be noted that a temporary visual impact will occur between metre 190 and metre 915 as the study area consist of a retail centre at metre 204, the R44 situated at metre 263 and the Stellenbosch Golf Club situated at metre 558 respectively. A temporary visual impact is assigned as observers will only reside within the area for a limited time. No visual impact will occur between metre 930 and kilometre two point eight (km 2.8) due to the undulating topography of the study area. It must be noted that a temporary visual impact will occur from the R310 situated at kilometre three (km 3) as motorists will only traverse through the area. The temporary visual impact will continue up to kilometre three point seven (km 3.7) as the area consists of a Business Park and the Stellenbosch Waste Water Treatment Works. A temporary visual impact is assigned as observers will remain within the area for a set period of time. Furthermore, the proposed development will have a temporary visual impact from the Animal Welfare Society Stellenbosch situated at kilometre three point nine (km 3.9). The visual impact between kilometre three point nine (km 3.9) and kilometre five (km 5) will remain temporary as the study area constitute of the Stellenbosch Waste Disposal Site and vineyard. Towards the southeast a temporary visual impact will occur from Blaauwklippen Road situated at metre 62 as motorists will only traverse through the area. A permanent visual impact will occur from the residential dwellings situated between metre 94 and metre 500 as observers will remain within the area permanently. Furthermore, a temporary visual impact will occur from the vineyards situated between metre 500 and kilometre one (km 1) as observers will remain within the area for a set period of time. Between kilometre one (km 1) and kilometre three point seven (km 3.7) no visual impact will occur due to the undulating topography of the study area. It must be noted that a temporary visual impact will occur between kilometre three point seven (km 3.7) and kilometre four point one (km 4.1) as the study area consists of vineyards and the Hottentots Holland Mountain Catchment Area. Beyond kilometre four point one (km 4.1) no visual impact will occur due to the undulating topography of the study area.

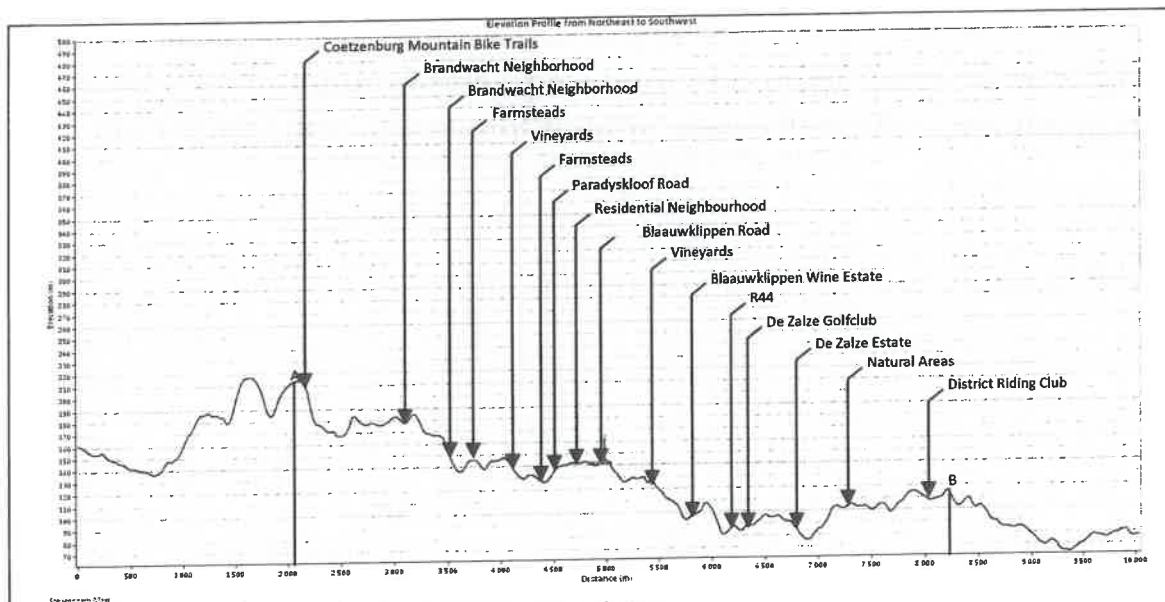


Figure 19: Elevation Profile from Northeast to Southwest of the study area.

Figure 19 illustrates the elevation profile of the study area from northeast to southwest. Towards the northeast a temporary visual impact will occur from Blaauwklippen Road situated at metre 27. The study area between metre 27 and metre 709 constitutes of medium density residential dwellings from where a permanent visual impact will occur as observers reside within the area. A temporary visual impact will occur from the vineyards situated between metre 709 and kilometre one point three (km 1.3); however, it must be noted that the proposed development will not be visible from the residential estate situated between kilometre one point three (km 1.3) and kilometre one point four (km 1.4). The proposed development will be permanently visible from the Brandwacht neighbourhood situated between kilometre one point four (km 1.4) and kilometre one point eight (km 1.8) as observers will reside within the area permanently. It must be noted that no visual impact will occur between kilometre one point eight (km 1.8) and kilometre two point seven (km 2.7) due to the undulating topography of the study area. The proposed development will be visible from Coetzenburg Mountain Bike Trails situated at kilometre two point nine (km 2.9) from where the visual impact will be temporary as observers will only remain within the area for a set period of time. Beyond kilometre two point nine (km 2.9) no visual impact will occur due to the undulating topography of the study area as illustrated by Point A within Figure 19 (Elevation Profile from Northeast to Southwest of the study area). Towards the southwest a temporary visual impact will occur the first (1st) one point two kilometres (1.2 km) as the study area consist of vineyards from where limited observers are expected. Furthermore, this temporary visual impact will continue up to the R44 situated between kilometre one point two (km 1.2) and kilometre one point three (km 1.3) as motorists will only traverse through the area. The De Zalze Golfclub is situated between kilometre one point three (km 1.3) and kilometre one point six (km 1.6) from where a temporary visual impact will occur as observers will remain within the area for a set period of time. The study area between kilometre one point seven (km 1.7) and kilometre two point one (km 2.1) constitutes of the residential dwellings of the De Zalze Golf Estate from where a permanent visual impact will occur. A temporary visual impact will occur from the natural area situated between kilometre two point one (km 2.1) and kilometre three (km 3) as observers will remain within the area temporarily; however, should these lands be developed, the impact will change to permanent. The proposed development will have a temporary visual impact from the Stellenbosch District Riding Club situated between kilometre three (km 3) and kilometre

three point four (km 3.4) as observers will remain within the area for a set period of time. Beyond kilometre three point four (km 3.4) no visual impact will occur due to the undulating topography of the study area as illustrated by Point B within Figure 19 (Elevation Profile from Northeast to Southwest of the study area).

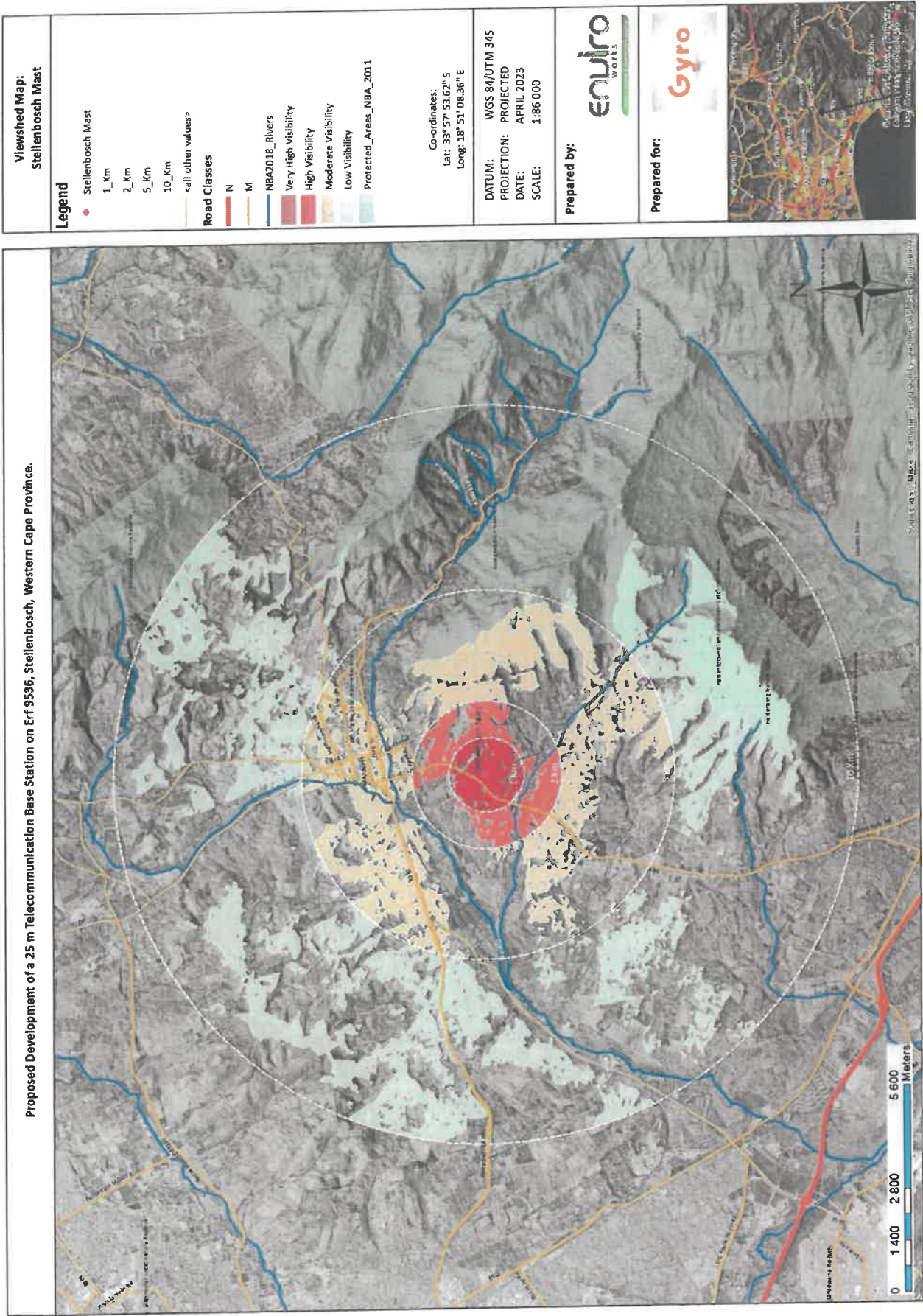


Figure 20: Viewshed Analysis of the proposed Stellenbosch Mast.

18 VISUAL ABSORPTION CAPACITY

The following section provides a description of the viewshed analysis via photographic evidence taken at a height of one point eight metres (1.8 m). This will enable the reader to understand the Visual Absorption Capacity (VAC) of the area and provide a visual reference. The Visual Absorption Capacity of the surrounding area is considered to be moderate within five kilometres (5 km) of the proposed Stellenbosch Mast due to the built-up environment, dense vegetation cover and the undulating topography of the study area.



Figure 21: Photo Position 1 situated towards the north of the Proposed Development.

Visual Exposure of the Area	High Visual Exposure
Visual Absorption Capacity	Low VAC
Landscape Integrity	Moderate Compatibility
Visibility	High Visual Impact
Photo Position 1 was taken thirty metres (30 m) towards the north of the proposed development. The proposed development will be highly visible from this vantage point given the low VAC of the study area as can be observed within the foreground. The proposed development will have a moderate compatibility with the study area given the trees surrounding the site as evident within the foreground.	



Figure 22: Photo Position 2 situated towards the south-east of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	Moderate Compatibility
Visibility	No Visual Impact

Photo 2 was taken along Blaauwklippen Road, which is situated one kilometre (1 km) towards the southeast of the Proposed Development. The proposed development will not be visible from this vantage point given the high VAC of the study area. The VAC is predominantly influenced by the moderate vegetation cover as evident within the foreground. A moderate landscape compatibility is assigned as a tree will blend in with the surrounding vegetation.



Figure 23: Photo Position 3 situated towards the south of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 23 is situated two point nine kilometres (2.9 km) towards the south of the Proposed Development and was taken along Stellenrust Road directly adjacent to the Dornier Wine Estate. No visual impact will occur from this vantage point given the high VAC of the study area. The VAC is predominantly influenced by the undulating landscape as can be observed within the foreground and the moderate vegetation cover as can be observed within the fore- and back-ground.

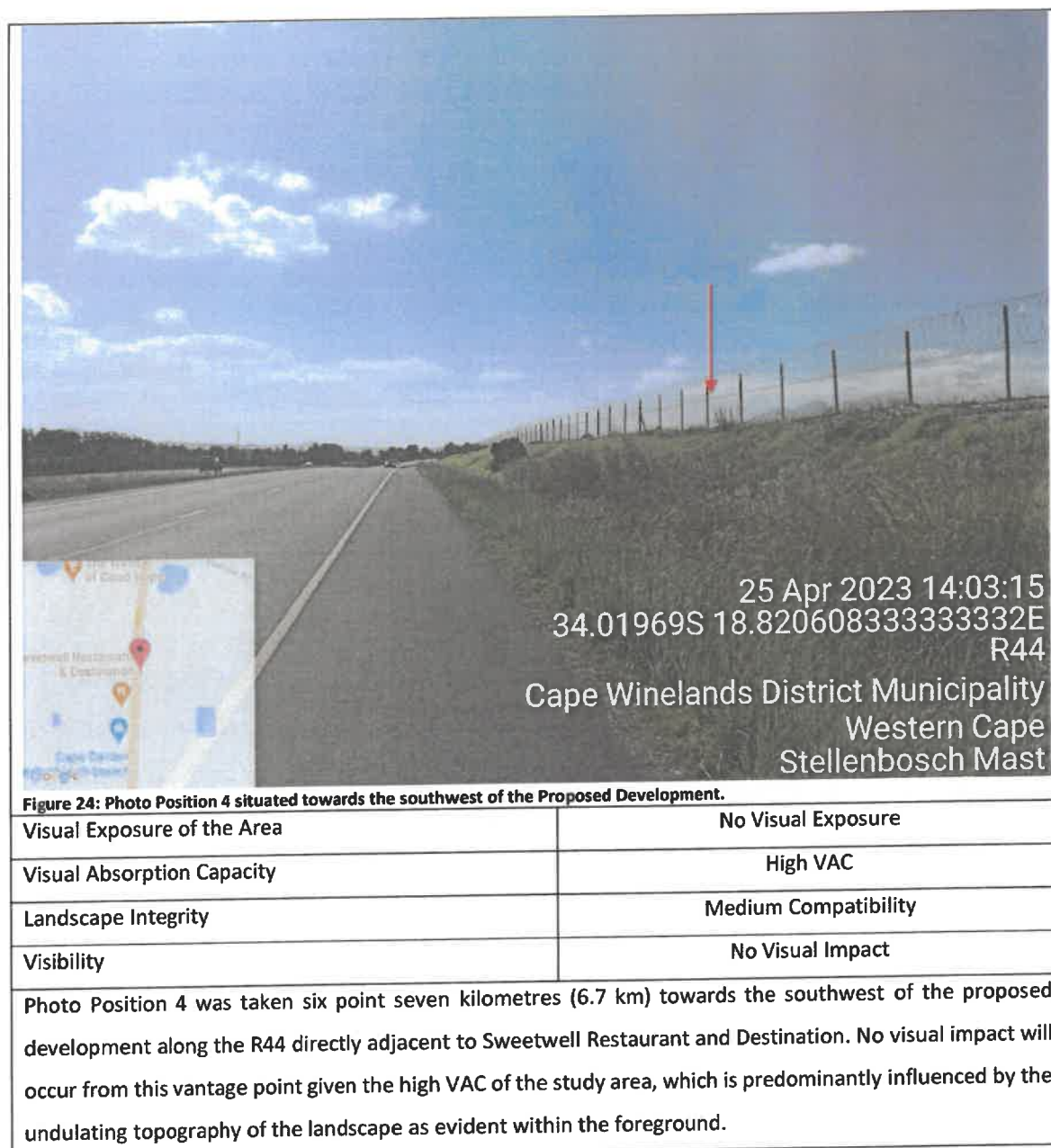




Figure 25: Photo Position 5 situated towards the southwest of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 25 was taken along Annandale Road situated five point six kilometres (5.6 km) towards the southwest of the proposed development. No visual impact will occur from Photo Position 5 given the high VAC of the study area. The high VAC is predominantly influenced by the dense vegetation cover as can be observed within the foreground. From this vantage point a tree mast will have a high compatibility since the study area predominantly consists of natural vegetation.



Figure 26: Photo Position 6 situated towards the northwest of the Proposed Development.

Visual Exposure of the Area	Low Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	Low Visual Impact

Figure 26 was taken along Baden Powell Drive situated four point one kilometres (4.1 km) towards the northwest of the proposed development. A low visual impact will occur from Photo Position 6 as the top of the proposed development could be visible from this vantage point. A low visual impact is assigned due to the dense vegetation cover as can be observed within the background coupled with the high landscape compatibility from this vantage point. The visual impact will be temporary as motorists will only traverse through the area.

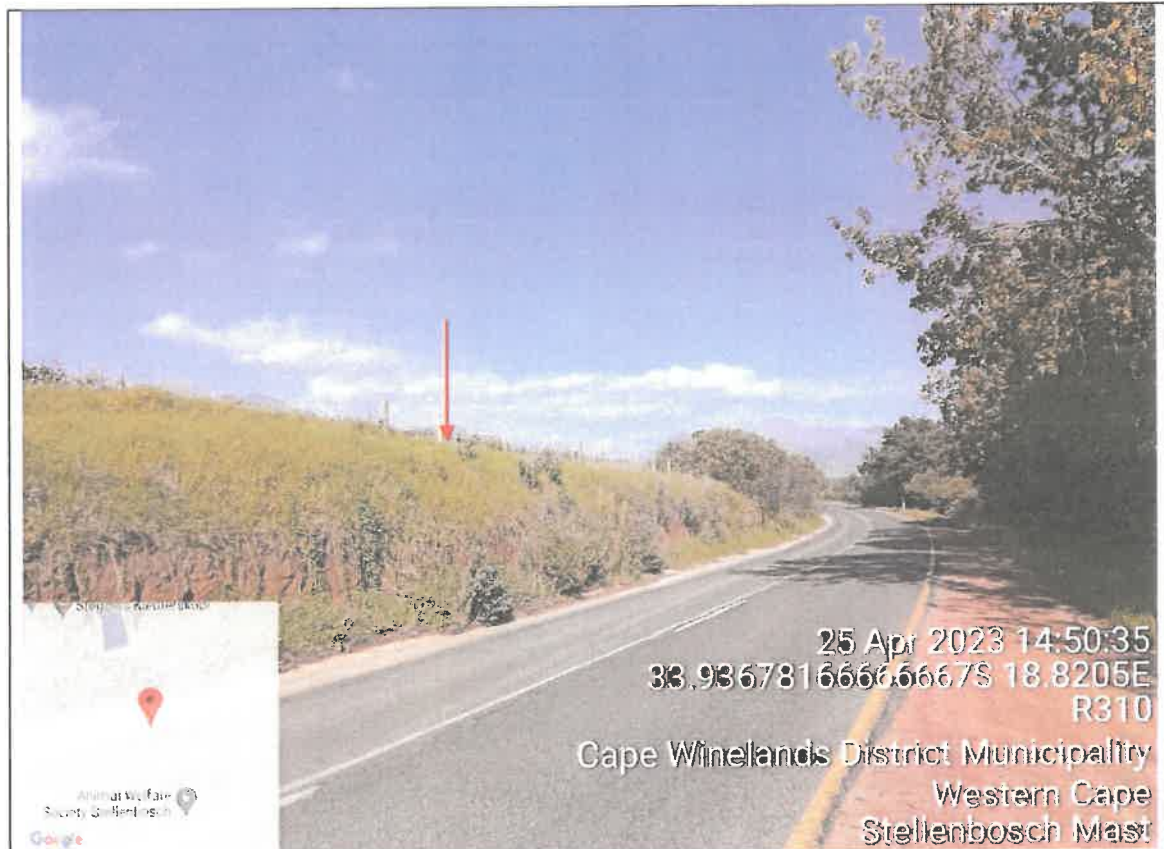


Figure 27: Photo Position 7 situated towards the northwest of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 27 was taken four point four kilometres (4.4 km) towards the northwest of the proposed development adjacent to the Stellenbosch Waste Disposal and the Stellenbosch Animal Welfare Society. No visual impact will occur from this vantage point due to the dense vegetation cover and the undulating topography of the landscape as can be observed within the foreground. The visual impact will be temporary as motorists will only traverse through the area.



Figure 28: Photo Position 8 situated towards the northeast of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact
<p>Photo Position 8 is situated one point seven kilometres (1.7 km) towards the northeast of the proposed development and was taken along Le Seuer Road. No visual impact will occur from this vantage point due to the distance between the proposed development and the observer coupled with the dense vegetation cover as can be observed within the foreground, as well as the undulating topography of the study area as can be observed within the background.</p>	



Figure 29: Photo Position 9 situated towards the north of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 29 was taken one and a half kilometres (1.5 km) towards the north of the proposed development within the Dalsig Neighbourhood from Rhodes-South Road. The proposed development will not be visible from this vantage point due to the dense vegetation cover and built-up environment of the study area as can be observed within the background, coupled with the distance between the proposed development and the observer.

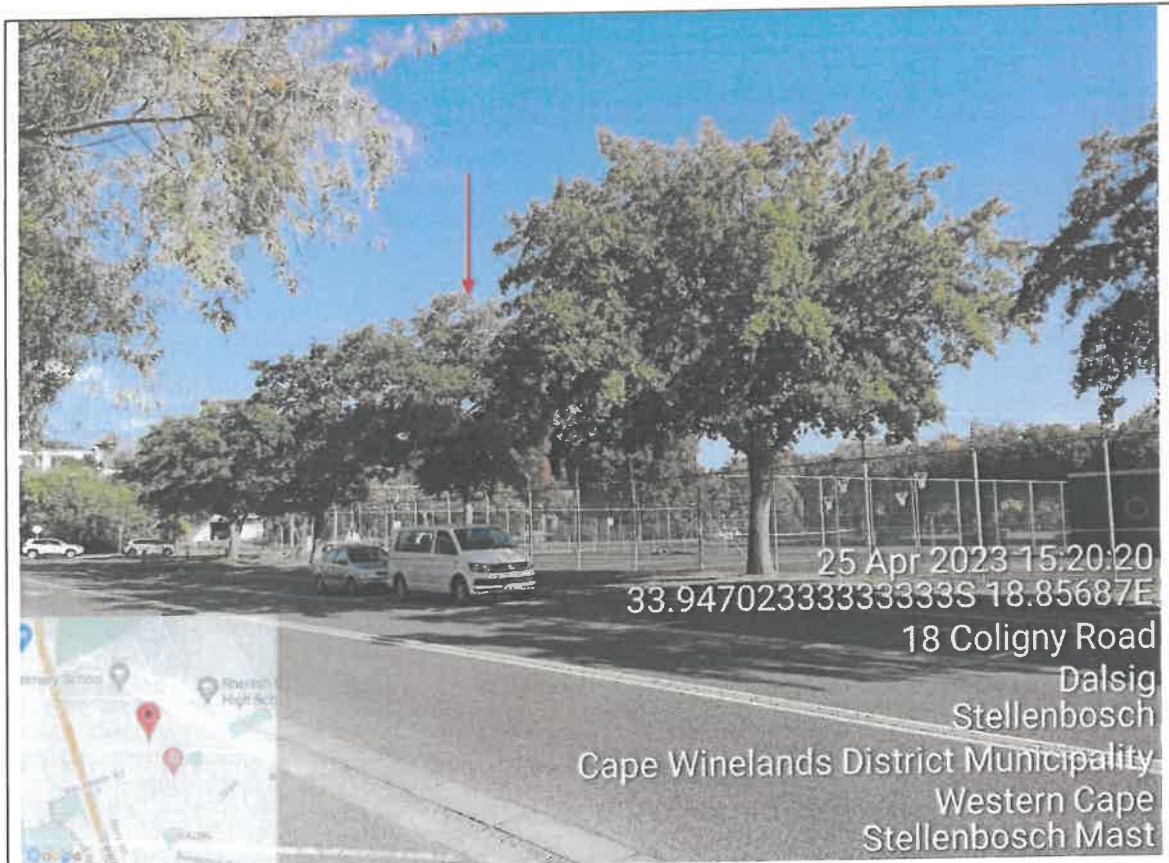


Figure 30: Photo Position 10 situated towards the north of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 30 was taken two point one kilometres (2.1 km) towards the north of the proposed development along Coligny directly adjacent to the Rhenish Primary School, Eikestad Primary School and Rhenish Girls High School. No visual impact will occur from this vantage point due to the built-up environment and moderate vegetation cover as can be observed within the foreground.

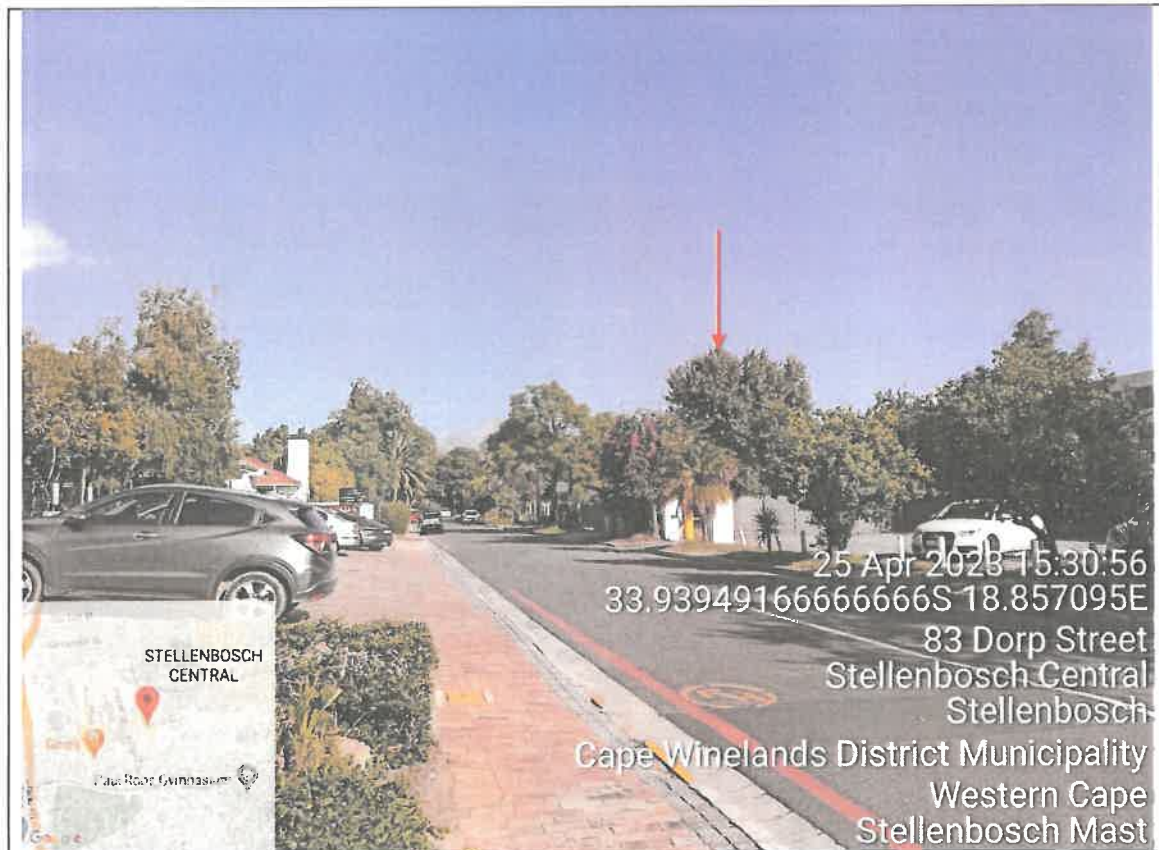


Figure 31: Photo Position 11 situated towards the north of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 31 was taken two point eight kilometres (2.8 km) towards the north of the proposed development on the corner of Dorp Street and Hamman Street, directly adjacent to Hudsons – The Burger Joint and Okasie Florist Shop from where no visual impact will occur. No visual impact will occur from this vantage point given the distance between the proposed development and the high VAC of the study area. The VAC is predominantly influenced by the high vegetation cover and built-up environment as evident within the fore- and back-ground. Furthermore, a monopole- and tree- mast will blend in with the surrounding vegetation cover.



Figure 33: Photo Position 13 situated towards the northeast of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 33 was taken five kilometres (5 km) towards the northeast of the proposed development along Banghoek Road adjacent to The Stellenbosch Super Spar, Total Energies Simonsrust and the Stellenbosch Fire and Rescue. No visual impact will occur due to the distance between the observer and the development. No visual impact is assigned as the proposed development will have a high landscape compatibility due to the dense vegetation cover as can be seen in the background. Furthermore, there will be no visual exposure as illustrated by the built-up environment and the dense vegetation cover as can be observed within the background.

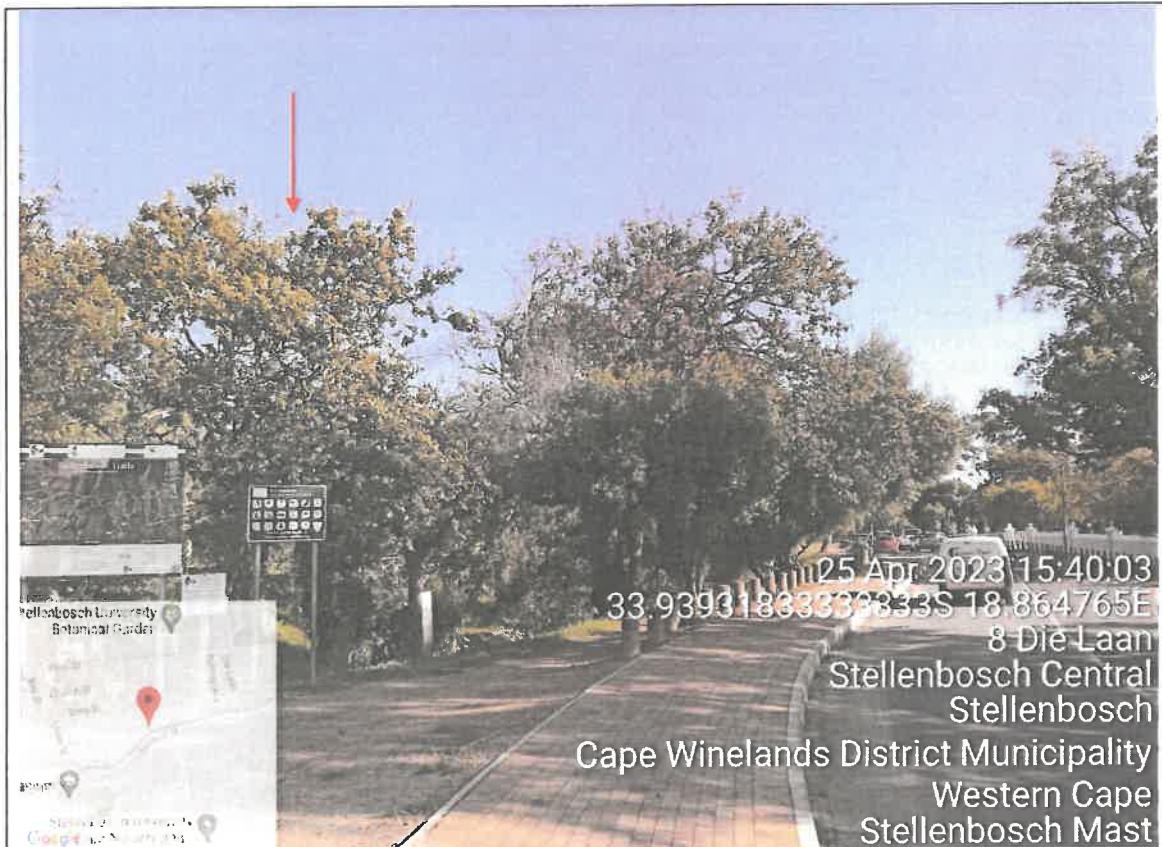


Figure 32: Photo Position 12 situated towards the northeast of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 32 was taken three point one kilometres (3.1 km) towards the northeast of the proposed development along Noordwal-Wes Road in in Central Stellenbosch adjacent to the Eerste River and Stellenbosch University School of Theology. No visual impact will occur from this vantage point given the high VAC of the study area. The VAC is predominantly influenced by the height and density of the vegetation cover as can be observed within the foreground.



Figure 34: Photo Position 14 situated towards the northeast of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 34 was taken eight point three kilometres (8.3 km) towards the northeast of the proposed development from Tokara Wine Estate, directly adjacent to an olive grove. No visual impact will occur from this vantage point given the high VAC of the study area which is predominantly influenced by the undulating topography of the landscape as evident within the foreground and the dense vegetation cover as evident within the background. Furthermore, no visual impact will occur due to the distance between the observer and the proposed development.



Figure 35: Photo Position 15 situated towards the northeast of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 35 was taken seven point two kilometres (7.2 km) towards the northeast of the proposed development along Rustenberg Road adjacent to Amares Wines. The proposed development will not be visible from this vantage point due to the high VAC of the study area. The high VAC is predominantly influenced by the dense vegetation cover as evident within the foreground and the undulating topography of the landscape as evident within the background. Furthermore, no visual impact will occur due to the distance between the observer and the proposed development.



Figure 36: Photo Position 16 situated towards the north of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Photo Position 16 was taken six point six kilometres (6.6 km) towards the north of the proposed development along the R44 adjacent to the Cloetesville Neighbourhood and the Timberlea Farming Trust with the Blue Jay Farm Stall. The proposed development will not be visible due to the high VAC of the study area. The high VAC is predominantly influenced by the undulating topography of the study area as evident within the background and the moderate vegetation cover as can be observed within the fore- and back-ground. The VAC is furthermore, influenced by the distance between the observer and the proposed development.



Figure 37: Photo Position 17 situated towards the north of the Proposed Development.

	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Photo Position 17 was taken three point seven kilometres (3.7 km) towards the north of the proposed development along Merriman Avenue, adjacent to the Stellenbosch Bowls Club. The proposed development will not be visible from Photo Position 17 due to the high VAC of the study area which is predominantly influenced by the built-up environment as can be observed within the foreground coupled with the distance between the proposed development and the observer.

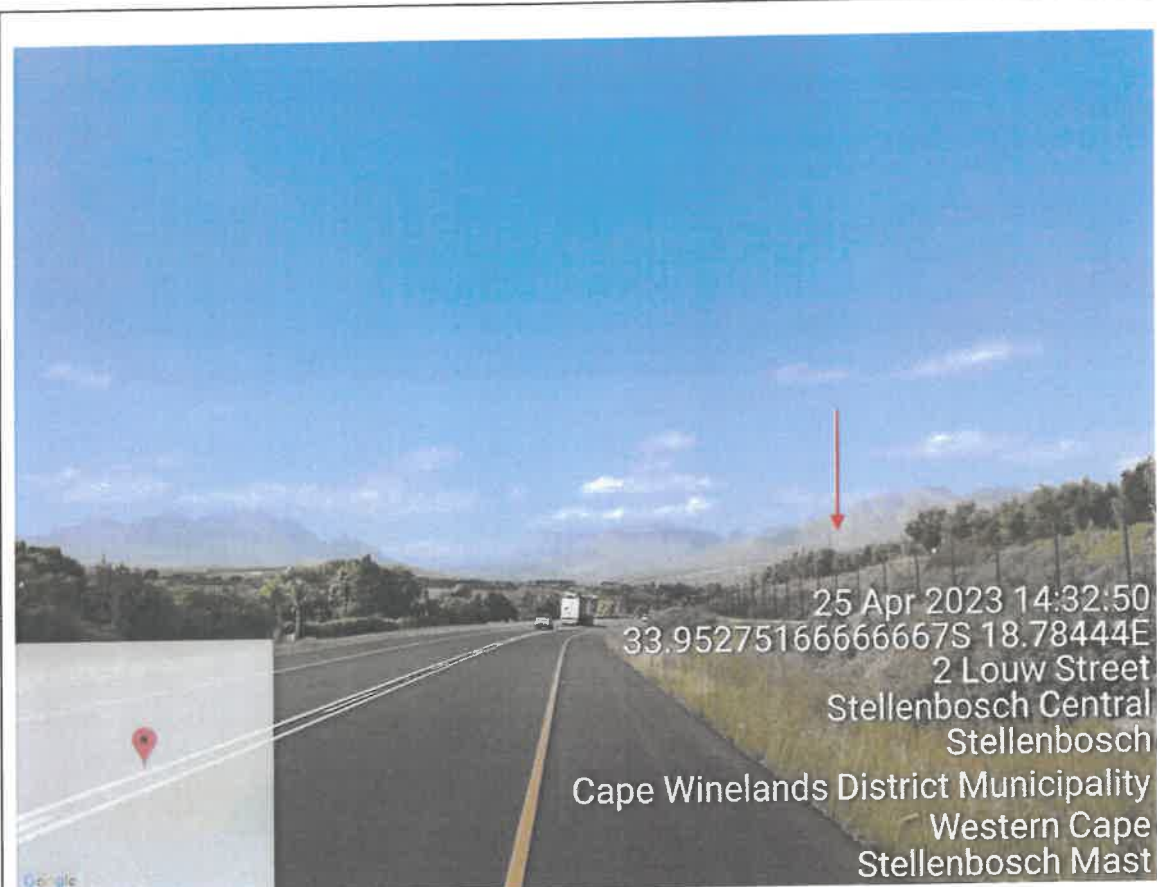


Figure 38: Photo Position 18 situated towards the west of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 38 was taken six point four kilometres (6.4 km) towards the west of the proposed development along M12/Polkadraai Road directly adjacent to the Longlands Country Estate. The proposed development will not be visible from this vantage point due to the distance between the proposed development and the high VAC. The VAC is predominantly influenced by the undulating topography as evident within the foreground and the high vegetation cover as can be observed within the fore- and back-ground.

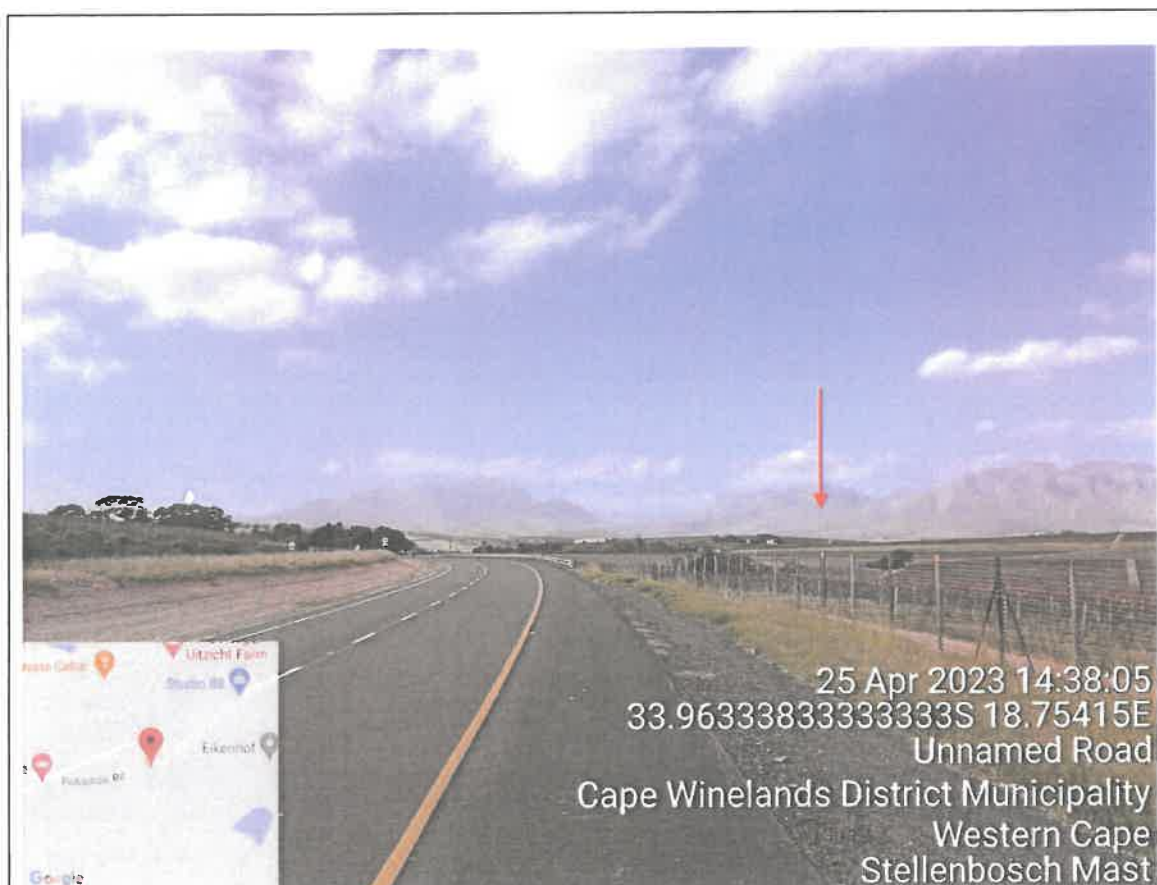


Figure 39: Photo Position 19 situated towards the west of the Proposed Development.

Visual Exposure of the Area	No Visual Exposure
Visual Absorption Capacity	High VAC
Landscape Integrity	High Compatibility
Visibility	No Visual Impact

Figure 39 was taken nine point two kilometres (9.2 km) towards the west of the proposed development along M12/Polkadraai Road, adjacent to the De Tore Private Cellar. The proposed development will not be visible from this vantage point due to the undulating topography of the study area as evident within the background. Furthermore, the visual impact is further restricted by the distance between the proposed development and the observer.

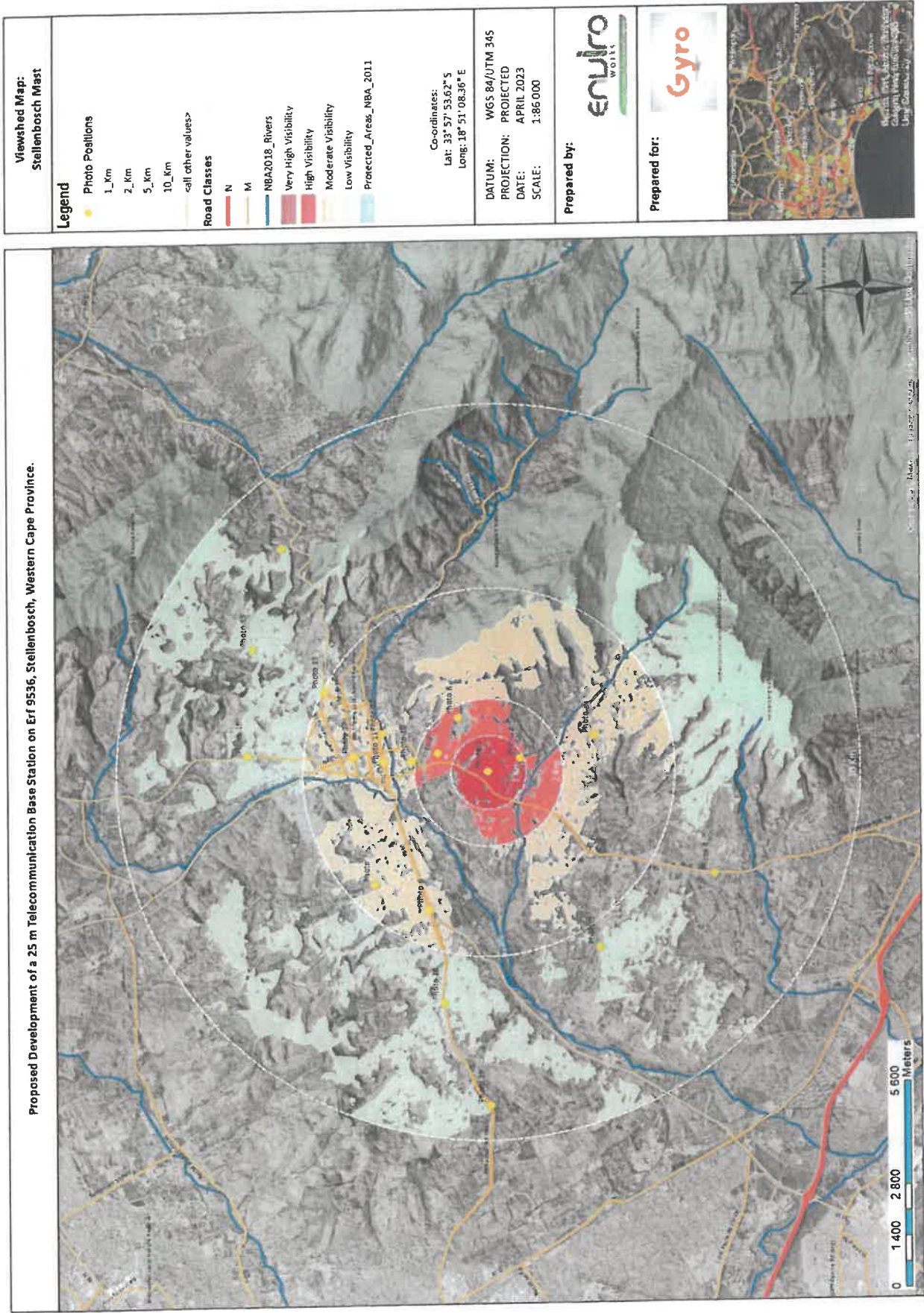


Figure 40: Locations from where the photos have been taken.

19 VISUAL IMPACT ASSESSMENT: IMPACT RATING METHODOLOGY

The previous section outlines all areas visible from the Stellenbosch Mast (viewshed analysis). This section will attempt to quantify these potential visual impacts in their respective geographical locations and in terms of the identified issues related to the visual impact. The methodology for the assessment of potential visual impacts states the nature of the potential visual impact (e.g. the visual impact on individuals who travel along R44, Blaauwklippen Road, Serruria Road, Speciosa Road, Cynaroides Road and Canterbury Lane as well as those residing within and visiting the project extent) and includes a table quantifying the potential significance of visual impact according to the following criteria:

- Duration of the impact (time scale);
- Extent of the impact (spatial scale);
- Magnitude (or nature) of negative or positive impacts;
- Probability of the impact occurring;
- Cumulative Impacts; and the,
- Degree to which the impact can be mitigated.

The scales to be used to assess these variables and to define the rating categories are tabulated in the tables below.

Table 7: Evaluation components, ranking scales and descriptions (criteria).

Evaluation component	Ranking scale and description (criteria)
DURATION	5 – Permanent: Where time will not mitigate the visual impact. 4 – Long term: Impact might occur for the lifespan of the project. 3 – Medium term: Impact might occur for the duration for screening vegetation to mature. 2 – Short term: Impact might occur for the duration of the construction phase. 1 – Immediate
EXTENT (or spatial scale / influence of impact)	5 – International: Affecting areas across International Boundaries. 4 – National: Affecting large parts of the country. 3 – Regional: Affecting a larger metropolitan or regional area. 2 – Local: Limited to the immediate surroundings. 1 – Site-specific: Extending only as far as the activity. 0 – None
INTENSITY Magnitude of the impact on views, scenic or cultural resources	5 – Definite where scenic and cultural resources are definitely affected. 4 – High where scenic and cultural resources are significantly affected. 3 – Moderate where visual and scenic resources are affected to a limited extent. 2 – Low where visual and scenic resources are not affected. 1 – Very low the proposed development will not be visible.
PROBABILITY (of occurrence)	5 – Definite: Where time will not mitigate the visual impact. 4 – Long Term Probability: Lifespan of the project. 3 – Medium probability: Duration for screening vegetation to mature. 2 – Low probability: Screening vegetation matured and development has a high Landscape Compatibility. 1 – Short Term: Duration of the construction phase.

Evaluation component	Ranking scale and description (criteria)
CUMULATIVE impacts	<p>High: The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Medium: The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Low: The activity is localised and might have a negligible cumulative impact.</p> <p>None: No cumulative impact on the environment.</p>

Once the evaluation components have been ranked for each potential impact, the significance of each potential impact will be assessed (or calculated) using the following formula:

$$\text{SP (Significance Points)} = (\text{Duration} + \text{Extent} + \text{Intensity}) \times \text{Probability}$$

The maximum value is 75 significance points (SP). The unmitigated and mitigated scenarios for each potential environmental impact should be rated as per the table below.

Table 8: Definition of significance ratings (positive and negative).

Significance Points	Environmental Significance	Description
60 – 75	Very High (VH)	An impact of very high significance will mean that the project cannot proceed, and that impacts are irreversible, regardless of available mitigation options.
45 – 59	High (H)	An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.
30 – 44	Medium-high (MH)	If left unmanaged, an impact of medium-high significance could influence a decision about whether or not to proceed with a proposed project. Mitigation options should be relooked.
15 – 29	Medium (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.
0 – 14	Low (L)	An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation.
+	Positive impact (+)	A positive impact is likely to result in a positive consequence/effect and is likely to contribute to positive decisions about whether or not to proceed with the project.

20 VISUAL IMPACT ASSESSMENT

The primary visual impacts of the proposed Stellenbosch Mast are further assessed as follow:

20.1 POTENTIAL VISUAL IMPACT ON SENSITIVE VISUAL RECEPTORS, LOCATED WITHIN A 10 KM RADII OF THE STELLENBOSCH MAST.

The Operational Phase of the Stellenbosch Mast could have a moderate visual impact (significance rating= 27) on observers within a one kilometre (1 km) radius.

Table 9: Impact Ratings of the Construction Phase within a 5 km radius.

Planning, design and construction phase	Design Alternative 1		Design Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL VISUAL IMPACTS:					
Nature of impact: Impact on the sense of place for surrounding users.	Activity: The movement of construction vehicles, machinery and personnel on site shall result in a visual impact on surrounding users. Furthermore, to this, the storage of materials and excavation shall result in disturbance and an unsightly character.				
Duration:	2		2		-
Extent:	2		2		-
Intensity:	2		2		-
Probability:	1		1		-
Total SP:	6		6		-
Significance rating:	Low (L)		Low (L)		-
Cumulative impact:	-		-		-
Proposed Mitigation:	<ul style="list-style-type: none">Access roads are to be kept clean;Site offices and structures should be limited to one location and carefully situated to reduce visual intrusions; Roofs should be grey and non-reflective;Construction camps as well as development areas should be screened with netting;Lights within the construction camp should face directly down (angle of 90°);Vegetation clearance should be limited to the development footprint only;Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact;All areas disturbed by construction activities must be subject to landscaping and rehabilitation;All spoil and waste will be disposed to a registered waste site and certificates of disposal provided;The project must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact;				
	N/A				

Planning, design and construction phase	Design Alternative 1		Design Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> Signage, if essential, should be discrete and confined to entrance gates. No corporate or advertising signage should be permitted. Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; and, Mitigation of visual impacts associated with the construction phase would entail proper planning, management and rehabilitation of the construction site. Mitigation measures include the following: <ul style="list-style-type: none"> Reduce the time of construction through careful planning of logistics and ensure the productive implementation of resources; Limit disturbance of the environment to the development footprint; and, Limit construction activities to business hours (07:00 – 17:00). 				

Table 10: Impact Ratings of the Operational Phase within a 1 km radius.

Operational Phase	Design Alternative 1	Design Alternative 2	No-Go Alternative
POTENTIAL VISUAL IMPACTS:			
Nature of impact: Impact on the sense of place for surrounding users.	Activity: The development of the Stellenbosch Mast can cause a visual intrusion to observers within a one-kilometre (1 km) radius from the proposed development.		
Duration:	4	4	5
Extent:	2	2	0
Intensity:	3	3	0
Probability:	3	4	5
Total SP:	27	36	25
Significance rating:	Moderate (M)	Medium-high (MH)	P (+)
Cumulative impact:	-	-	-

Operational Phase	Design Alternative 1	Design Alternative 2	No-Go Alternative
	<ul style="list-style-type: none"> Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; Mitigation to minimise lighting impacts include the following: <ul style="list-style-type: none"> Shielding the sources of light by physical barriers (walls, vegetation or structures itself); Limit mounting heights of lighting fixtures, or alternatively using foot-lights or bollard level lights); Make use of downward directional lighting fixtures; Make use of minimum lumen or wattage in lights; The navigation light at the top of the mast must be shielded to prevent disturbance to adjacent landowners; and, Use motion sensors to activate lighting ensuring light is available when needed. If a Tree Mast is developed it should be designed to resemble trees that are indigenous to the area; If a Monopole Mast is developed, the mast must be painted grey or white as illustrated within the Visual Impression to ensure that the mast blend in with the backdrop of sky; Rehabilitation and Post-closure measures: <ul style="list-style-type: none"> All above-ground structures should be removed, safely disposed of or possibly recycled for use elsewhere; and, The affected area should be regarded to pre-development topographic conditions, unless the area is required for new specific uses. 		N/A
Proposed Mitigation:			

Table 11: Impact Ratings of the Operational Phase within a 2 km radius.

Operational Phase	Design Alternative 1	Design Alternative 2	No-Go Alternative
POTENTIAL VISUAL IMPACTS:			
Nature of impact:	Activity: The development of the Stellenbosch Mast can cause a visual intrusion to observers within a two-kilometre (2 km) radius from the proposed development.		
	No construction phase impacts are associated with the no-go		

Operational Phase	Design Alternative 1	Design Alternative 2	No-Go Alternative
Impact on the sense of place for surrounding users.			alternative thus no assessment has been undertaken.
Duration:	4	4	5
Extent:	2	2	0
Intensity:	1	2	0
Probability:	2	2	5
Total SP:	14	16	25
Significance rating:	Low (L)	Moderate (M)	P (+)
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Please refer to Mitigation Measures listed above. 		
			N/A

Table 12: Impact Ratings of the Operational Phase within a 5 km radius.

Operational Phase	Design Alternative 1	Design Alternative 2	No-Go Alternative
POTENTIAL VISUAL IMPACTS:			
Nature of impact: Impact on the sense of place for surrounding users.	Activity: The development of the Stellenbosch Mast can cause a visual intrusion to observers within a five-kilometre (5 km) radius from the proposed development.		
Duration:	4	4	5
Extent:	1	1	0
Intensity:	2	2	0
Probability:	2	2	5
Total SP:	14	14	25
Significance rating:	Low (L)	Low (L)	P (+)
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Please refer to Mitigation Measures listed above. 		
			N/A

Table 13: Impact Ratings of the Operational Phase within a 10 km radius.

Operational Phase	Design Alternative 1	Design Alternative 2	No-Go Alternative
POTENTIAL VISUAL IMPACTS:			
Nature of Impact: Impact on the sense of place for surrounding users.	Activity: The development of the Stellenbosch Mast can cause a visual intrusion to observers within a ten-kilometre (10 km) radius from the proposed development.		No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Duration:	1	1	5
Extent:	1	1	0
Intensity:	1	1	0
Probability:	2	2	5
Total SP:	6	6	25
Significance rating:	Low (L)	Low (L)	P (+)
Cumulative impact:	-	-	-
Proposed Mitigation:	Please refer to Mitigation Measures listed above.		N/A

21 CONCLUSION AND RECOMMENDATIONS

The highest visual impact within the short distance zone will occur within the first (1st) 196 metres. A high permanent visual impact will occur from the residential estate situated 40 metres towards the northwest, the residential dwellings along Blaauwklippen Road situated 62 metres towards the northeast as well as the residential dwellings situated 73 metres towards the southeast of the proposed development. Within this radius of 192 metres a temporary high visual impact will occur from Blaauwklippen Road traversing from north to south within this area. A temporary visual impact is assigned as motorists will only travel through the area momentarily. This temporary high visual impact will; furthermore, occur from the vineyard situated 31 metres towards the southwest of the proposed development. Beyond the 192-metre radius visual exposure will occur towards the south, southwest and west; however, due to the built-up environment, undulating topography of the study area and the moderate vegetation cover the visual impact will be restricted towards the north, northeast, east and southeast.

Within the short to medium distance zone the proposed development will only be visible from the R44 situated one point one kilometres (1.1 km) towards the southwest. It must be noted that no visual impact will occur towards the southeast and northwest within the short to medium distance zone due to the undulating topography of the study area. Two (2) vantage points (Photo Position 8 & 9) were inspected within the town of Stellenbosch and it was found that the proposed development will not be visible from either of these points.

Within the medium to long distance zone seven (7) vantage points were inspected and the proposed development will only be visible from one (1) of these. The proposed development will be visible from Photo Position 6 situated four kilometres (4 km) towards the northwest. The proposed development will be visible from the Hottentots-Holland Mountain Catchment Area; however, a low temporary visual impact will occur from this vantage point as observers will remain within the area temporarily. It must be noted that from this vantage point the observer will not experience a change in the aesthetic value of the study area given that from this distance a tree mast will blend in with the moderate vegetation cover of the study area. Except for these two (2) instances listed the visual impact will be restricted by the high VAC of the study area.

Visibility beyond five kilometres (5km) from the proposed Stellenbosch Mast is expected to be negligible due to the distance between the object and the observer. As per the viewshed analysis the proposed development will be visible within the long-distance zone from the Hottentots-Holland Mountain Catchment Area situated six kilometres (6 km) towards the south. From this vantage point a low and temporary visual impact is expected due to the limited number of observers that will traverse through the area coupled with the high VAC.

Both a Monopole- and Tree Mast will be acceptable alternatives for development; however, a monopole mast will have a higher visual impact than that of a tree mast due to the fact that it has a lower landscape compatibility. A tree mast will have a high landscape compatibility as it will blend in with the surrounding vegetation cover within the environment and the mountainous terrain in the background. The proposed development will be visible at night as the navigation light at the top will be clearly definable. A monopole mast will have a moderate-high visual impact within the short distance zone; however, a tree mast will have a moderate visual impact as it will have a higher landscape compatibility.

Construction Phase:

- Access roads are to be kept clean;
- Site offices and structures should be limited to one location and carefully situated to reduce visual intrusions; Roofs should be grey and non-reflective;
- Construction camps as well as development areas should be screened with netting;
- Lights within the construction camp should face directly down (angle of 90°);
- Vegetation clearance should be limited to the development footprint only;
- Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact;
- All areas disturbed by construction activities must be subject to landscaping and rehabilitation;
- All spoil and waste will be disposed to a registered waste site and certificates of disposal provided;
- The project must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;
- Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact;
- Signage, if essential, should be discrete and confined to entrance gates. No corporate or advertising signage should be permitted.
- Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; and,
- Mitigation of visual impacts associated with the construction phase would entail proper planning, management and rehabilitation of the construction site. Mitigation measures include the following:
 - Reduce the time of construction through careful planning of logistics and ensure the productive implementation of resources;
 - Limit disturbance of the environment to the development footprint; and,
 - Limit construction activities to business hours (07:00 – 17:00).

Operation Phase:

- Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare;
- Mitigation to minimise lighting impacts include the following:
 - Shielding the sources of light by physical barriers (walls, vegetation or structures itself);
 - Limit mounting heights of lighting fixtures, or alternatively using foot-lights or bollard level lights);
 - Make use of downward directional lighting fixtures;
 - Make use of minimum lumen or wattage in lights;
 - The navigation light at the top of the mast must be shielded to prevent disturbance to adjacent landowners; and,
 - Use motion sensors to activate lighting ensuring light is available when needed.
- If a Tree Mast is developed it should be designed to resemble trees that are indigenous to the area;
- If a Monopole Mast is developed, the mast must be painted grey or white as illustrated within the Visual Impression to ensure that the mast blend in with the backdrop of sky;
- Rehabilitation and Post-closure measures:
 - All above-ground structures should be removed, safely disposed of or possibly recycled for use elsewhere; and,
 - The affected area should be regarded to pre-development topographic conditions, unless the area is required for new specific uses.

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21. SITE PHOTOGRAPHS



Figure 41: Northern View from the Site



Figure 42: Eastern View of the Site.



Figure 43: Southern View of the Site.



Figure 44: Western View of the Site.