STELLENBOSCH
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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

Application Number: LU/15569
Our File Reference Number: Farm 279, Stellenbosch
Your Reference Number:
Enquiries: Ulrich von Molendorff
Contact No: 021 – 808 8682
Email address: Ulrich.Vonmolendorff@stellenbosch.gov.za

PER E-MAIL: [redacted]

Sir / Madam

APPLICATION FOR REZONING: FARM 279, STELLENBOSCH DIVISION

1. The above application refers.

2. The Municipal Planning Tribunal on 29 September 2023 resolved as follows:

   2.1 That the following application in terms of Section 15(2) of the Stellenbosch Municipal Land Use Planning Bylaw, promulgated by notice number 8768/2023, dated 09 June 2023, namely:

   2.1.1 **Rezoning** in terms of Section 15(2)(a) of the said by-law to rezone ±14.8ha of Farm No. 279, Stellenbosch from Agriculture and Rural Zone to Utility Services Zone, to allow the operations of a Material Waste Recovery facility, an Organic Waste Transfer station and an oxidation dam for the Stellenbosch Waste Water Treatment Works (WWTW) as indicated on Zoning Plan Ref STB/12891/ZN dated December 2022 and drawn by C.K. Rumble and Partners.

BE APPROVED in terms of Section 60 of the said Bylaw and subject to conditions of approval.

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

   3.1 The approval only applies to the proposed rezoning and shall not be construed as authority to depart from any other legal prescriptions or requirements from Council or other legislation or bylaws or regulations that may be applicable.

3.2 A detailed site development plan as contemplated in terms of Section 16 of the Zoning Scheme Bylaw, 2019 as required in terms of Section 160 of the said bylaw, which clearly shows the rezoned area, the landscaping proposals (with plant schedule) and all existing structures and features be submitted with the final building plans, which site development plan must satisfactorily address, but are not necessarily limited to, all the conditions of this approval, compliance with relevant development parameters of the said Bylaw and any relevant matters relating to Section 16(4) of the said Bylaw, and especially the strategic location thereof and the visual impact to the entrance to the town.

3.3 The final Site Development Plan to be submitted, be informed by Site Development Plan (Project No. 1001682, Revision A dated 05/05/2023) drawn by Zutari Imact.Engineered and building plans 4653-JGA-CL-DAP-099/902/904 dated June 2022 and drawn by JG Afrika, building plan Project No. 22.06.04 Drawing M002 and M003, dated 14/03/2023 and drawn by MSmith Architectural Group and Zoning Plan Ref STB/12891/ZN dated December 2022 and drawn by C.K. Rumble and Partners, attached as **APPENDIX 2**.

3.4 Building plans be submitted generally in accordance with the plans submitted as **APPENDIX 2** as well as the architectural guidelines submitted as **APPENDIX 3** for the approval of the municipality.

3.5 The conditions listed in the letter dated 16 August 2023 from the Western Cape Government: Transport and Public Works attached as **APPENDIX 6** be complied with.

3.6 The conditions listed in the memorandum dated 22 June 2023 from the Cape Winelands District Municipality Health Department attached as **APPENDIX 6** be complied with.

3.7 The conditions listed in the memorandum dated 18 July 2023 from the Municipal Director: Infrastructure Services attached as **APPENDIX 7** be complied with.

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

4.1 The proposed land use, within the Stellenbosch Urban Edge, does not impact negatively on the safety, health and wellbeing of the surrounding environment and sufficient municipal services are provided.

4.2 The visual impact of the facility can sufficiently be mitigated with architectural design guidelines and landscaping proposals.

4.3 The facility will ensure the effective and efficient utilisation of resources, minimise the consumption of natural resources, stimulate job creation within the waste economy and increase waste management through reuse, recovery and recycling.

5. **Matters to be noted:**

5.1 A Water Use Authorization be obtained from the Department of Water and Sanitation if deemed necessary and all requirements of the National water Act, 1998 (Act 36 of 1998) regarding water use and pollution prevention must be adhered to at all times.

5.2 If any amendments to the approved development is required, then the holder must apply for amendment of the Environmental Authorization to the competent authority where any detail with respect to the Environmental Authorization must be amended, added, submitted, corrected, removed or updated. If a new holder is proposed an application for amendment in terms of Part 1 of the EIA Regulations, 2014 (as amended) must be submitted.

5.3 The land use shall not create any undue noise or be a nuisance to the neighbourhood and that precautionary measures be taken in order to avoid environmental noise pollution in terms of the Noise Control Regulations (PN627 dated 20 November 1998) made in terms of Section 25 of the Environmental Conservation Act, 1989 (Act No 73 of 1989).

5.4 During construction the owner, developer or any agent acting on his/her behalf must take all reasonable steps to prevent nuisance caused by dust in accordance with the National Dust Control Regulations.

5.5 Should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without delay.

6. You are hereby informed in terms of section 79(2) of the Stellenbosch Municipal Land Use Planning Bylaw, 2015, 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.

7. Appeals must be submitted 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. The following prescribed information is accordingly required:

7.1 The personal particulars of the Appellant, including:

i. First names and surname
ii. ID number

10. The 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

11. 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.

12. Kindly note that no appeal right exists in terms of Section 62 of the Local Government Municipal Systems Act, No 32 of 2000.

13. 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

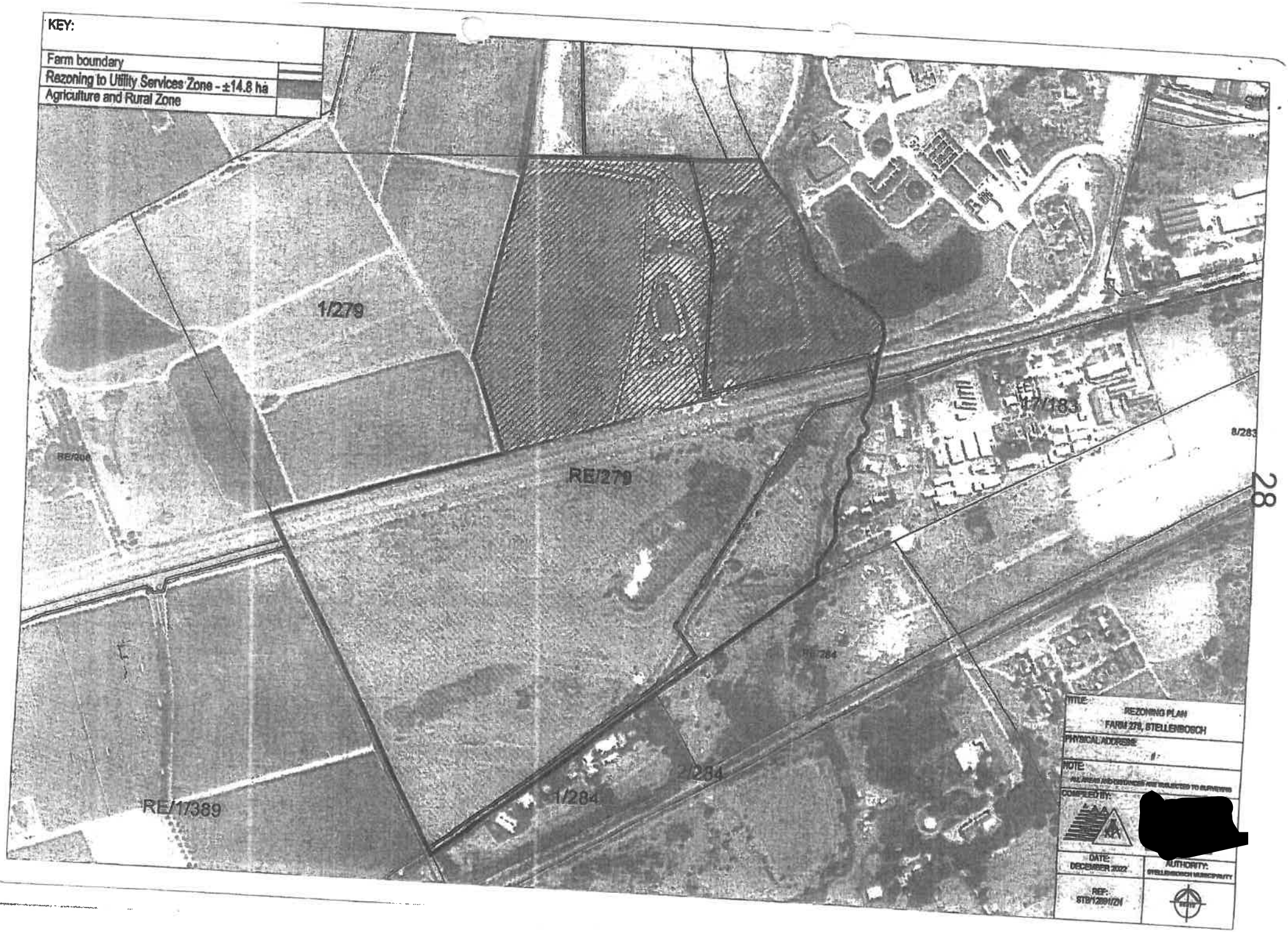
FOR DIRECTOR: PLANNING AND ECONOMIC DEVELOPMENT

16/10/2023
DATE:

[redacted]

APPENDIX 2

Site Development, building and Zoning Plans


KEY:
Farm boundary
Rezoning to Utility Services Zone - ±14.8 ha
Agriculture and Rural Zone
1/279
RE/279
7/183
8/283
RE/17389
1/284
2/284
TITLE:
REZONING PLAN
FARM 279, STELLENBOSCH
PHYSICAL ADDRESS:
NOTE:
COMPILED BY:
DATE:
DECEMBER 2022
AUTHORITY:
STELLENBOSCH MUNICIPALITY
REF:
STB/12691/ZN

APPENDIX 3
Applicant's Motivation

MOTIVATIONAL REPORT:

PROPOSED REZONING OF FARM 279, STELLENBOSCH

Our reference: STB/12891/ZN



BID NO: BSM25/23

REVISION 0

Compiled by:

CK RUMBOLL & PARTNERS

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1. INTRODUCTION

CK Rumboll and Partners has been appointed by Stellenbosch Municipality (SM) to undertake an application for the spot rezoning of Farm 279, Stellenbosch, to provide the correct zoning for the existing Material Waste Recovery Facility, a proposed Organic Waste Transfer Station and the oxidation dam of the Waste Water Treatment Works (WWTW). Power of Attorney is attached as **Annexure A.**

2. BACKGROUND & PURPOSE

The airspace / capacity of the Devon Valley landfill site in Stellenbosch, located north of the site, is at the end of its operational lifespan and therefore requires alternative means of waste disposal. The Stellenbosch Municipality requires facilities such as the proposed waste transfer facilities to collect and divert organic waste to comply with the Western Cape Integrated Waste Management Plan (2017-2022).

The site currently consist of the following uses north of the Adam Tas Road; vineyards, a Material Waste Recovery Facility and an oxidation dam from the Waste Water Treatment Works (WWTW), located east of the site. The oxidation dam has been on site since the establishment of the WWTW in the 1900's. The Material Waste Recovery Facility was constructed in 2019. The vineyards on site was leased to Asara Wine farm and will now be the new site of the proposed Organic Waste Transfer Station, as the lease agreement with Asara has been terminated.

During 2020 the process was undertaken to obtain the environmental and heritage approval for the proposed Organic Waste Transfer Station. Environmental Authorisation was obtained on the 28th of April 2021, even though Heritage Western Cape did not support the current site. More detail is available in Section 6 of this document.

The purpose of the awarded tender to CK Rumboll and Partners is to obtain the relevant land use rights for the existing uses of the WWTW oxidation dam, the material waste recovery facility and the proposed Organic Waste Transfer Station, north of the Adam Tas Road.

The purpose of this document is to apply for the following:

- The proposed **rezoning of a portion, ±14.8ha in size, of Farm 279, Stellenbosch,** in terms of *Section 15(2)(a) of the Stellenbosch Municipal Land Use Planning By-Law 2015,* from Agriculture and Rural Zone to Utility Services Zone;

A copy of the application form is attached as **Annexure B.**

3. PROPERTY DESCRIPTION

	Farm 279, Stellenbosch
Extent	41.2096 ha
Registered Owner	Municipality of Stellenbosch
Local Authority	Stellenbosch Municipality
Servitudes	An electric power line servitude and 3m wide pipeline servitude runs over the farm
Current Zoning	Agriculture and Rural Zone
Current Land Use	Vineyards, agricultural offices, oxidation pond from the WWTW and Stellenbosch Material Recovery Facility and Recycling
Coordinates	33°56'53.71"S 18°49'14.02"E
Title Deed	STF8-32/1919 (conveyance certificate)
Title Deed Restrictions	None
SG number	401/1918
Applicable Zoning Scheme	*Stellenbosch Municipality Zoning Scheme By-Law 2019 (PG 8153)*
Borders: North	Farm 280 and Portion 2 of Farm 203
East	RE/183 and Portion 17 of the Farm 183
South	RE/284 and Portion 1 of the Farm 284
West	RE Portion 1 of the Farm 389 and Portion 1 of the Farm 279

Diagram, Conveyancer Certificate and Title Deed are attached as **Annexure C.**

4. LOCALITY

On a Regional level Stellenbosch is located in the Stellenbosch Local Municipal area in the Cape Winelands District. On a Local level the proposed developable area is located south-east (just outside) of the existing built environment, known as the Stellenbosch Waste Transfer Site area. The Adam Tas Road (R310), being a main road through the town and which runs horizontally across the farm, gives access to Farm 279, Stellenbosch, herein after referred to as the site. Locality Map attached as **Annexure D.**

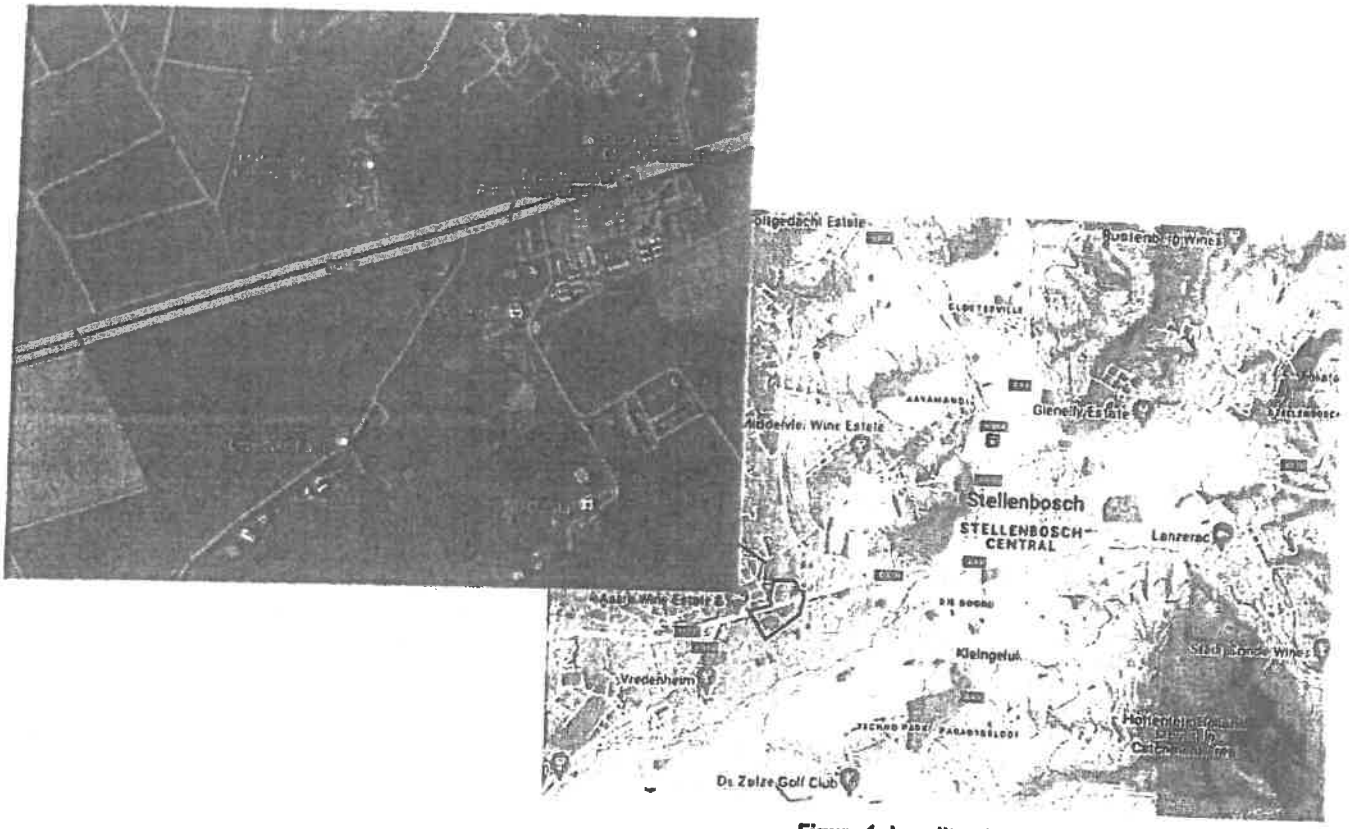


Figure 1: Locality of Farm 279 Stellenbosch

5. SITE DETAILS

5.1. ZONING AND SURROUNDING LAND USES

Farm 279, Stellenbosch, is zoned as Agriculture and Rural Zone according to the Stellenbosch Zoning Scheme Regulations. As mentioned the area of the farm north of the Adam Tas Road is being used by the WWTW and the Material Waste Recovery Facility and the larger portion of the farm south of the Adam Tas Road is being used for agricultural purposes. Thus application will be made to rezone only the northern portion of the farm, creating a split zone over the farm for Utility Services Zone and Agricultural and Rural Zone.

The surrounding uses consist of the Waste Water Treatment Works (WWTW) to the east, the Stellenbosch Waste Disposal / Land fill site to the north, Asara wine farm to the west and the Droëdyke Farm to the south. By allowing the proposed rezoning the Material Waste Recovery Facility (MWRF), Organic Waste Transfer Station (OWTS), Landfill site and the WWTW will create a Waste Management node, by grouping similar uses together.

5.2. PHYSICAL FEATURES

A topographical study has been conducted by JG AFRIKA and 1m contours were plotted. The data gathered and compiled, which includes the contour plan and cadastral map, can be seen in the figure below. It further shows the platform which will be created to accommodate the new OWTS, due to the site's slope from west to east there is a retaining wall on site between the vineyards and the Material Waste Recovery Facility. The proposed OWTS will take this into consideration when construction starts.

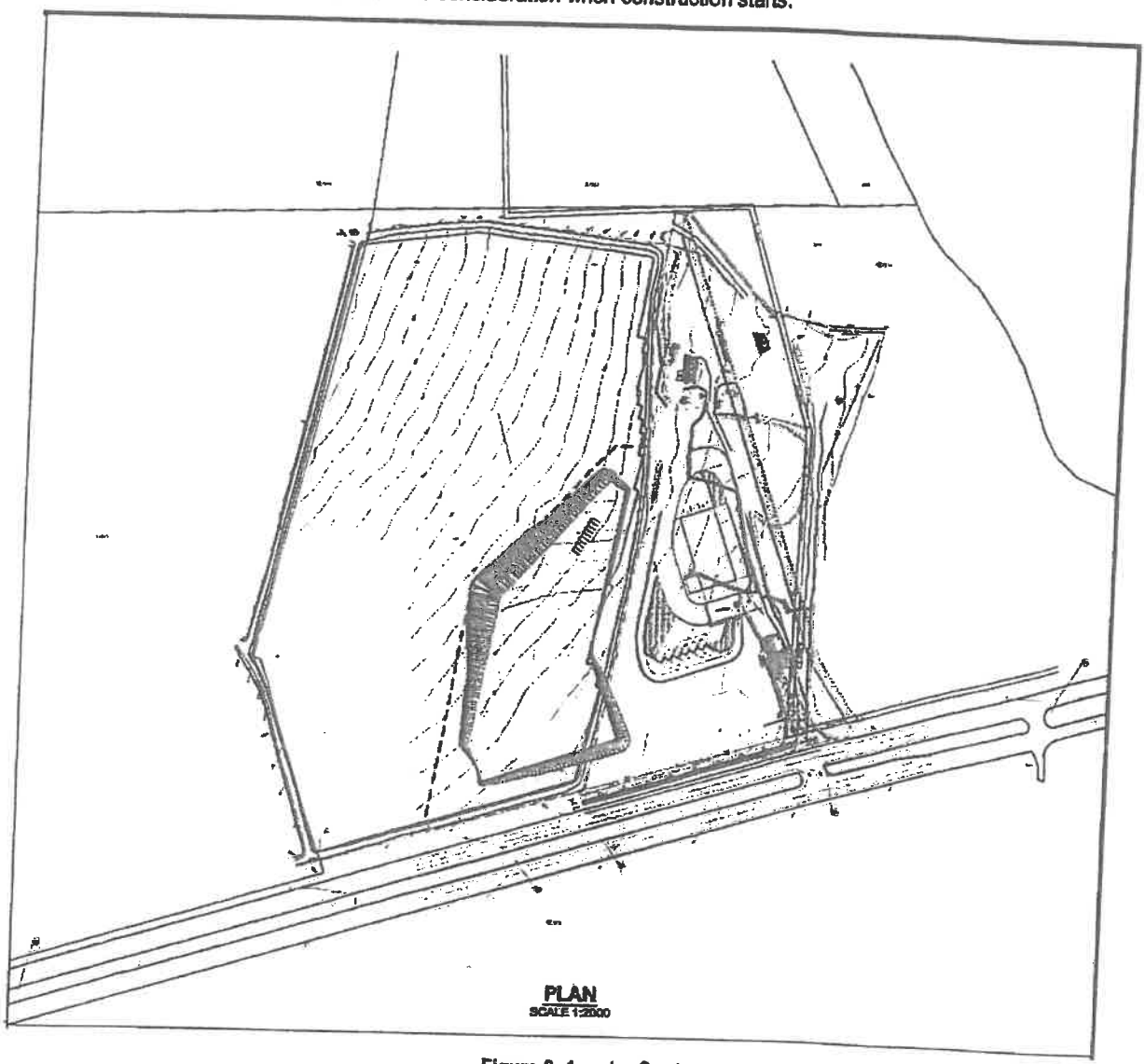


Figure 2: 1 metre Contour map of Farm 279, Stellenbosch

5.3. REAL RIGHTS

A Conveyancers Certificate was obtained for Farm 279 to ensure there are no real rights on the property that will affect the proposed development. The conveyancer confirmed that there are no restrictive title conditions in the Title Deed that will affect the proposed development. There is an electric power line servitude and 3m wide pipeline servitude which runs over the site, however considering the existing and

proposed land uses, the proposal is anticipated to not have an effect on the servitudes. Conveyancer certificates, Title Deeds and Diagrams attached as **Annexure C.**

6. APPROVALS RECEIVED

6.1. Heritage Western Cape

During the Environmental and Heritage process three alternative sites were identified for the OWTS, see figure below.

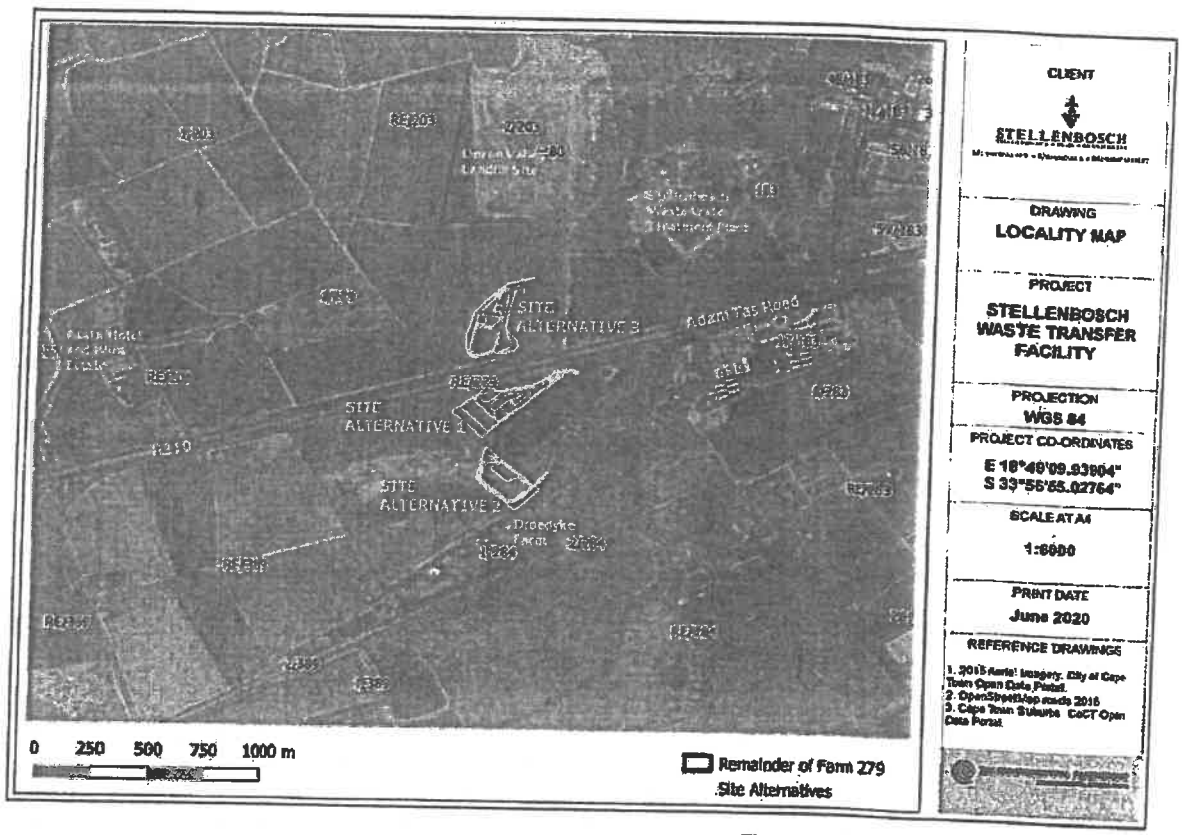


Figure 3: Site Alternatives for the OWTS

Due to the Grade IIIA scenic route classification of the R310 / Adam Tas Road and the high visual impact the OWTS will have on the road, the Heritage Consultant concluded in the Heritage Impact Assessment (HIA) that Alternative Site 2 is the preferred site for the development in terms of impacts to heritage resources.

According to the Final Comment received by Heritage Western Cape, dated 20 November 2020, attached as **Annexure E,** they supported the conclusion made by the Heritage consultant and approved Alternative Site 2. The Municipality as well as the Environmental Consultant did not support Alternative Site 2 and the preferred site was Alternative Site 3. The Environmental Authorisation (EA) will be more fully explained

below, but the EA approved Alternative Site 3 and thus overrules the HWC comment, seeing that they are only a commenting authority and cannot force the non-development of Alternative Site 3. The impact on heritage resources was considered, but the social, economic and environmental advantage of Alternative Site 3 was more favourable. The necessary interventions will be taken to lessen the impact of the site on the heritage resources and scenic route of the R310 / Adam Tas Road.

6.2. Environmental Authorisation

The independent environmental consultant, Environmental Partnership, undertook a Basic Assessment Environmental process to obtain Environmental Authorisation for the proposed OWTS.

The Environmental Authorisation (EA) was granted on the 28th of April 2021, attached as **Annexure F**, supporting the preferred Site Alternative 3. The following conditions was listed in the EA:

Heritage:

- Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape.
- A qualified archaeologist and/or palaeontologist must be contracted where necessary to remove any heritage remains.

Visual impact mitigation:

- The ground level at site boundary must remain natural ground level.
- The facility must not exceed the development footprint.
- Berms and tree planting must be established to reduce the visual impact of the facility from the R310 and sufficient budget must be allowed for the implementation and maintenance of the tree screens.
- The architectural and landscaping guidelines included in the final BAR must be adhered to.

Odour management:

- Waste must not be stored for longer than 24 hours at the facility.
- The readily biodegradable Pure Organic Waste is to be stored in air-tight receptacles, which are frequently emptied and transported to the end-ser.
- And odour control system is to be installed as part of the proposed facility.
- The facility is to be washed down and kept clean on a daily basis.

Storm water management:

- Management of stockpiled material to prevent silt and sediment from washing into roadways and storm drains.
- Covering of stockpiles during heavy rainfall events with polyethylene sheeting or tarpaulins.
- Regular sweeping of roadways.
- Silt fences must be erected to contain sedimentation from or to the site.

- Storage of fuel, paint, cement, oils and other deleterious substances must be stored in secure containers.
- Provision of a spill kit with adequate training for site staff in its use.
- Provision of filter socks for water pumped from the base of excavations to remove silt prior to discharge into storm water management system.
- The storm water management plan must be developed and approved by the municipality.

Reasons for granting the EA for Site Alternative 3 is as follows:

Need and desirability:

- The Municipality requires facilities such as the proposed waste transfer facility to collect and divert organic waste for beneficiation, to comply with the Western Cape Integrated Waste Management Plan (2017-2022). The location of the proposed waste transfer facility is ideally located adjacent to the MWRF and to the south of the landfill site, which also enables the sharing of infrastructure with the MWRF.

Biodiversity and Biophysical Impacts:

- According to the Botanical Opinion, there is no natural vegetation within Site Alternative 3, as this area comprises of cultivated vineyards as well as an old landfill and the current MWRF. Therefore, no impacts on indigenous vegetation are anticipated.
- The Freshwater Impact Assessment also concluded that there are no surface aquatic features (wetlands or other watercourses) on the site. Site Alternative 3 will have no direct impacts on watercourses.

Groundwater impacts:

- According to the Geohydrological Assessment the main aquifer environment at the site is intergranular and fractured. The impact of the proposed waste transfer facility on the aquifer beneath the site is deemed to have a low to medium impact. However, through the implementation of the specialist recommendation and the EMPr, impacts on the aquifer will be mitigated to an acceptable level.

Visual impacts:

- Site Alternative 3 is likely to be more visible, given the elevation of the site, but the view sheds are very similar for all three sites. Although the proposed facility is not visually congruent with the surrounding vineyards and agricultural land, it will be located adjacent to the MWRF and landfill site, which will cluster the waste management activities.
- Additionally, the size and scale of the proposed facility and associated buildings is in keeping with the semi-industrial, retail and other activities, many of which are already visible along this route towards the east.

Heritage:

- Negative impacts:
  - Visual and heritage impacts are anticipated. However, specialist recommendations have been included in the EMPr as mitigation measures.
  - There will be an increase in noise and dust impacts during the construction phase.
- Positive impacts:
  - The proposed development will divert waste away from the landfill site, which will prolong the lifespan of the landfill site.
  - Prolonging the lifespan of the current Devon Valley landfill site will enable the municipality to manage the waste produced by its residents without having to transport the waste outside the municipal boundaries, or create more waste cells.
  - There will be an improvement in the waste management at the landfill site.
  - The proposed development provides opportunities for waste beneficiations by the private sector.
  - Employment opportunities will be created during the construction and operation phases.

6.3. Department of Transport and Public Works

A Traffic Impact Statement (TIS) was prepared by ICE Group (Boland) and submitted to the Western Cape Department of Transport and Public Works in 2011 to obtain access approval from the R301/Adam Tas Road.

The Department of Transport had no objection to allow the new access onto MR177 (R310 / Adam Tas Road), letter dated 17 February 2011, attached as **Annexure G**, subject to the following conditions:

a) Access be limited to the position as indicated in the TIS above using the existing median opening and turning lane on MR177.

b) The proposed gated access to be upgraded to the following standards:
   i. The width of the gate to be at least 6.8m
   ii. The bell mouth to have a minimum radii of 15.
   iii. Drainage to be addressed properly.
   iv. The bell mouth at the access must be provided with a permanent surface (tarred).

c) A minimum vehicle stacking space of 25m is required between the road reserve fence and the proposed gate providing a total vehicle stacking space of 40m measured from the yellow line on the MR177.

d) All detail design plans for the above must be submitted to the Branch for approval.

e) The municipality will be responsible to immediately remove any illegal dumping normally present at such facilities.

f) Strict operating hours for public access to the landfill site be implemented upon the opening of the access.

A new Traffic Impact Statement was done in 2020, discussed in Section 8 of this report, and will be submitted to Department of Transport for comment during the land use application process.

7. THE PROPOSED DEVELOPMENT

7.1. REZONING

The airspace / capacity of the Devon Valley landfill site in Stellenbosch, located north of the site, is at the end of its operational lifespan and therefore requires alternative means of waste disposal. The Stellenbosch Municipality requires facilities such as the proposed waste transfer facilities to collect and divert organic waste to comply with the Western Cape Integrated Waste Management Plan (2017-2022), which aims to divert organic waste from landfills over a 10-year period starting in 2017.

As mentioned, the Material Waste Recovery Facility is located north of the Adam Tas Road and the proposed Organic Waste Transfer Station will be located next to it to create a larger Waste Management Site, including the WWTW to the east and the Devon Valley Landfill site to the north. The purpose of the awarded tender to CK Rumboll and Partners is to obtain the relevant land use rights for the existing uses of the WWTW oxidation dam, the material waste recovery facility and the proposed Organic Waste Transfer Station, north of the Adam Tas Road.

The current zoning of Farm 279, Stellenbosch, is Agriculture and Rural Zone and the existing and proposed uses north of Adam Tas Road does not comply with the primary use of this zone. Application will be made for the following:

- The proposed **rezoning of a portion, ±14.8ha in size, of Farm 279, Stellenbosch,** in terms of *Section 15(2)(a) of the Stellenbosch Municipal Land Use Planning By-Law 2015,* from Agriculture and Rural Zone to Utility Services Zone;

The rezoning map is attached as **Annexure H**, and can be seen in the figure below.

If the proposed rezoning is found favourable by the council and approved, the farm will consist of a split zoning of Agriculture and Rural Zone, south of Adam Tas Road, and Utility Services Zone, north of Adam Tas Road. A subdivision is not proposed at this stage as the property will remain in Stellenbosch Municipality's ownership and there will be no reason to subdivide it at this stage. The zonings will be sufficient to accommodate all the uses on the Farm.

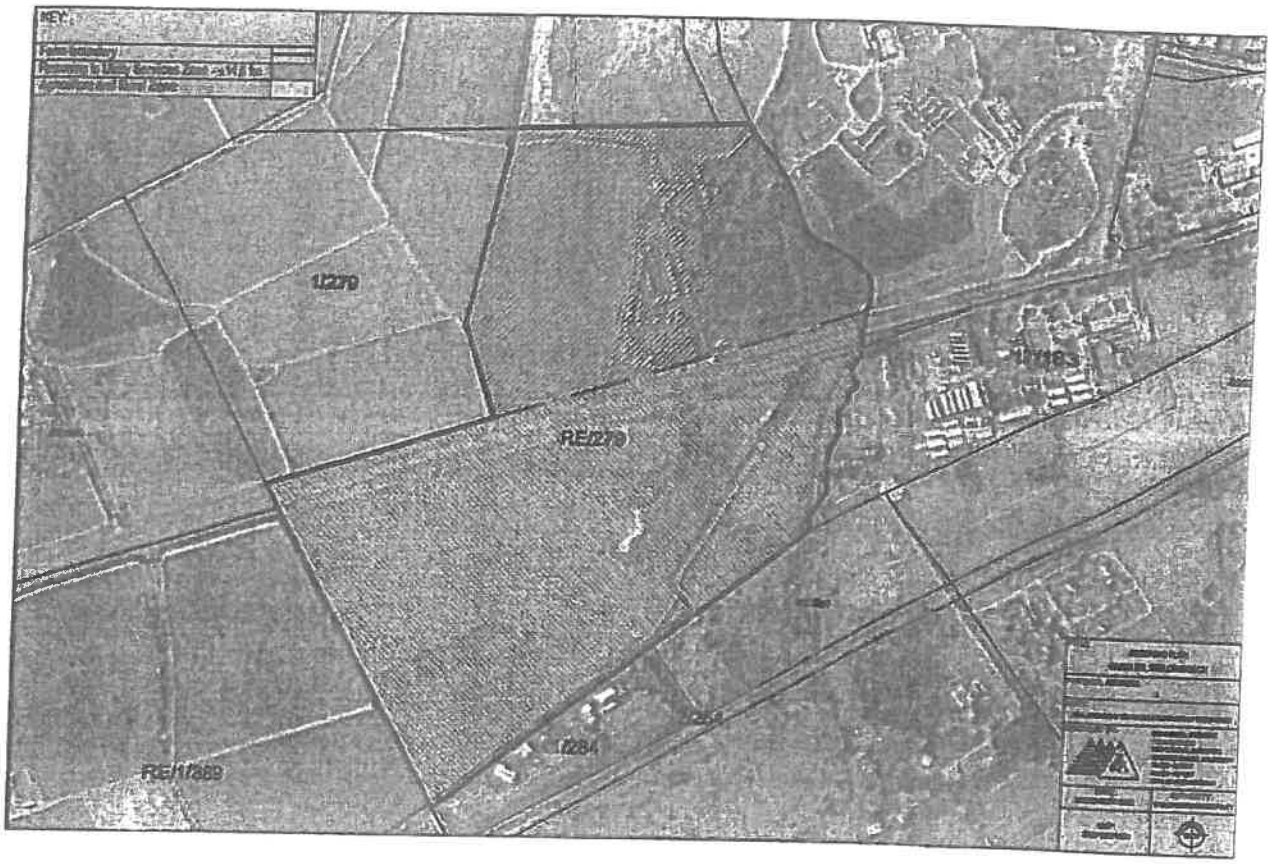


Figure 4: Proposed Rezoning Plan

The proposed Organic Waste Transfer Station will consist of the following components and infrastructure:

- A facility building of approximately 1 200 m², with the capacity to store on day's waste and will comprise of:
    - A container handling / ship handling area
    - A tipping hall/drop-off area and area for future conveyer / compaction loading hall and system
    - Ablution facilities
    - Mess/kitchen facilities
    - Site offices
    - Pure-organic waste storage and transfer station
    - Organic mixed waste storage and transfer station
    - Space of an additional transfer bay
- In addition, the following associated infrastructure will be included:
    - An access ramp to a raised drop off platform which is approximately 3m above the container / ship handling and storage area
    - Internal roads
    - Upgrading of the R310 median

- A parking area
- A fence
- A landscaped berm, for screening purposes, along the southern and western boundaries of the site
- Expansion of existing storm water attenuation pond
- Storm water pipelines and catch pits

The proposed Site Development Plan for the Organic Waste Transfer Station can be seen in the figure below and is attached as **Annexure I.**

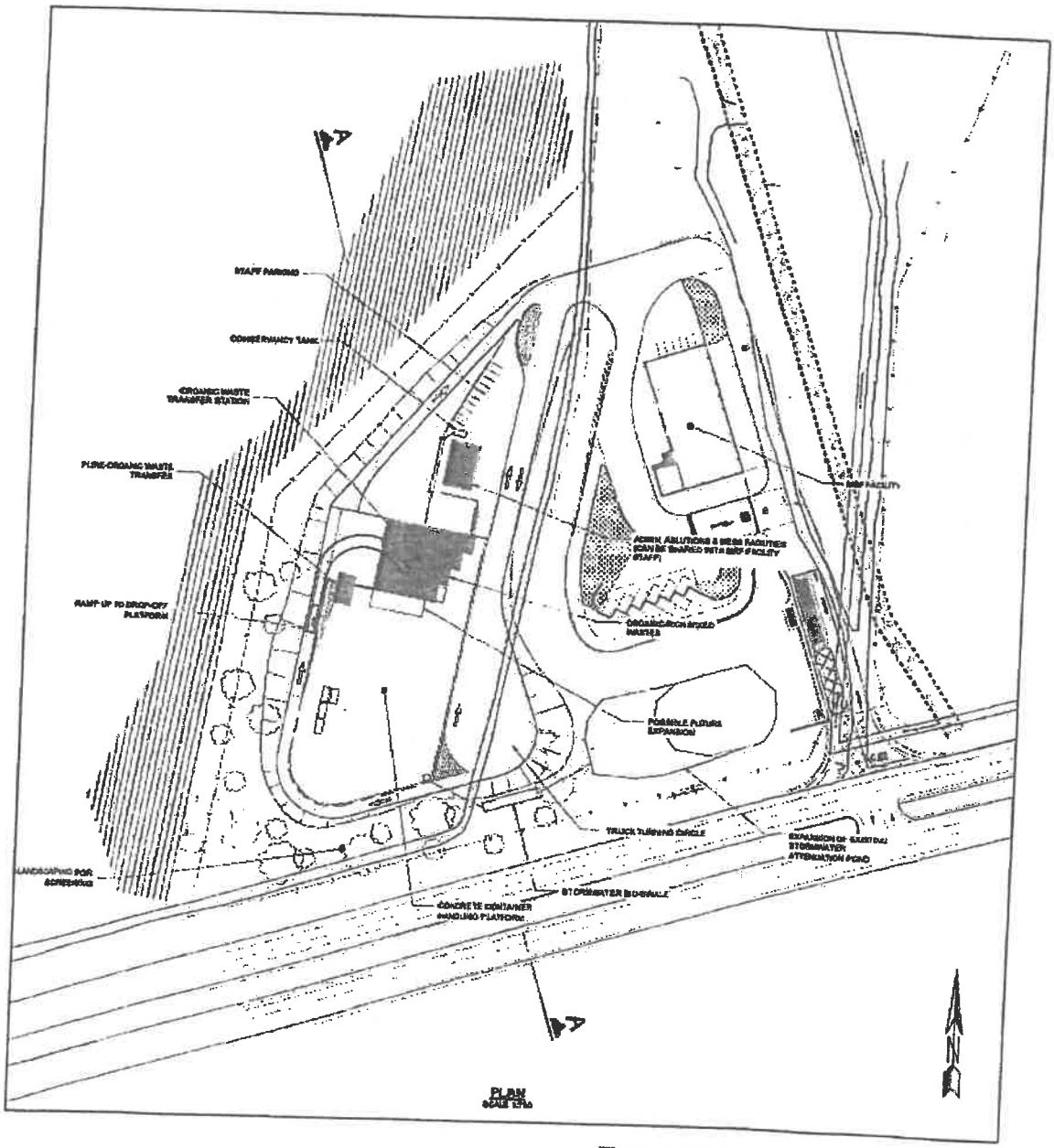


Figure 5: Site Development Plan of the OWTS

7.2. ARCHITECTURAL CONCEPT

Specific architectural guidelines were drafted by Osmond Lange Architects for the Organic Waste Transfer site and is attached as **Annexure J.**

The concept of the OWTS was to use an architecture that is reminiscent of historic Stellenbosch and industrial barn building typologies. A modern pattern façade using historic Stellenbosch building proportions was explored. It has a combination of smooth and rough textures. Smooth precast concrete panels offset with textured bagged brickwork speaks of a rustic wine farm style architecture found in the area.

This façade faces onto one of the main roads into Stellenbosch, being Adam Tas Road, and will create visual interest. Shadows will fall off the pattern relief and create a perception of depth, see 3D modelling in figure below. The truck bay area is treated as a more industrial and contrasted portion of the building and is the working portion of the façade. Dark grey roof sheeting material is proposed to be used to create the envelope.

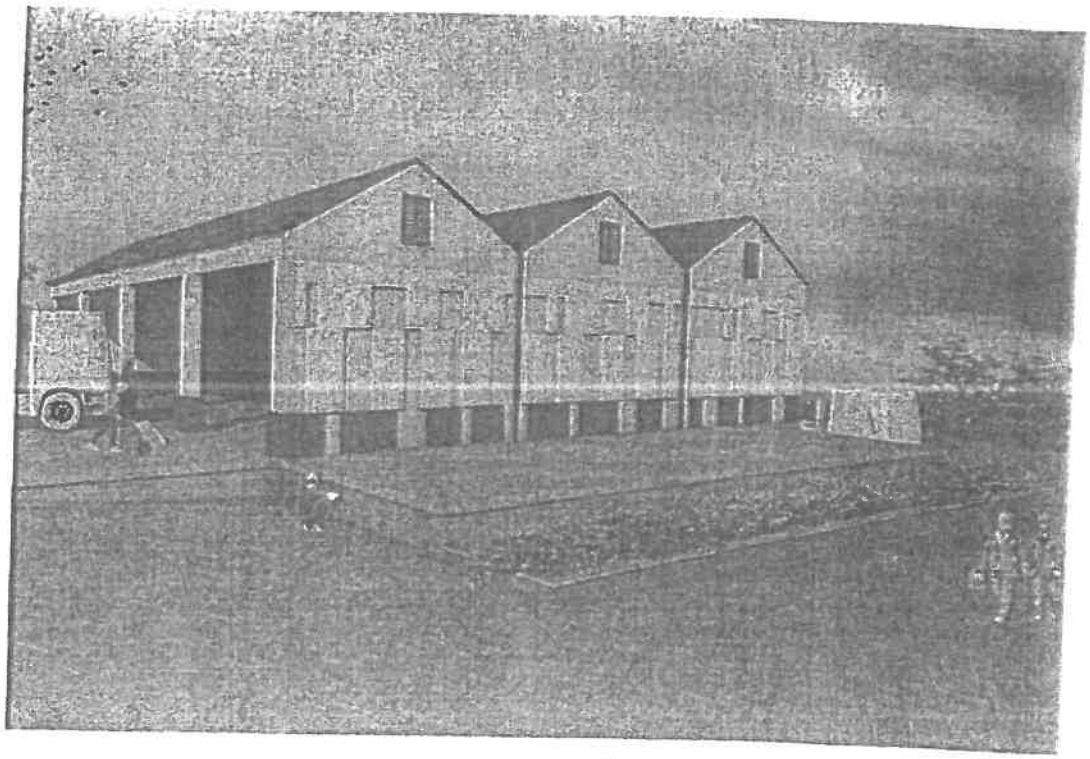


Figure 6: Architectural 3D rendering of building

The roof is modulated into three portions to create a sense of manageable scale. A single massive roof structure would not relate to the architectural language of the area. Louvres and gables are treated simply, but are reminiscent of the gables with punctured openings on some of the traditional buildings in the area, see example of roof below.

8. SPECIALIST REPORTS

8.1. TRAFFIC IMPACT STATEMENT

Compiled by: JG Afrika Pty Ltd – Cape Town
Attached as **Annexure L**

Access to the site is gained directly from the R310 also known as the Adam Tas Road. The Traffic Impact Statement considered the two alternative sites, the preferred site north of the R310 and the alternative site south of the R310. The R310 is a class 1 dual carriageway.

The TIS was completed before the access to the MWRF was completed, but it refers to the approved access that will be shared between the MWRF and the OWTS. The access has since been constructed as a surfaced bell mouth as suggested in the TIS. The facility is expected to generate less than 50 peak hour trips. The site is access controlled and a stacking distance needs to be 12m to the kerb line, in reality the stacking distance is 20m from the curb which is sufficient. Sidewalks has also been constructed next to the internal roads.

The following access recommendations were made:

- A surfaced bell mouth entrance – completed.
- 1.5m sidewalk on at least one side on the internal road – completed and will be provided for the new OWTS roads as well.
- A 28m wide median opening at the R310 – not yet completed.
- Vegetation should ne cutback for sight distance – constantly managed.
- 12m stacking distance – there is a 20m stacking distance.

It should also be noted that the proposed structures will be located outside of the 95m building line restriction next to the R310.

The proposed development is supported from a traffic engineering point of view provided that the recommendations made are adhered to.

8.2. VISUAL IMPACT ASSESSMENT

Compiled by: Belinda Gebhardt

Attached as **Annexure M**

A Visual Impact Assessment (VIA) was done in 2019 for the Refuse Transfer Station with the following findings, with regards to the three alternative sites (for ease of references the preferred site will be referred to as Site Alternative 3, although it is Alternative C in the VIA).:

- The greater landscape has a high scenic and historic value and in the immediate area the landfill, residential suburbs, retail and semi-industrial activities detract from the visual character and quality of the area.
- Visual Absorption Capacity (VAC) is high due to the hilly topography, the existing landfill and the clusters and avenues of trees, which provides excellent screening.
- The visibility of Site Alternative 3 is more visible given the elevation of the site, but the view sheds are very similar for all three sites.
- The proposed facility is more congruent with the existing landfill, electric transfer station and other semi-urban activities in the vicinity. The size and scale of the proposed facility and associated buildings is consistent with other facilities and structures related to the wine industry visibly along the R310. Visual intrusion with the existing townscape / landscape is therefore considered moderate, with Site Alternative 3 being in closer proximity to similar visual elements but more visible.
- Most significant visual risks or impacts include:
    - The impact of construction and particularly vegetation clearing, which was rated as a medium-low impact with mitigation.
    - The impact on the physical landscape form, which was rated as a very low.
    - Visual impact of the buildings and associated infrastructure was rated medium and medium-low impact with mitigation.
    - The cumulative visual impact – visually incongruent elements outside the urban edge can lead to the visual fragmentation of the Winelands landscape. The site is locate close to the existing landfill site and other semi-industrial types of activities on the outskirts of the urban area and will have a relative small footprint. Therefore, its contribution is relatively limited.
    - Site Alternative 3 is at a higher elevation and likely to be more prominently visible from short sections of the R310. However, grouping the facility with similar activities and sharing infrastructure makes sense and may help to reduce the visually intrusive elements.

- Planted screening along the R310 is important to reduce the visual impact for all three sites and space should be allowed for this and it must be included in the budgeting.
- With effective mitigation all three sites can be considered visually acceptable.

Architectural and landscape concepts were completed in 2020 after the VIA in 2019 and an addendum was added to assess the impact of the concepts. The following assessment was made after assessing the additional information:

- Site Alternative 3 is still the preferred alternative with least impact.
- Site Alternative 3 is likely to be more visible from sections of the R310. However, grouping the facility with similar activities and sharing infrastructure does curtail the visual clutter from sprawling into the landscape.
- The proposed architectural guidelines and landscaping plans will help to reduce the visual impact of the facility on the landscape and should be included as conditions of approval for any of the alternatives.

8.3. ENGINEERING REPORT

Compiled by: JG Afrika Pty Ltd – Cape Town
Service Report and Service confirmation attached as **Annexure N.**

The engineering report assessed the design, accessibility and impact on services of four sites (for ease of references the preferred site will be referred to as Site Alternative 3, although it is Alternative D in the engineering report). The proposed Organic Waste Transfer Site will have the following impact on services:

Civil services

Site Alternative 3 will connect to the existing services networks constructed during the Material Waste Recovery Facility development.

All storm water sun-off from the external areas of the site will be controlled on-site. Contaminated storm water areas will be directed inwards towards catch pits. The catch pits will discharge the contaminated storm water to treatment areas, which will be treated to an acceptable standard and then discharged to the new storm water channel that connects to the MWRF storm water system.

Electrical and telecommunications services

The current MWRF development adjacent to the proposed Site Alternative 3 means that there will be an electrical grid connection at the entrance, which will also serve the OWTS. It is assumed that the OWTS will also piggy-back on the MWRF telecommunication infrastructure.

Service availability

Confirmation was received for the following service capacity:

- Water – Anticipated water demand < 1000 litres per day. A higher pipe diameter was constructed for both the MWRF and the OWTS.
- Sewer – Estimated generation < 1000 litres per day to conservancy tanks. There is an existing conservancy tank located at the public drop-off which can be expanded to accommodate additional flows indicated.
- Electrical connection – Single phase electrical connection is needed. The substation on site can accommodate an additional single phase electrical connection.

9. PLANNING POLICY

PROVINCIAL POLICY CONTEXT

The **Western Cape Provincial Spatial Development Framework (PSDF)** was approved and published in March 2014. The main guiding principle on which the PSDF is based is spatial justice, sustainability and resilience, spatial efficiency, accessibility, quality and liveability.

The PSDF supports and contributes to the National Development Plan (NDP) of 2012 which strives to eliminate poverty and reduce inequality by creating jobs and livelihoods, transform urban spaces, expand infrastructure and provide capable public services. The PSDF further supports the OneCape 2040 initiative on the following key transition areas of the OneCape vision:

- Integrated neighbourhoods and upgrading the built environment
- Integrated services planning and provision
- Design and produce settlements that addresses resource scarcity
- Healthy, accessible, liveable, multi-opportunity communities

The proposed development of the Organic Waste Transfer Station should focus on the integration with the surrounding areas to create integrated sustainable uses/nodes. The design of the development must incorporate the use of the natural fall of the land and incorporate service-effective waste transfer facilities to ensure the sustainable use of service resources.

The following PSDF's key transitions (p. 32) are relevant to the proposed development of the Organic Waste Transfer Station:

- Develop mixed-use and compact settlements through competitiveness, social inclusion, quality of life, efficient delivery of affordable services and resilience to environmental hazards and human safety – *with the increased strain on landfill sites, the development offers a waste transfer service that will allow for efficient services which can accommodate the capacity of the town in terms of*

recycling and organic waste. Further the facility is placed to cluster with similar uses to ensure compact development;

- Increase densities in appropriate locations aligned with resources and space economy – *with the Stellenbosch town being the main focus point of development in the Stellenbosch Area, increased pressure will be put on services especially with the growing number of people. The proposal offers an alternative to relieve pressures which are put on landfill sites;*
- Integration of complementary land uses – *the site is bordered by Waste Water Treatment Works to the east and the landfill site to the north which makes the proposal complimentary with surrounding land uses especially since an oxidation dam of Waste Water Treatment Works and the MWRF is situated on site;*
- Cluster activities and promote urban settlements rather than suburban settlements – *the development includes the cluster of the MWRF, the proposed organic waste transfer station and the oxidation dam;*

The WCSDF indicated the following in terms of the built environment and Solid Waste:

"Between 2001 and 2010 the volume of waste generated in the W Cape increased by some 18% per annum, far exceeding the rate of population and economic growth. 70% of the province's waste is generated in Cape Town Metro, but its relative contribution is falling. There are 193 operational facilities, including 92 general waste disposal sites, 54 drop-offs, 15 transfer stations and 13 materials recovery facilities. Whilst 6 new regional waste disposal sites are planned, securing suitable land is proving difficult and costs are prohibitive. Intermediate storage, sorting and recovery facilities offer opportunities for recyclable waste to be diverted out of the waste stream. Vissershok and the PetroSA facility next to Mossgas are the only sites used for hazardous waste disposal, and only 3 incinerators are operational. Whilst the challenge varies across the province, the shortage of landfill space is a common problem"

In terms of Solid Waste, the proposed development is precisely the type of development needed to alleviate the current and increasing strain waste operational facilities are experiencing in the Western Cape.

The **Western Cape Integrated Waste Management Plan (IWMP) (2017-2022)** was approved and published in March 2017. According to Goal 3: Effective and efficient utilisation of resources in the IWMP municipalities should divert 50% of organic waste streams away from landfill sites by 2022 and a complete ban on organic waste disposed at landfill sites by 2027. The proposed OWTS will provide in this initiative to comply with the IWMP.

The directorate of Waste Management Western Cape further explained in a circular letter, dated 19 July 2018, at the current rates of disposal to landfills, organic waste causes a variety of significant negative

financial, social and environmental impacts. For instance, the high volume of organic waste occupies increasingly scarce landfill airspace, and it produces leachate which requires expensive landfill containment barriers to mitigate against surface and groundwater contamination. It results in high logistics costs, particularly because the health risks, including smell and vectors, require frequent trips for collection and disposal.

The diversion of organics form landfills, and therefore the reduction in volumes being disposed of in landfills, would significantly extend the lifespan of existing and future landfills. Financial savings would also be made through the possibility of downscaling the design of containment barriers. The resulting reduction in methane generation would assist with meeting South Africa's national greenhouse gas reduction targets and obligations.

The proposed development of the Organic Waste Transfer Station needs to incorporate all said transitions and policies within the layout design which focus on clustering of uses, efficient societies and provide in the needs of the beneficiary group. With the focus on sustainable and efficient development, providing the necessary bulk infrastructure and services is vital to the sustainable growth of the town and province; hence the proposal is within the development ideals of the Western Cape SDF.

LOCAL POLICY CONTEXT

The **Stellenbosch Spatial Development Framework (SDF)** was approved in 2019 and guides all future development in the municipal area.

Stellenbosch is identified as a potentially significant centre for economic activity and residence within the metropolitan region and SM (as identified in the GCM RSIF). The SDF stipulates that Stellenbosch Town will remain the major settlement within the municipality; a significant centre comprising extensive education, commercial and government services with a reach both locally and beyond the borders of the municipality, tourism attractions, places of residence, and associated community facilities. The town has grown significantly as a place of study, work, and tourism. With the increase of the local population in the Stellenbosch area, the volume of the waste generated and disposed of is exacerbating the rate at which the municipal landfill site will reach full capacity.

As seen in the figure below, a portion of Farm 279, Stellenbosch, is located within the urban edge of Stellenbosch and another portion falls outside of the urban edge. On the Stellenbosch land use proposal map Farm 279, the portion outside of the urban edge where the proposed Organic Waste Transfer Station will be located, is earmarked for graded landscapes to be protected. The portion inside the urban edge is earmarked for green areas to be retained, which promotes the existing use of the oxidation dam.

The Stellenbosch Municipality is currently in the process of amending the Stellenbosch Spatial Development Framework and thus a request was made to amend the urban edge of Stellenbosch. Although utility services can be accommodated outside the Urban Edge of a town, it would be preferable to include these type of uses within the urban edge, seeing that it is seen as urban built-up area. The figure below illustrates the Proposed Urban Edge Amendment as a red dashed line. It is was further proposed to **remove the Sensitive Scenic Route annotation** on this area of the farm, seeing that the motivation through this document shows that this area has site specific circumstances that promotes the clustering of the waste management uses together and that the screening next to the road will be sufficient to mitigate any visual impact.

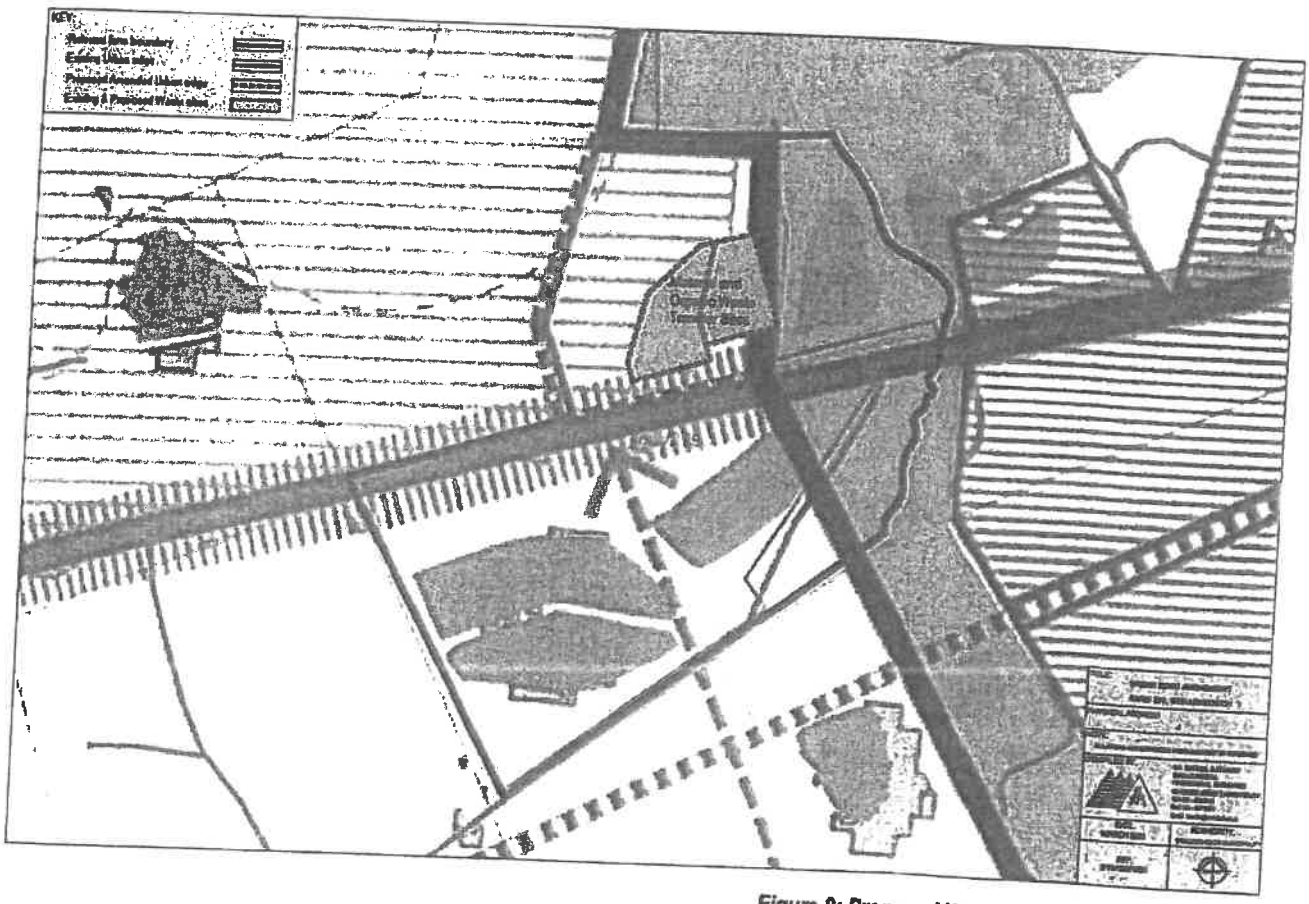


Figure 9: Proposed Urban Edge Amendment

Although a request was submitted to amend the urban edge of Stellenbosch to include the waste management site in total, at the time of the submission of this application the Stellenbosch SDF 2023 has not been approved yet. It is thus the purpose of this application to request that the proposed application for rezoning be viewed as a site specific development in accordance with Section 22(2) of the Spatial Planning and Land Use Management Act, 2013. As motivated and described in this document, the proposed rezoning is to accommodate the existing facilities of the WWTW oxidation dam, the Material Waste Refuse Facility

and the proposed Organic Waste Transfer Station. These facilities are located directly south of the Devon Valley landfill site and west of the Stellenbosch Waste Water Treatment Works, of which both named facilities are located within the urban edge. Al these facilities will create a Waste Management Node, by grouping together similar uses, which supports the site specific circumstances of the development.

In terms of Stellenbosch Municipal Area as a whole, the SM Engineering Services Department supports the focus on Stellenbosch and Klapmuts as priority development areas as appropriate bulk service networks exist which could be expanded upon. One of the policy imperatives of the SDF is to minimise waste and increase recycling in the Municipality. The proposal is exactly for the expansion of a bulk infrastructure service considering the current and future development pressures on the greater Stellenbosch Area.

The **Adam Tas Corridor Local Spatial Development Framework**, September 2019, identifies the development potential next to Adam Tas Road and the future growth next to this corridor. Farm 279 is however outside this area and there are no development suggestions made for the area, see figure below. Even if the area is not included in the Adam Tas Corridor Proposals, it should also be noticed that the development proposals in the document suggest significant infill development, of which the increase in uses and population will further put strain on the landfill site. The Organic Waste Transfer Station will ensure there is sufficient waste capacity for the future development of the Adam Tas Corridor.

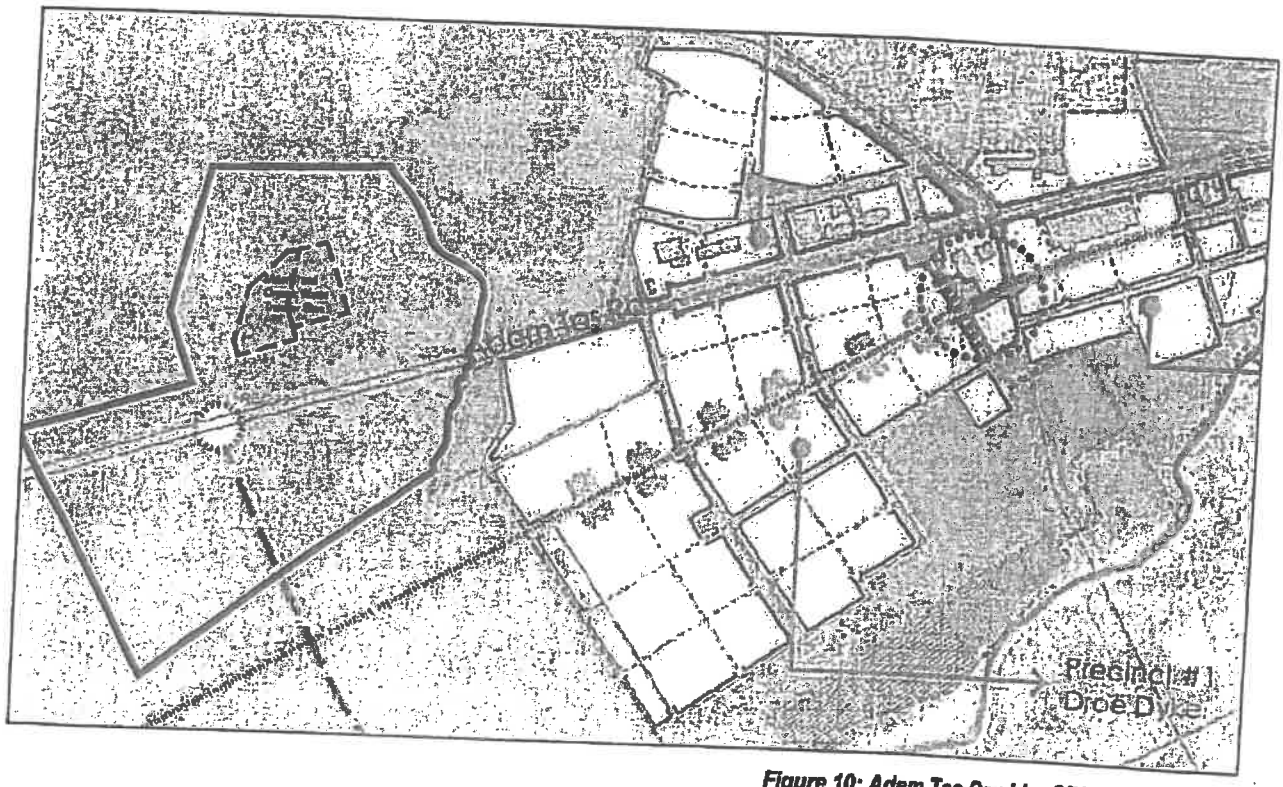


Figure 10: Adam Tas Corridor SDF Proposal

10.PRINCIPLES FOR LAND USE PLANNING

The criteria for the assessment of application as per Chapter VI Section 59 of the Land use Planning Act, 2014 (Act 3 of 2014) and Chapter 2 Section 7 of the Spatial Planning Land Use Management Act, 2013 (Act 16 of 2013) are addressed as follows:

- **Spatial Justice**

  The proposed OWTS supports the spatial and development goals of the Western Cape as well as the local municipality's need to increase waste capacity for the region. Although outside the urban edge, the development supports an urban development similar to the neighbouring structures. The proposed development will supply the necessary services for the town and region in terms of waste capacity.

  The new facility will also create job opportunities to assist in the management of the facility. It will further support previously disadvantaged communities by creating jobs and providing the necessary services to create an integrated human settlement.

- **Spatial Sustainability**

  The proposed development will create a spatially compact and resource-efficient waste management area together with the other surrounding uses. The development will further support the municipal financial sustainability on the short, medium and long term, and will not be a financial burden. The location of the development will also optimise the use of existing infrastructure developed for the MWRF.

  Although the development will remove agricultural vineyards for the building the impact on agricultural viability is less than the impact of the facility will have on natural vegetation. The facility will not be limited to provide a service to only a single income group, but to all income groups. It further supports integration with the existing facilities.

- **Efficiency**

  The development will ensure the optimisation of existing infrastructure, rather than require the development of additional infrastructure. The development will further support the efficient functioning of the region by providing a much needed waste service to an already pressured system. By creating the additional facility for organic waste transfer it secures further future developments in Stellenbosch and the region.

- **Principles of good Administration**

  The proposed development will be subject to a public participation process whereby all interested and affected individuals and departments will be approached to comment. The decision making process will be guided by statutory land use planning systems.

- **Spatial resilience**

  The development will not limit the resilience of the area or any surrounding community. It supports growth and the provision of basic services to the community. The proposed rezoning will also allow the opportunity for other similar uses north of Adam Tas Road if approved and supported by the Municipality.

11.CONCLUSION

The proposed application for the spot rezoning of Farm 279 to accommodate the said waste management site, complies with the goals of the Local and Provincial Planning Policies with regards to service provision as follows:

- The implementation of this proposed development will effectively integrate with the existing and waste management area to ensure the sustainability of the proposal and contribute to the viability of the town.
- The development supports and complies with the Western Cape Provincial Spatial Development Framework and due to the site specific circumstances will not be inconsistent with the Stellenbosch SDF.
- The development also supports and comply with the criteria for the assessment of an application as per the Land Use Planning Act, 2014 (Act 3 of 2014) and the Spatial Planning Land Use Management Act, 2013 (Act 16 of 2013).
- The development is accessible and there will be no major negative effects on the surrounding built environment, natural environment or economic environment.
- The development improves access to services create a sustainable human settlement.
- The proposed development represents a spatially compact development that fully considered the opportunities provided by the site and addressed the potential impacts and restrictions that was identified by various specialist studies with the required mitigation measures to ensure sustainable development.
- This development will promote smart growth by ensuring the efficient use of land and infrastructure.

This office supports the proposed development of the Organic Waste Transfer Station, providing for better and more effective utilisation of land, infrastructure and services within the designated area with a design concept to effectively address the visual impact of the development. In light of the above, we herewith respectfully request the application to be consider favourably.

Zanelle Nortjé

For CK Rumboll and Partners

July 2021v3

STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

DIRECTORATE: PLANNING & ECONOMIC DEVELOPMENT

www.stellenbosch.gov.za/planning-portal/

SUBMIT COMPLETED FORM TO landuse.applications@stellenbosch.gov.za

LAND USE PLANNING APPLICATION FORM

(Section 15 of the Stellenbosch Municipal Land Use Planning By-Law (2015) and other relevant legislation)

KINDLY NOTE: Please complete this form using BLOCK letters and ticking the appropriate boxes.

PART A: APPLICANT DETAILS

First name(s)	ZANELLE				
Surname	NORTJE				
Company name *(if applicable)*	CK RUMBOLL AND PARTNERS				
Postal Address	16 RAINIER STREET				
	MALMESBURY		Postal Code	7300	
Email	zanelle@rumboll.co.za				
Tel	022 482 1845	Fax		Cell	0767211725

PART B: REGISTERED OWNER(S) DETAILS *(if different from applicant)*

Registered owner(s)	STELLENBOSCH MUNICIPALITY				
Physical address	PLAIN STREET				
	STELLENBOSCH		Postal code	7600	
E-mail	Clayton.Hendricks@stellenbosch.gov.za				
Tel	0218088224	Fax		Cell	0731344912

PART C: PROPERTY DETAILS *(in accordance with title deed)*

Erf / Erven / Farm No.	FARM 279	Portion(s) if Farm	REMAIND.	Allotment area	STELLENBOSCH		
Physical Address	ON THE ADAM TAS ROAD BEFORE STELLENBOSCH FROM THE WEST						
Current Zoning	AGRICULTURE AND RURAL ZONE	Extent	41.2096 HA	Are there existing buildings?	Y	N	
Applicable Zoning Scheme	STELLENBOSCH MUNICIPALITY ZONING SCHEME BY-LAW 2019						
Current Land Use	AGRICULTURE AND MATERIAL WASTE STATION						

Title Deed number and date	T	STF-32/1919									
Attached Conveyance's Certificate	Y	N	Any Restrictions ito the Attached Conveyance's Certificate? If yes, please list condition(s) as per certificate								
Are the restrictive conditions in favour of a third party(ies)?	Y	N	If Yes, list the party(ies):								
Is the property encumbered by a bond?	Y	N	If Yes, list the bondholder(s):								
Is the property owned by Council?	Y	N	If Yes, kindly attach a power of attorney from the Manager Property Management								
Is the building located within the historical core?	Y	N	Is the building older than 60 years?	Y	N	Is the application triggered by the National Heritage Resources Act, 1999 (Act 25 of 1999)[1]	Y	N	If Yes, kindly indicate which section are triggered and attached the relevant permit if applicable.		
Any existing unauthorized buildings and/or land use on the subject property(ies)?				Y	N	If yes, is this application to legalize the building / land use[2]?			Y	N	
Are there any pending court case(s) / order(s) relating to the subject property(ies)?				Y	N	Are there any land claim(s) registered on the subject property(ies)?			Y	N	

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

PART E: LAND USE PLANNING APPLICATIONS AND APPLICATION FEES PAYABLE

APPLICATIONS IN TERMS OF SECTION 15 OF THE STELLENBOSCH MUNICIPAL LAND USE PLANNING BY-LAW (2015)

Tick	Type of application: *Cost are obtainable from the Council Approved tariffs*
X	15(2)(a) rezoning of Land
	15(2)(b) a permanent departure from the development parameters of the zoning scheme
	15(2)(c) a departure granted on a temporary basis to utilise land for a purpose not permitted in terms of the primary rights of the zoning applicable to the land
	15(2)(d) a subdivision of land that is not exempted in terms of section 24, including the registration of a servitude or lease agreement
	15(2)(e) a consolidation of land that is not exempted in terms of section 24
	15(2)(f) a removal, suspension or amendment of restrictive conditions in respect of a land unit
	15(2)(g) a permission required in terms of the zoning scheme
	15(2)(h) an amendment, deletion or imposition of conditions in respect of an existing approval
	15(2)(i) an extension of the validity period of an approval

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

[2] No application may be submitted to legalize unauthorised building work and or land use on the property if a notice has been served in terms of Section 87(2)(a), and until such time a Section 91 Compliance Certificate have been issued in terms of the Stellenbosch Land Use Planning By-law (2015)

	15(2)(j) an approval of an overlay zone as contemplated in the zoning scheme
	15(2)(k) an amendment or cancellation of an approved subdivision plan or part thereof, including a general plan or diagram
	15(2)(l) a permission required in terms of a condition of approval
	15(2)(m) a determination of a zoning
	15(2)(n) a closure of a public place or part thereof
	15(2)(o) a consent use contemplated in the zoning scheme
	15(2)(p) an occasional use of land
	15(2)(q) to disestablish a home owner's association
	15(2)(r) to rectify a failure by a home owner's association to meet its obligations in respect of the control over or maintenance of services
	15(2)(s) a permission required for the reconstruction of an existing building that constitutes a non-conforming use that is destroyed or damaged to the extent that it is necessary to demolish a substantial part of the building
	15(2)(6) when the Municipality on its own initiative intends to conduct land development or an activity
	15(2)(l) amendment of Site Development Plan
	15(2)(l) Compilation / Establishment of a Home Owners Association Constitution / Design Guidelines

OTHER APPLICATIONS		
	Deviation from Council Policies/By-laws	R
	Consent / Permission required in terms of a title deed	R
	Technical approval in terms of the Zoning Scheme Bylaw, 2019	R
	Other (specify): _____	R
	TOTAL A:	**R**

PRESCRIBED NOTICE AND FEES** *(for completion and use by official)*

Tick	Notification of application in media	Type of application	Cost
	SERVING OF NOTICES	Delivering by hand; registered post; electronic communication methods	R
	PUBLICATION OF NOTICES	Local Newspaper(s); *Provincial Gazette*; site notice; Municipality's website	R
	ADDITIONAL PUBLICATION OF NOTICES	Site notice, public meeting, local radio station, Municipality's website, letters of consent or objection	R
	NOTICE OF DECISION	*Provincial Gazette*	R
	INTEGRATED PROCEDURES	T.B.C	R
		TOTAL B:	**R**
		TOTAL APPLICATION FEES* (TOTAL A + B)	**R**

**** The complete application should first be submitted without the payment of any applicable application fees. Only when satisfied that a complete and accurate application has been submitted, will a proforma invoice be submitted to the applicant with payment instructions. Application fees that are paid to the Municipality are non-refundable and once proof of payment is received, the application will be regarded as duly submitted.***

*****All indigent residents who are registered as such with the Municipality and with proof submitted together with application will be exempted from applicable fees for Permanent Departure applications including but not limited to building lines, coverage, height, bulk, parking. Contact: Indigent.office@stellenbosch.gov.za or 021 808 8501 or 021 808 8579***

****** The applicant is liable for the cost of publishing and serving notice of an application. Additional fees may become applicable and the applicant will be informed accordingly.***

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

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

DETAILS FOR INVOICE	
Name & Surname/Company name (details of party responsible for payment)	**CK RUMBOLL AND PARTNERS**
Postal Address	**PO BOX 211** **MALMESBURY** **7299**
Vat Number (where applicable)	**4400262533**

PART F: DETAILS OF PROPOSAL

Building line encroachment	Street		From	1m	To	0m
	Street		From	m	To	m
	Side		From	m	To	m
	Side		From	m	To	m
	Aggregate side		From	m	To	m
	Rear		From	m	To	m
Exceeding permissible site coverage			From		To	
Exceeding maximum permitted bulk / floor factor / no of habitable rooms			From		To	
Exceeding height restriction			From	m	To	m
Exceeding maximum storey height			From	m	To	m

Consent/Conditional Use/Special Development

To permit .....
in terms of Section.....of the..... Zoning Scheme Regulations

Other (please specify) _____ _____ _____

Brief description of proposed development / intent of application:

The purpose of this document is to apply for the following:

- The proposed **rezoning of a portion, ±14.8ha in size, of Farm 279, Stellenbosch,** in terms of *Section 15(2)(a) of the Stellenbosch Municipal Land Use Planning By-Law 2015,* from Agriculture and Rural Zone to Utility Services Zone;

SEE MOTIVATIONAL REPORT ATTACHED.

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

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

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

PART H: AUTHORISATION(S) SUBJECT TO OR BEING CONSIDERED IN TERMS OF OTHER LEGISLATION

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

SECTION I: DECLARATION

I hereby wish to confirm the following :

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

CK RUMBOLL &
VENNOTE / PARTNERS

PROFESSIONELE LANDMETERS – ENGINEERING AND MINE SURVEYORS – STAD- EN STREEKSBEPLANNERS – SECTIONAL TITLE CONSULTANTS

Datum/Date:**15 December 2022**

Verwysing/Reference: **FQ 25/23 (12891)**

GEREGISTREERDE EIENAAR(S) SE TOESTEMMING – VOLMAG
REGISTERED OWNER'S CONSENT – POWER OF ATTORNEY

Hiermee verleen ek / ons: GALALDINE
Hereby I / we,

die geregistreerde eienaar(s) van eiendom, **Farm 279 Stellenbosch**
registered owners of property

volmag aan Mnre CK RUMBOLL EN VENNOTE om namens my aansoek te doen vir die:
grant power of attorney to Messers CK RUMBOLL AND PARTNERS to apply on my behalf for the:

- X Hersonering/Rezoning
- ☐ Verlenging / Extention
- ☐ Onderverdeling / Subdivision
- ☐ Regstelling van grense / Adjustment of boundaries
- ☐ Afwyking /Departure
- ☐ Wysiging van die goedgekeurde faseringsplan / Amendment of the approved phasing plan
- ☐ Konsolidasie/ Consolidation
- ☐ Vergunningsgebruik / Consent Use
- ☐ Wysiging van Algemene Plan / Amendment to General Plan
- ☐ Aanpassing van Terreinplan / Amendment of Site Development Plan
- ☐ Servitute registrasie / Servitude registration
- ☐ Bouplan in te dien / loge of building plan
- ☐ Sluiting van pad / Road closure
- ☐ Verkryging van bouplanne by munisipaliteit / Obtaining building plans form relevant municipality

van bogenoemde eiendom.

of said property.

Geteken: .....
Signed:

.....

Datum / Date: 31/04/2023

VENNOTE / PARTNERS:
IHJ Rumboll PRL (SA), BSc (Surv), M.I.P.L.S. and AP Steyl PrL (SA), BSc (Surv), M.I.P.L.S.

ADDRESS/ ADRES: accounts@rumboll.co.za / PO Box 211 / Rainierstr 16, Malmesbury, 7299
MALMESBURY (T) 022 482 1845 (F) 022 487 1661 VREDENBURG (T) 022 719 1014

AKTEBESORGERSERTIFIKAAT

Ek, die ondergetekende

JAN HENDRIK POTGIETER

in my hoedanigheid as aktebesorger praktiserende te Piet Retiefstraat 13, Malmesbury sertifiseer hiermee dat ek 'n soektog gedoen het in die Akteskantoor, Kaapstad ten opsigte van die volgende eiendom, te wete:

Die Plaas Veldwachters Rivier Outspan South Nommer 279 Stellenbosch, in die Munisipaliteit en Afdeling van Stellenbosch, Provinsie Wes-Kaap;

GROOT 41,2096 (Een en Veertig komma Twee Nule Nege Ses) Hektaar

Gehou kragtens Transportakte Nommer STF8-32/1919

(hierna genoem "Plaas Nr 279")

ten einde vas te stel of voormelde transportakte of enige vorige transportaktes ten opsigte van Plaas Nr 279 voorwaardes bevat wat die hersonering na Nutssone (Utility Zone) vir doeleindes van 'n Vullisoordragterrein (Waste Transfer Site) ten opsigte van Plaas Nr 279, verbied.

Geen voorwaardes kon gevind word wat die hersonering van Plaas Nr 279 na Nutssone (Utility Zone) vir doeleindes van 'n gebruik as 'n Vullisoordragterrein (Waste Transfer Site), verbied nie.

GEDATEER TE MALMESBURY OP 16 NOVEMBER 2022.

J H POTGIETER
TRANSPORTBESORGER

GOD OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, AND OF
E BRITISH DOMINIONS BEYOND THE SEAS, KING, DEFENDER OF THE FAITH,
PEROR OF INDIA.

WHEREAS, under and by virtue of the provisions contained in the
th section of the Act No.15 of 1887 of the Cape of Good Hope,
titled an "Act for regulating the manner in which the Crown Lands
the Colony shall be disposed of", the

COUNCIL OF THE MUNICIPALITY OF STELLENBOSCH

entitled to a grant of a certain piece of land situated in the
vision of Stellenbosch;

NOW THEREFORE THESE PRESENTS WITNESS that there is hereby
anted by the Governor-General of the Union of South Africa unto
e said COUNCIL OF THE MUNICIPALITY OF STELLENBOSCH, the
id piece of land named "Veldwachters Rivier Outspan South",
asuring sixty eight morgen five hundred and forty square roods,
8 morgen 540 square roods), situated as aforesaid and represented
d described in the diagram hereunto annexed, subject to the
llowing conditions:-

That the Government shall have the right at all times of resuming for public purposes such portion or portions of the land hereby granted as may not have been alienated by the Town Council. In the event of resumption as aforesaid no compensation shall be payable by the Government except in respect of substantial improvements of a permanent nature erected or made on the land resumed whether by the Town Council or by any other person or body acting under the express authority of the said Council.

That all roads and thoroughfares over the land whether or not described in the plan or diagram thereof, shall remain free and uninterrupted unless closed, diverted, or altered by competent authority.

That all rights to minerals, mineral products, mineral

hereafter have or be entitled to obtain under or by virtue of any law relating to the prospecting, digging, mining, or exploitation of minerals, mineral products, mineral oils, precious stones, precious or base metals on or under the land hereby granted, which rights shall not be impaired or in any way affected by the title deed.

IV. That the land shall be subject to all rights and servitudes which now affect, or at any time hereafter may be found to affect the title of the land hereby granted, or which may be binding on the Government in respect of the said land as at the date hereof.,

with full power and authority henceforth to possess the same in perpetuity, subject, however, to all such duties and regulations as are either already or shall in future be established with regard to such lands.

Thus done and signed by the Secretary for Lands at Pretoria on the 31st day of October 1912, duly authorized thereto in that behalf by the Governor-General, in terms of the Crown Land Disposal (Execution of Deeds) Act, 1911.

Registered V 3 F.B. Folio 50
Deeds Registry
Cape Town
20 Nov. 1912
Clerk in charge.

SECRETARY FOR LANDS.

DEEDS

Ex. No. 401 74/1918

Annexure to Stellenbosch F/A Vol. 8

Folio 32.

ISSUED FOR INFORMATION ONLY

ALLEEN VIR INFORMASIE DOELEINDES UITGEREIK

ENDORSEMENT IN TERMS OF SECTION 31 (6) OF ACT No. 47 OF 1937 (AS AMENDED).

ENDOSSEMENT KRAGTENS ARTIKEL 31 (6) VAN WET Nr. 47 VAN 1937 (SOOS GEWYSIG).

The hereinmentioned property ... has been expropriated by ... in terms of ... kragtens Vide Notice of expropriation No. ... filed as exprp. caveat ... cellaseer as ontelemingsgewing ... Lasseer ...

DEEDS OFFICE,
ARTEKANTOOR,
CAPE TOWN.
KAAPSTAD.

15 -5- 1968

REGISTRAR OF DEEDS.
REGISTRATEUR VAN AKTES.

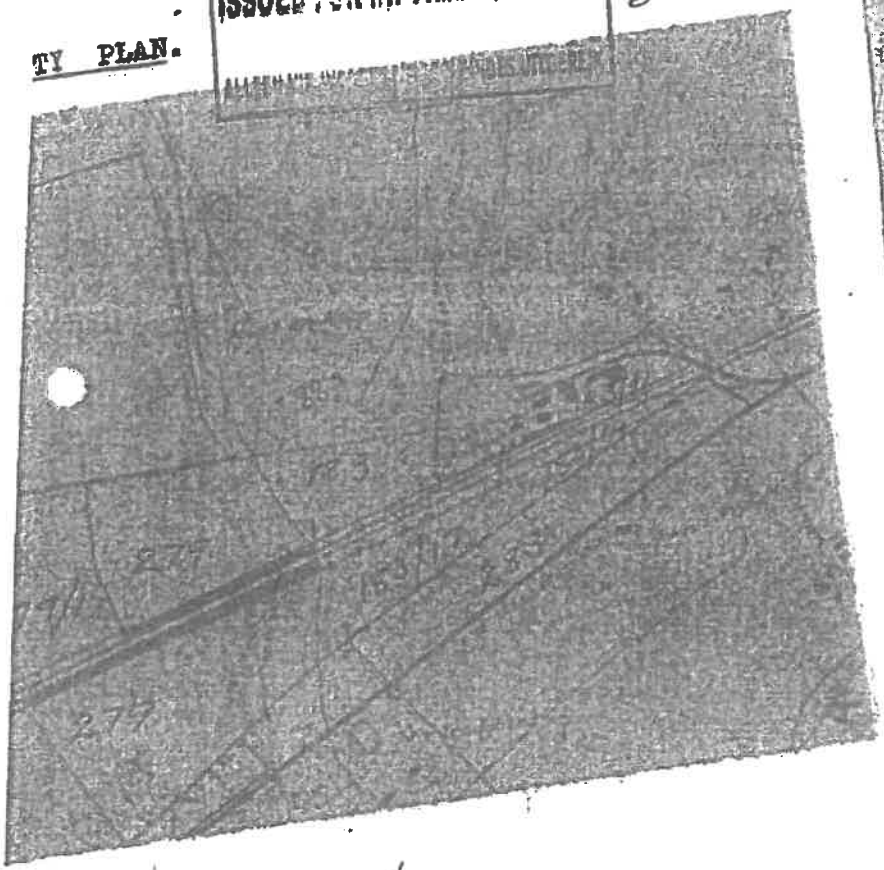
plans in duplicate filed
planne in duplikaat gedeponeer

Comm

1-2/2

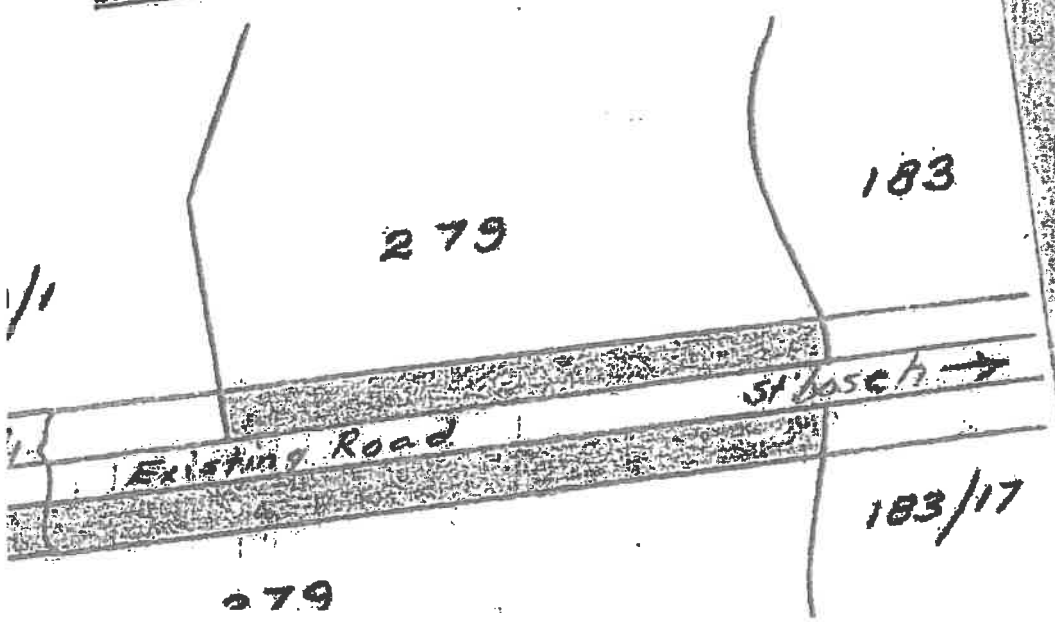
ISSUED [illegible] ONLY

TY PLAN.



Ef. Cov. 359/68

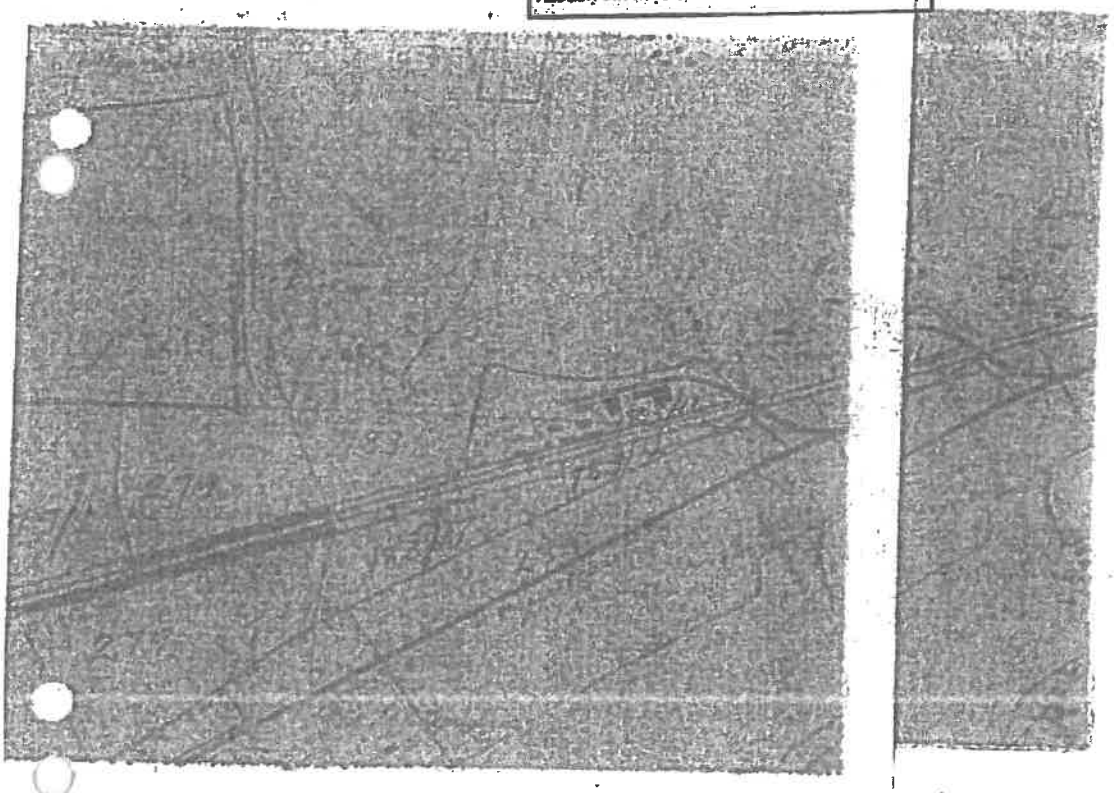
SITE PLAN.



ALITY PLAN.

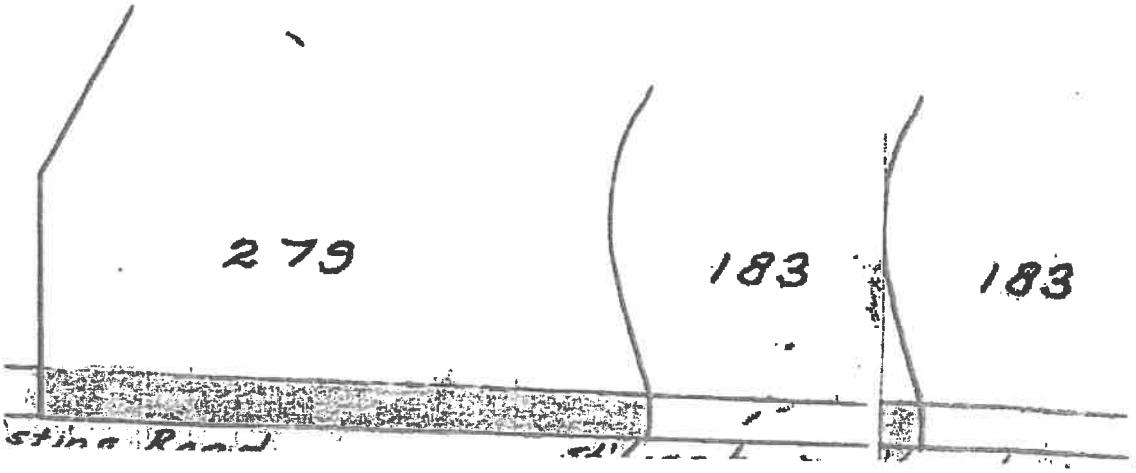
ALLEEN TER INFORMATIE

1-2
2



Gen. 253/68.

ITE PLAN.



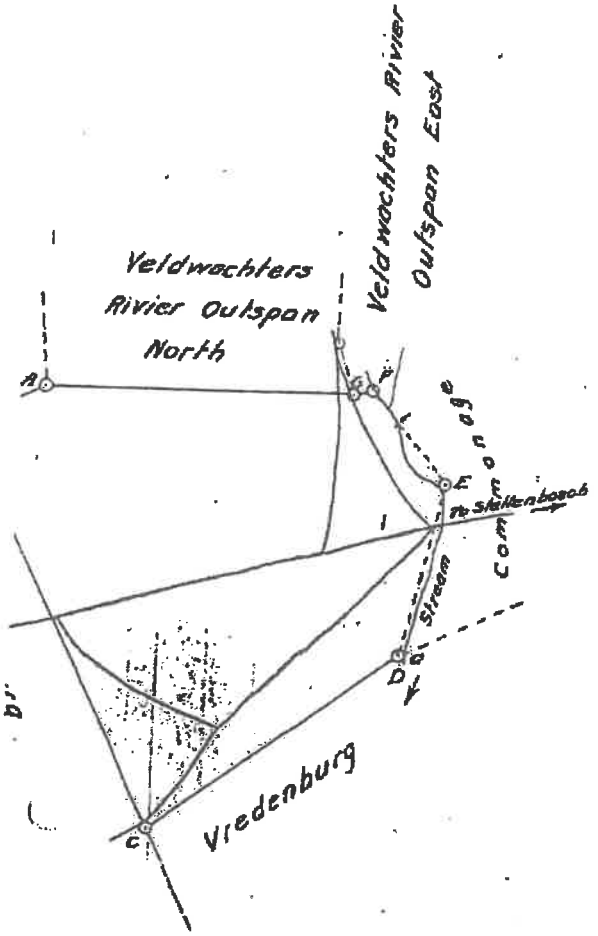
ISSUED SUBJECT TO THE CONDITIONS ENDORSED HEREON

Stel. F. 8·32

Approved

A. W. Lonnie Bowden

Surveyor-General.



Sides.		Angles.	
AB	47·98	A	153. 32. 0
BC	247·03	B	90. 8. 50
CD	166·95	C	80. 28. 10
DE	98·26	D	138. 32. 30
EF	66·04	E	127. 15. 40
FG	10·50	F	122. 31. 10
GA	170·58	G	187. 31. 40

Co-ordinates.		
	Yds	Xds
A	8238·61	+ 319·36
B	8196·43	+ 342·23
C	8313·60	+ 559·71
D	8445·44	+ 457·28
E	8463·68	+ 360·73
F	8419·95	+ 311·68
G	8409·09	+ 313·42

Area - 68 Morgen 540 Sq. Rds.

The farm VELDWACHTERS RIVIER OUTSPAN SOUTH No 27·9

100 200 300 400 500

Scale 100 Cape Roods = 1 Inch.

e diagram lettered ABCDa outer bank of Stream FG represents of land
q. Roods situate in the Division of Stellenbosch being
ivier Outspan South.

Surv. Gen.

FRIEDLAENDER & BURGER
LANDMETERS

SERWITUUT ART

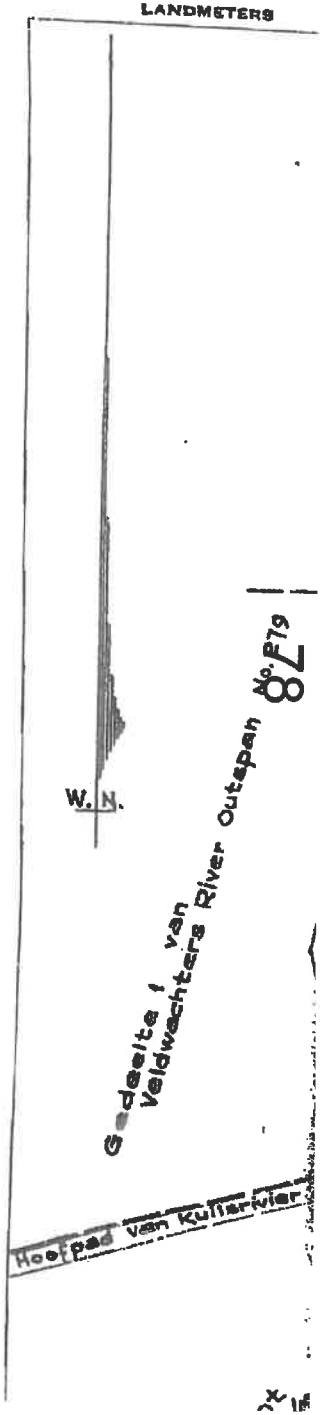
E 4308/74

SYE [redacted]		RIGTINGS -HOEKE		KOÖRDINATE Stelsel Lo. 19° Y	X
	Meters	Konstante		± 0,00	+3 700 000,00
DE	448,18	232·04·10	D	+ 16 838,52	+ 58 156,33
EF	50,45	141·21·50	E	+ 16 485,01	+ 57 880,84
FG	325,09	210·27·30	F	+ 16 516,51	+ 57 841,43
GH	20,26	220·19·00	G	+ 16 351,72	+ 57 561,20
HJ	63,80	252·42·00	H	+ 16 338,61	+ 57 545,75
JK	16,37	236·03·30	J	+ 16 277,70	+ 57 526,78
KL	2,63	208·54·20	K	+ 16 264,12	+ 57 517,64
LM	46,46	165·56·10	L	+ 16 262,85	+ 57 515,34
MN	224,11	73·08·10	M	+ 16 274,14	+ 57 470,27
NO	179,49	182·05·20	N	+ 16 488,61	+ 57 535,28
OP	136,80	163·31·20	O	+ 16 482,07	+ 57 355,91
PQ	142,51	86·32·50	P	+ 16 520,87	+ 57 224,73
QR	189,04	176·54·00	Q	+ 16 663,12	+ 57 233,31
RS	42,50	252·53·40	R	+ 16 673,34	+ 57 044,55
			S	+ 16 632,72	+ 57 032,05
		STEL. 2 NEW Δ		+ 15 524,43	+ 59 631,35
		VERDUN Δ		+ 17 185,33	+ 56 805,07

Beskrywing van Bakens

D, G, J, N - - - Middel van rioolduksel.
E, F, H, O, S - Ysterpaalseksie in betonblok.
K - - - - - - Ent van stutmuur van beton waterdeurloop.
L - - - - - - Westekant van beton waterdeurloop.
M - - - - - - 25 mm. ysterpyp in betonblok.
P, Q, R - - - - 12 mm. ysterpen in betonblok.

FRIEDLAENDER & BUR
LANDMETERS



IN TERMS OF SECT. 18 (BIS) 2 (III) OF ACT 9/1927 THE CURV. BDY. BETWEEN a' AND a HAS BEEN SUBST. BY THE RECT. BDY. A.B.C. DGM. —— F. 291/80 FILE S/ STEL. 183 (Vol. 3) PAGE 449

7.3.1930 SURVEYOR-GENERAL.

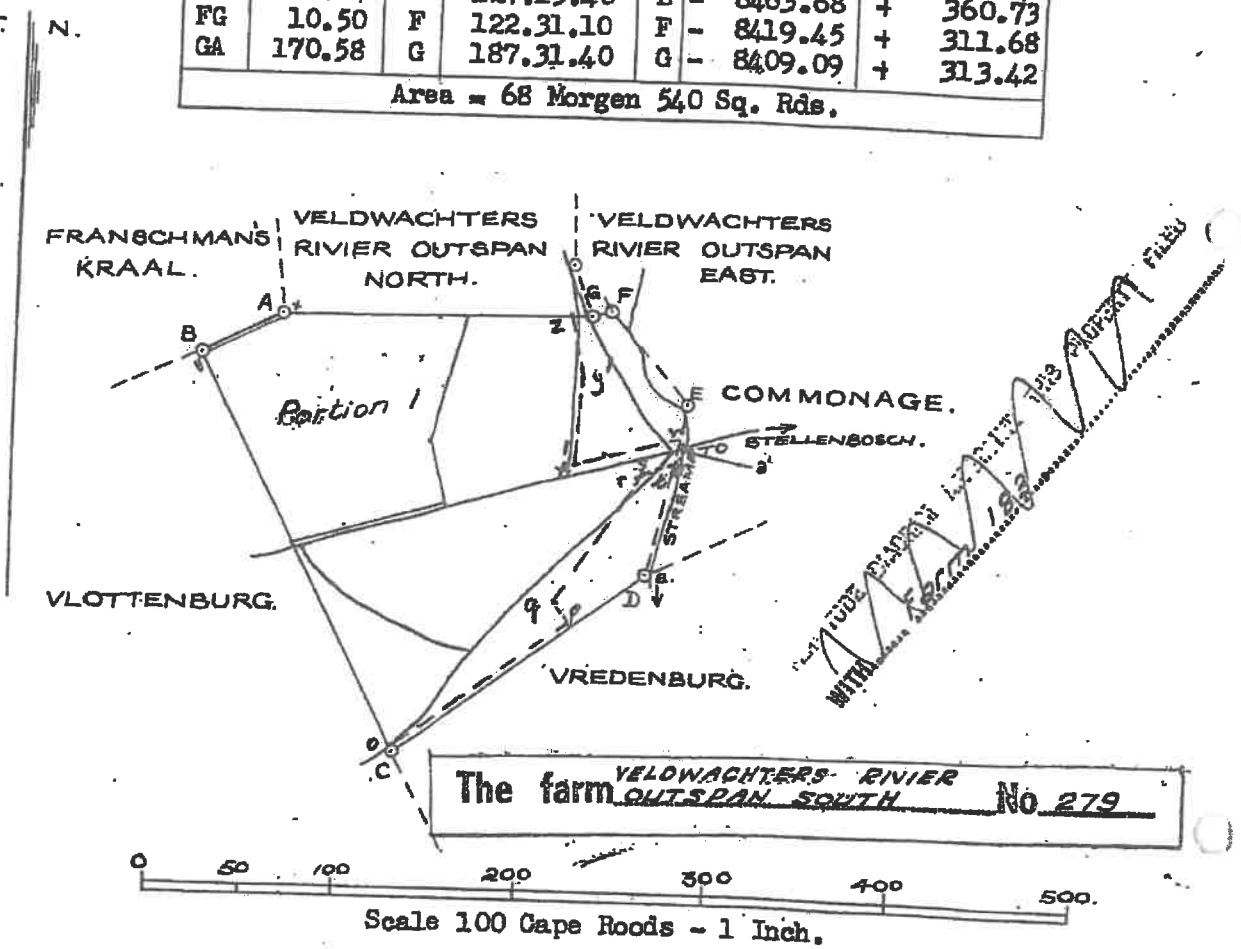
79

S. G. Dgm. No. 401/1918.

Approved,
(Sgd.) A.H. Cornish-Bowden,
Surveyor-General.

Sides.		Angles.		Co-ordinates. Y's		X's	
AB	47.98	A	153.32. 0	A	- 8238.61	+	319.36
BC	247.03	B	90. 8.50	B	- 8196.43	+	342.23
CD	166.95	C	80.28.10	C	- 8313.60	+	559.71
DE	98.26	D	138.32.30	D	- 8445.44	+	457.28
EF	66.04	E	127.15.40	E	- 8463.68	+	360.73
FG	10.50	F	122.31.10	F	- 8419.45	+	311.68
GA	170.58	G	187.31.40	G	- 8409.09	+	313.42

Area = 68 Morgen 540 Sq. Rds.



Scale 100 Cape Roods - 1 Inch.

The above diagram lettered A.B.C.D.a. Outer bank of Stream FG represents 68 Morgen 540 Sq. Roods of land situate in the Division of Stellenbosch being "Veldwachters Rivier Outspan South."

Bounded N. by Veldwachters Rivier Outspan North & Veldwachters Rivier Outspan East.
N.W. " Franschman's Kraal
S.W. " Vlottenburg
S.E. " Vredenburg
E. " Commonage

Surveyed and beaconed by me according to regulations,

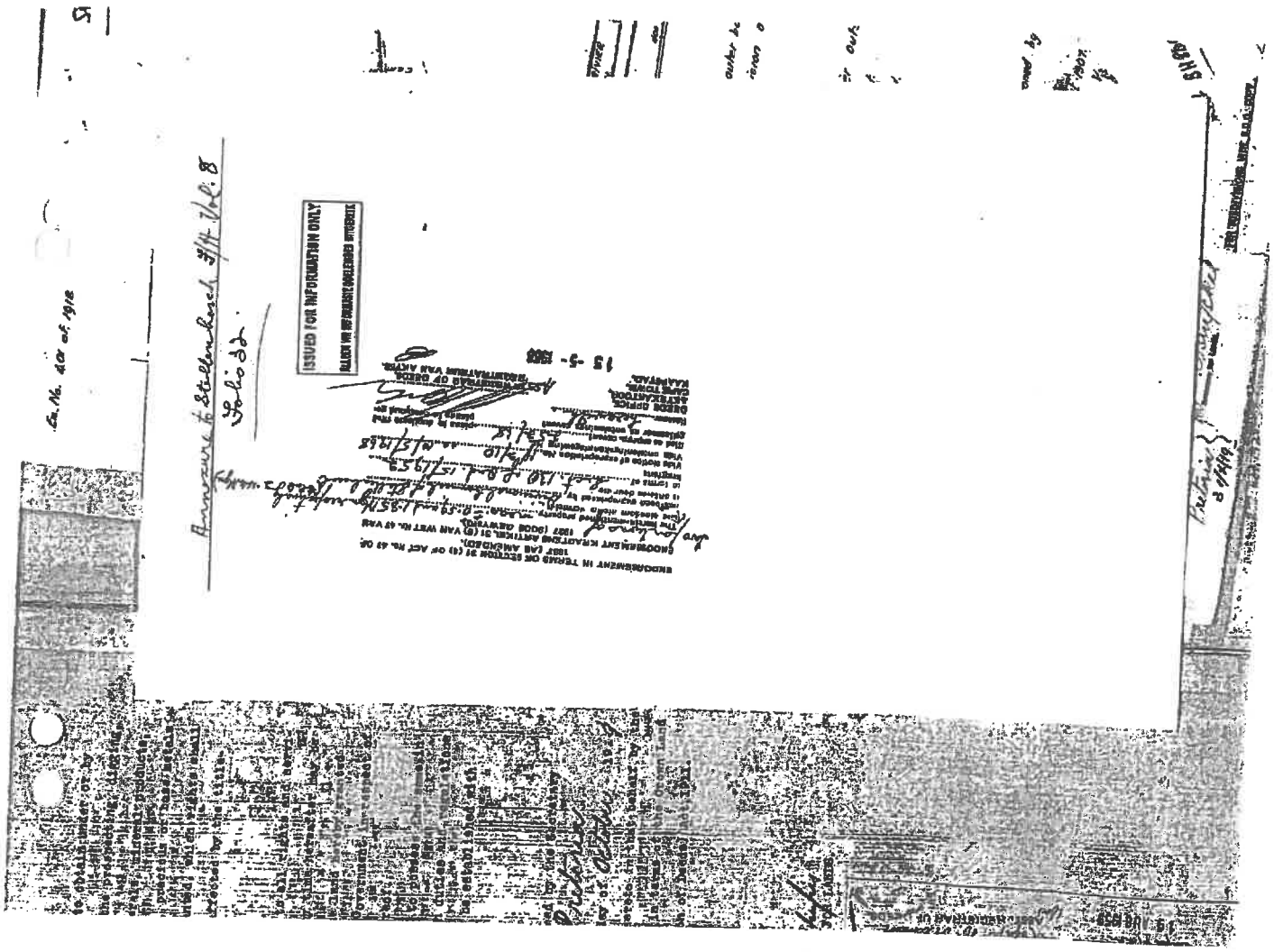
(Sgd.) C.H. van Breda,
Government Land Surveyor.
Sept,, 1907.

Copied from the diagram relating to

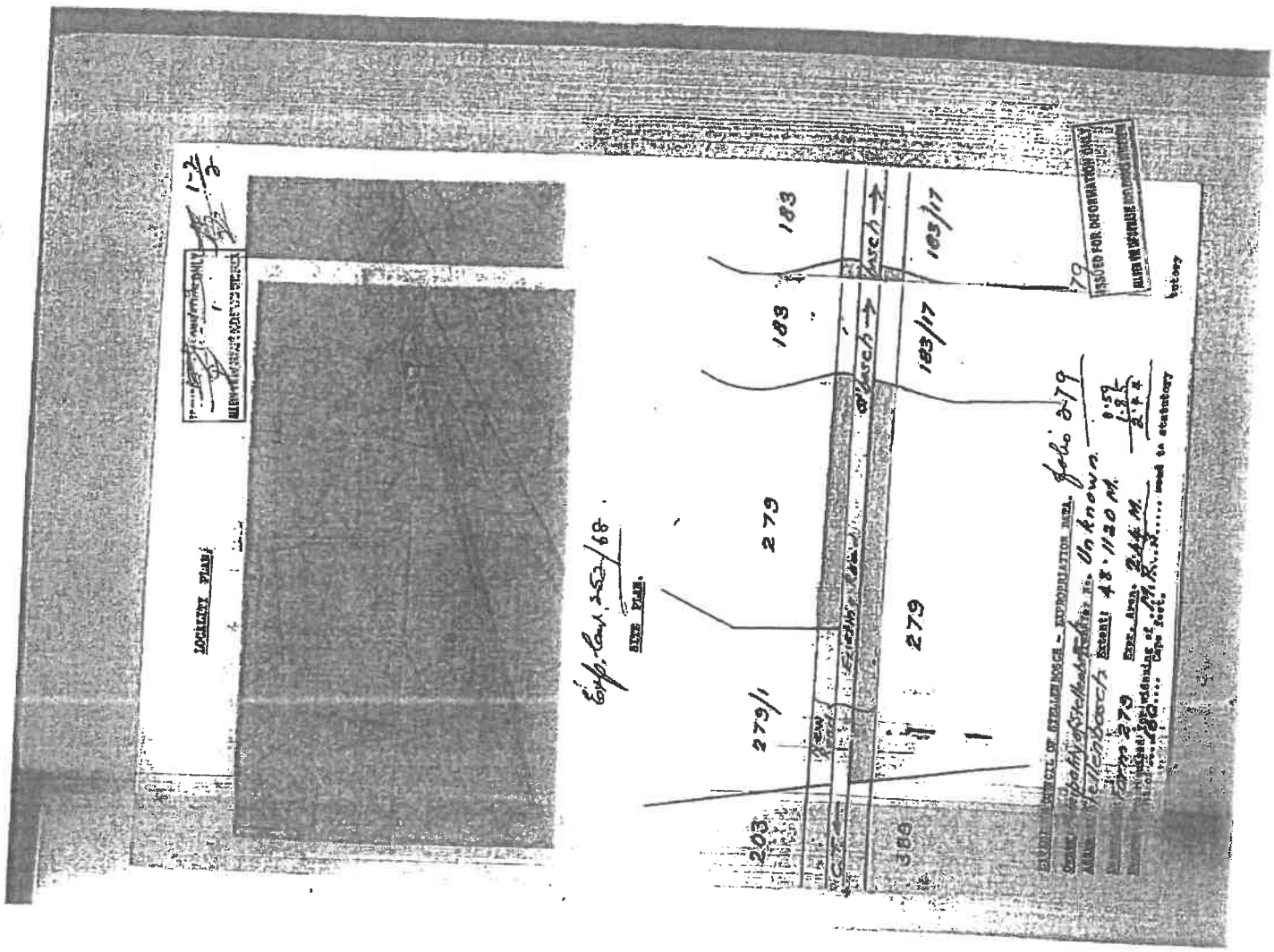
OPMETING-STUKKE. SURVEY RECORDS.	KAART NO. DIAG. NO.	BESKRYWING. DESCRIPTION.	AKTE. DEED.	OPPARAFEER. INITIALED.
E 1049/57	6379/57	The line x y represents the centre line of an Electric Power Line Servitude	445/189	wjw 11.9.59
E 1281/58	6379/1	The line opqrst u v w x y z represents the centre line of a Servitude pipeline 3 metres wide		

THE FOLLOWING DEDUCTIONS HAVE BEEN MADE FROM THIS DIAGRAM. DIE VOLGENDE AFTREKKINGS IS VAN HIERDIE KAART GEDOEN.							
SURVEY RECORDS. MEET-STUKKE.	DIAG. NO. KAART NO.	SUBDIVISION. ONDER-VERDELING.	AREA/GROOTTE. MORG./MORGE. SQ. FT./VK. VOET.		TRANSFER NO. AKTE.	INITIALED. GEPARAFEER.	Remainder Morgen
E 251/61	12256/1	Portion 1	20·7880		9618/1961	wjw 21.7.61	48·1120




ISSUED FOR INFORMATION ONLY
13 -5- 1968

LOCALITY PLAN.
SITE PLAN.
Folio 279.
279
279/1
183
183/1
203
389

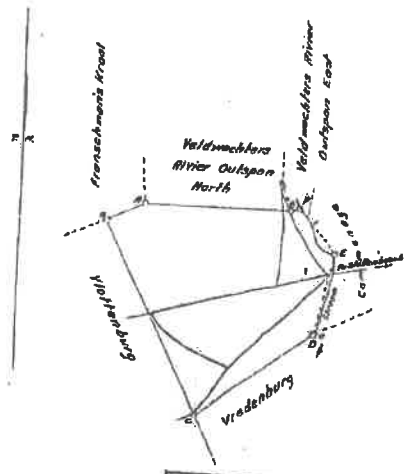

LOCALITY PLAN
279
279/1
279
183
183/17
183
183/17
203
388
Gopalpur Road
Gopalpur Road
Gopalpur Road

Ex. No. 401 of 1912

Stell. F. 8.32

Approved

Surveyor-General



Sides	
AB	49.98
BC	267.03
CD	166.93
DE	98.26
EF	66.06
FG	10.90
GA	170.58

Angles	
A	153. 32. 0
B	90. 8. 50
C	80. 28. 10
D	138. 38. 30
E	121. 15. 40
F	128. 31. 10
G	187. 31. 40

Co-ordinates	
A - 8238.81	+ 319.36
B - 8196.43	+ 362.25
C - 8313.60	+ 539.71
D - 8089.88	+ 457.28
E - 8063.98	+ 360.73
F - 8019.46	+ 311.68
G - 8008.09	+ 319.46

Area - 68 Morgen 560 Sq Rds

The farm VELDWACHTERS RIVIER OUTSPAN SOUTH No 214

Scale 100 Cape Roods = 1 Inch

The above diagram lettered ABCDEFGA outer bank of Stream. FG represents 66 morgen 560 Sq Roods situate in the Division of Stellenbosch, being "Veldwachters Rivier Outspan South".

Bounded N by Veldwachters Rivier Outspan North & Veldwachters Rivier Outspan East.
NW by Franschmans Kroal.
SW by Vlottenburg
SE by Vredenburg
E by Commonage.

Surveyed and beaconed by me according to regulations.

Sept 1907. (Sgd) C. H. von Brodo.
Government Land Surveyor.

I certify that this diagram belongs to the Title Deed this day issued in favour of the Council of the Municipality of Stellenbosch.

(Sgd) B. C. Kinsckel

Sket 84 BCD

Folio 1068

FRIEDLAENDER & BURGER
LANDMETERS

SERWITUUTKAART

L 4308/74

	AFSTAND Meters	RIGTINGS-HOEKE Konstante		Y	KOORDINATE Stelsel Lo.19° X
				0,00	+3 700 000,00
DE	448,18	232-04-10	D	+ 16 838,82	+ 56 188,88
EF	80,45	141-21-50	E	+ 16 485,01	+ 57 860,84
FG	328,09	210-57-20	F	+ 16 516,81	+ 57 841,43
GH	20,86	220-19-00	G	+ 16 581,72	+ 57 881,20
HJ	53,80	252-42-00	H	+ 16 538,21	+ 57 845,75
JK	16,37	236-05-20	J	+ 16 577,70	+ 57 826,78
KL	2,83	208-54-20	K	+ 16 564,12	+ 57 817,64
LM	46,48	188-46-10	L	+ 16 562,85	+ 57 818,34
MN	224,11	73-06-10	M	+ 16 574,14	+ 57 470,27
NO	179,49	182-08-20	N	+ 16 488,61	+ 57 535,25
OP	136,80	162-31-20	O	+ 16 488,07	+ 57 355,91
PQ	142,81	96-32-50	P	+ 16 520,67	+ 57 324,73
QR	189,04	176-54-00	Q	+ 16 658,12	+ 57 338,21
RS	42,50	252-53-40	R	+ 16 673,34	+ 57 044,58
			S	+ 16 632,72	+ 57 032,05
		STEL. 2 NEW A		+ 15 524,43	+ 59 421,85
		VERPUNT A		+ 17 185,83	+ 56 805,07

Beskrywing van Bakens

D,G,J,N - - - Middel van rioolsleuf.
E,F,H,O,S - Ysterpaalsleutels in betonblok.
K - - - - - - Ent van sluitmuur van beton waterdeurloop.
L - - - - - - Westekant van beton waterdeurloop.
M - - - - - - 25 mm. ysterpyp in betonblok.
P,Q,R- - - - 12 mm. ysterpen in betonblok.

Die eiendom lyn D.E.F.G.H.J.K.L.M.N.O.P.Q.R.S
stel voor die middellyn van 'n Serwituut van Pypleiding
5 Meter wyd oor die Munisipale plase soos aangedui
in die akte.

gelee in Munisipaliteit en
Stellenbosch
Uitgemeet in Mei 1974
deur my.

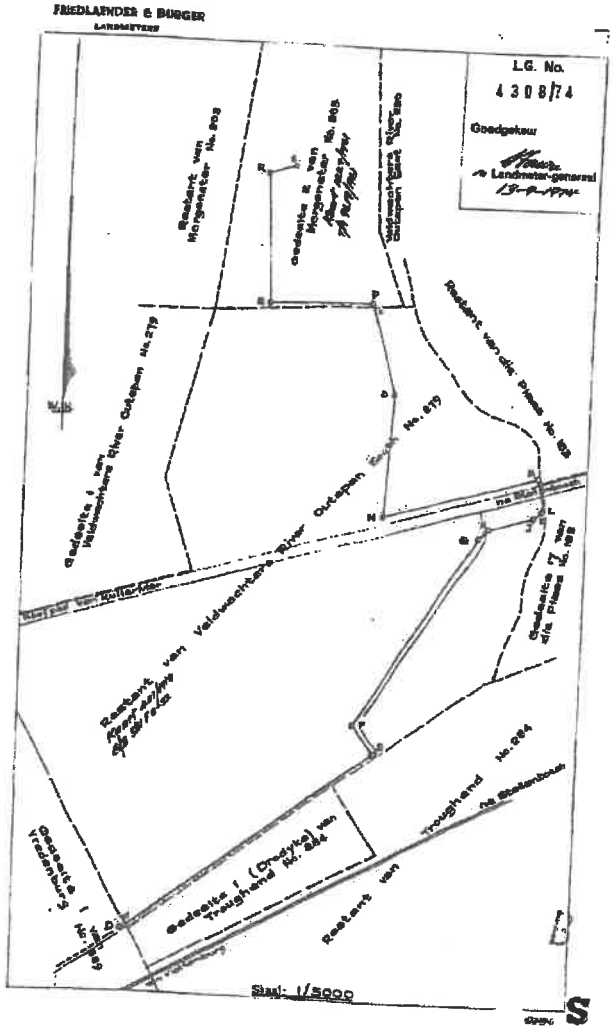
Administratiewe Distrik
Provinsie Kaap die Goeie Hoop.

Landmeter

Die kaart is gehoë aan
No.
gedateer
t.g.v.
Registrateur van Aktes

Die oorspronklike kaart is
No. gehoë aan
Transport/Grondbrief
No.

Liër No. Stel. 327
M.B. No. B-1198/74
Komp. BH-BDCB
(3785)
BHST-138 (6965)
M3169



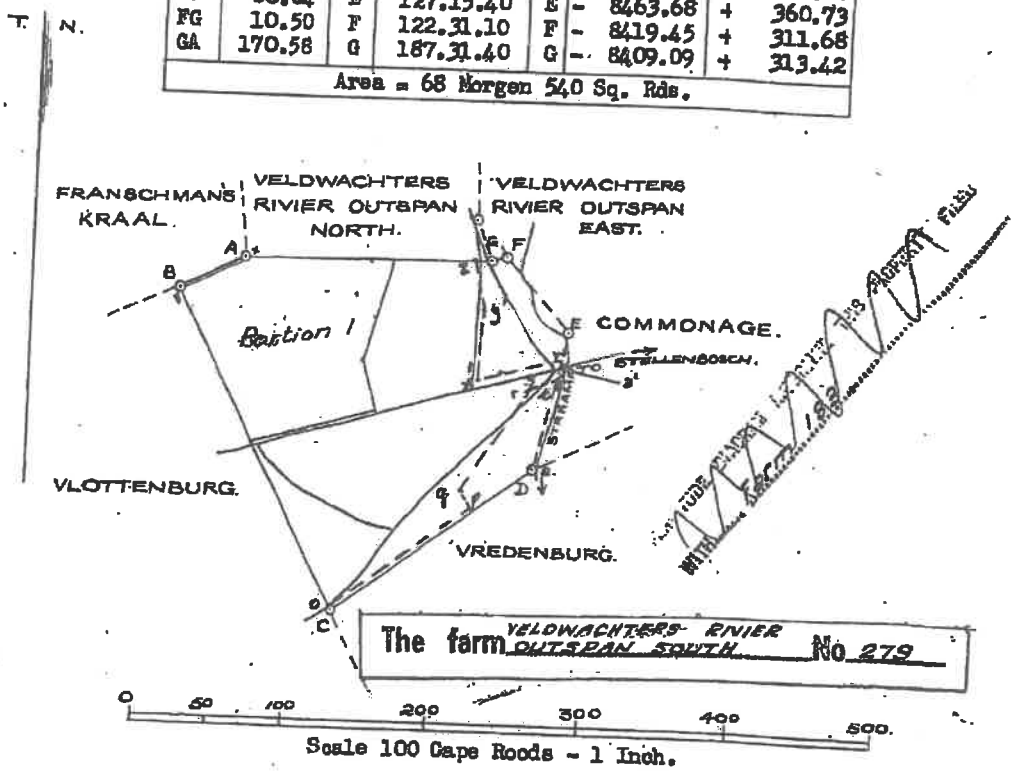
IN TERMS OF SECT. 18 (BIS) 2 (III) OF ACT 9/1927 THE CONV. BDY. BETWEEN a AND a HAS BEEN SUBST. BY THE REST. BDY. A.B.C. DGM. — F 291/80 FILE S/ STEL. 183 (Vol. 3) PAGE 449
7.3.1980 SURVEYOR-GENERAL

87

S. G. Dgm. No. 401/1918.

Approved,
(Sgd.) A.H.Cornish-Bowden,
Surveyor-General.

Sides.		Angles.		Co-ordinates. Y's		X's
AB	47.98	A	153.32. 0	A - 8238.61	+	319.36
BC	247.03	B	90. 8.50	B - 8196.43	+	342.23
CD	166.95	C	80.28.10	C - 8313.60	+	559.71
DE	98.26	D	138.32.30	D - 8445.44	+	457.28
EF	66.04	E	127.15.40	E - 8463.68	+	360.73
FG	10.50	F	122.31.10	F - 8419.45	+	311.68
GA	170.58	G	187.31.40	G - 8409.09	+	313.42
Area = 68 Morgen 540 Sq. Rds.						



Scale 100 Cape Roods - 1 Inch.

The above diagram lettered A.B.C.D.a. Outer bank of Stream FG represents 68 Morgen 540 Sq. Roods of land situate in the Division of Stellenbosch being "Veldwachters Rivier Outspan South."

Bounded N. by Veldwachters Rivier Outspan North & Veldwachters Rivier Outspan East.
N.W. " Franschman's Kraal
S.W. " Vlottenburg
S.E. " Vredenburg
E. " Commonage

Surveyed and beaconed by me according to regulations,

(Sgd.) C.H. van Breda,
Government Land Surveyor.
Sept,, 1907.

Copied from the diagram relating to Freehold Title Deed No. Stel.F.8-32 dated 31/10/1919 in favour of The Council of the Municipality of Stellenbosch.
Saturdhope
SURVEYOR-GENERAL
23 1957
CAPE TOWN

M 3169

FOR LIST OF DEDUCTIONS SEE BACK OF DIAGRA
VIR AFTREKKINGS SIEN KEERSY.

VN. 279 S C

Sheet BH-SDCB.
BHSZ: 138 (6965); BHSZ-137 (6964)
VIR NOTERING VAN SERWITUUT SIEN KEERSY.
FOR SERVITUDE NOTING SEE BACK OF DIAGRAM

B

1123/1957 P.B./R.B.

SURVEY RECORD.	KAART NO. DIAG. NO.	BESKRYWING. DESCRIPTION.	AKTE. DEED.	OPGEMAAKT. INITIALED.
E.1443/57	6579/157	The line x-y represents the centre line of an Electric Power Line Servitude	443/	[illegible] 11.9.57
E.1443/57	6580/157	The line a-b-c-d-e-f-g-h-j-k-l-m-n-p-q-r-s-t-u-v-w-x-y-z represents the centre line of a Servitude pipeline 3 metres wide		

THE FOLLOWING DEDUCTIONS HAVE BEEN MADE FROM THIS DIAGRAM.
DIE VOLGENDE AFTREKKINGS IS VAN HIERDIE KAART GEDOEN.

SURVEY RECORD. OPM. REGT-STUKKE.	DIAG. NO. KAART NO.	SUBDIVISION. ONDER-VERDELING.	AREA/OPPERVL. MORG./HAMTE. SQ. FT./VK. VOET.		TRANSFER NO. AKTE.	INITIALED. GEPARA-FEER.	Remarks. Morgen.
E.251/61	12261	Portion 1	20-7880	—	9613/1961	[illegible] 21.3.61	42-1120

Our Ref:	HM/ CAPE WINELANDS /STELLENBOSCH/FARM RE 279
Case No.:	20050704SB0622E
Enquiries:	Stephanie Barnardt
E-mail:	stephanie.barnardt@westerncape.gov.za
Tel:	021 483 5959
Date:	20 November 2020

iLifa leMveli leNtshona Koloni
Erfenis Wes-Kaap
Heritage Western Cape

Carmen Du Toit
PO Box 945, Cape Town, 8000
info@ctsheritage.com, info@enviropart.co.za, saliem.haider@stellenbosch.gov.za , claire@claireabrahamse.co.za

FINAL COMMENT
In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999) and the Western Cape Provincial Gazette 6061, Notice 298 of 2003

HERITAGE IMPACT ASSESSMENT: PROPOSED STELLENBOSCH WASTE TRANSFER FACILITY ON FARM RE 279, STELLENBOSCH, CAPE WINELANDS, SUBMITTED IN TERMS OF SECTION 38(1) OF THE NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)

CASE NUMBER: 20050704SB0622E

The matter above has reference.

This matter was discussed at the Impact Assessment Committee (IACom) meeting held on 11 November 2020.

FINAL COMMENT:
The Committee endorses the heritage and visual impact assessment as meeting the requirements of S38(3) of the NHRA. The Committee further supports the recommendations on page 55-56 of the HIA prepared by CTS Heritage and Claire Abrahamse, dated September 2020, which identifies site option 2 as having the lowest cultural landscape and heritage visual impact. Notwithstanding the EAP recommendation for option 3, the Committee supports the HIA recommendation that option 2 is the preferred site.

The following recommendations are endorsed:

1. Site Alternative 2 is the preferred development alternative in terms of impacts to heritage resources.
2. The retention of the dam walls and existing hedge line for visual mitigation.
3. The establishment of a new tree line above the site to screen from above the dam wall height.
4. These tree lines must be managed over time, to ensure visual screening is continued, even as the trees and hedges mature and may need to be replaced.
5. The roadway should not be overly-formalised or -engineered. Tarred sidewalks are discouraged – a simple tarred or bricked roadway is preferred.
6. Consideration should be given by the Municipality to the enhancement of public access to the site above the dams – at Site 1 – and the rehabilitation of this piece of land as an informal parkland, in order to enhance the community connection to this historic outspan site.
7. The rehabilitation of the Veldwachtersrivier course below the R310 should be undertaken as part of the development of the site.
8. If any unmarked graves or buried archaeological heritage resources are uncovered or exposed during bulk earthworks, these must immediately be reported to Heritage Western Cape.

HWC reserves the right to request additional information as required.
Should you have any further queries, please contact the official above and quote the case number.

Yours faithfully

pp.

.....
Dr. Mxolisi Dlamuka
Chief Executive Officer, Heritage Western Cape

Western Cape Government

Department of Environmental Affairs and Development Planning
D'mitri Matthews
Development Management: Region 1
D'mitri.Matthews@westerncape.gov.za | Tel: 021 483 8350

EIA REFERENCE: 16/3/3/1/B4/45/1063/20
NEAS REFERENCE: WCP/EIA/0000833/2020
DATE OF ISSUE: 28 April 2021

The Municipal Manager
Stellenbosch Municipality
P.O. Box 17
STELLENBOSCH
7600

Attention: Mr. Jacobus Gideon (Deon) Louw

Tel.: (021) 808 8213
Email: Deon.Louw@stellenbosch.gov.za

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): PROPOSED WASTE TRANSFER FACILITY ON A PORTION OF THE REMAINDER OF FARM NO. 279, STELLENBOSCH

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation, attached herewith, together with the reasons for the decision.

2. In terms of Regulation 4 of the Environmental Impact Assessment Regulations, 2014, (as amended), you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, that all registered Interested and Affected Parties ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.

3. Your attention is drawn to Chapter 2 of the National Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully
Zaahir Toefy
Digitally signed by Zaahir Toefy
Date: 2021.04.28 08:57:30 +02'00'

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

CC: (1) Ms. A. Pelrson (The Environmental Partnership) E-mail: alma@enviropart.co.za
(2) Mr. Q. Bailey (Cape Winelands District Municipality) E-mail: quinton@capewinelands.gov.za
(3) Ms. S. Barnard (Heritage Western Cape) E-mail: stephanie.barnardt@westerncape.gov.za
(4) Ms. A. Duffel-Canham (CapeNature) E-mail: aduffell-canham@capenature.co.za
(5) Mr. E. le Roux (DEA&DP: Waste Management Licensing) E-mail: etienne.roux@westerncape.gov.za

Western Cape Government

Department of Environmental Affairs and Development Planning
D'mitri Matthews
Development Management: Region 1
D'mitri.Matthews@westerncape.gov.za | Tel: 021 483 8350

EIA REFERENCE: 16/3/3/1/B4/45/1063/20
NEAS REFERENCE: WCP/EIA/0000833/2020
DATE OF ISSUE: 28 April 2021

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): PROPOSED WASTE TRANSFER FACILITY ON A PORTION OF THE REMAINDER OF FARM NO. 279, STELLENBOSCH

With reference to your application for the abovementioned, find below the outcome with respect to this application.

DECISION

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activity specified in Section B below with respect to the Site Alternative 3 described in the Basic Assessment Report ("BAR"), dated 18 December 2020.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in Section E below.

A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

Stellenbosch Municipality
% Mr. Jacobus Gideon (Deon) Louw
P.O. Box 17
STELLENBOSCH
7600

Tel.: (021) 808 8213
Email: Deon.Louw@stellenbosch.gov.za

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "**the holder**".

B. ACTIVITY AUTHORISED

Listed activity	Activity/Project Description
EIA Regulations Listing Notice 1 of 2014: Activity Number 28: Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	The proposed development will be industrial in nature and will be located outside the urban area on land that was used for agriculture. The development will be approximately 1,7ha in extent.

The abovementioned list is hereinafter referred to as **"the listed activity"**.

The holder is herein authorised to undertake the following alternative that includes the listed activity as it relates to the development:

The development of a waste transfer facility with a development footprint of 17 000m² in extent, located north of the R310 and east of the Asara Wine Estate and Hotel (Site Alternative 3). The existing Devon Valley landfill site is located north of the site and a Material Recovery Facility ("MRF") to the east.

The following structures and infrastructure will form part of the proposal:

- A facility building of approximately 1 200m² and 11.5m high from ground level to the top of the roof ridge. The facility building will have the capacity to store one day's waste and will comprise of:
  - a container handling/skip handling area;
  - a tipping hall/drop-off area and area for future conveyer/compaction loading hall and system;
  - ablution facilities;
  - mess/kitchen facilities;
  - site offices;
  - pure-organic waste storage and transfer station;
  - organic mixed waste storage and transfer station; and
  - space for an additional transfer bay.
- In addition to the facility building, the project proposal includes the following associated infrastructure:
  - an access ramp to a raised drop off platform which is approximately 3m above the container/skip handling and storage area;
  - internal roads;
  - upgrading of the R310 median;
  - a parking area;
  - a fence;

- a landscaped berm, for screening purposes, along the southern and western boundaries of the site;
- expansion of existing stormwater attenuation pond; and
- stormwater pipelines and catch pits.

C. SITE DESCRIPTION AND LOCATION

The listed activity will be undertaken on the Remainder of Farm No. 279, Stellenbosch, at the following co-ordinates:

Latitude (S)			Longitude (E)		
33°	56'	50.00"	18°	49'	10.20"

The SG digit code is: C0670000000027900000

Refer to Annexure 1: Locality Map and Annexure 2: Site Development Plan.

The above is hereinafter referred to as **"the site"**.

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

The Environmental Partnership
% Ms. A. Pelrson
P. O. Box 945
CAPE TOWN
8000

Tel.: 021 422 0999
Email: alma@enviropart.co.za

E. CONDITIONS OF AUTHORISATION

Scope of authorisation

1. The holder is authorised to undertake the listed activity specified in Section B above in accordance with, and restricted to, Site Alternative 3, as described in the BAR dated 18 December 2020, at the site as described in Section C above.

2. The holder must commence with the listed activity on site within a period of **five (5) years** from the date of issue of this Environmental Authorisation.

3. The development must be concluded within **ten (10) years** from the date of commencement of the listed activity.

4. The holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.

5. Any changes to, or deviations from the scope of the alternative described in Section B above must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the Competent Authority may request information, in order to evaluate the significance and

impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

Written notice to the Competent Authority

6. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities. The notice must:

   6.1 make clear reference to the site details and EIA Reference number given above; and

   6.2 include proof of compliance with the following conditions described herein:

   Conditions: 6, 7, 8, 11 and 20.8

Notification and administration of appeal

7. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–

   7.1 notify all registered Interested and Affected Parties ("I&APs") of –
   7.1.1 the outcome of the application;
   7.1.2 the reasons for the decision as included in Annexure 3;
   7.1.3 the date of the decision; and
   7.1.4 the date when the decision was issued.

   7.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, 2014 (as amended) detailed in Section G below;

   7.3 draw the attention of all registered I&APs to the manner in which they may access the decision; and

   7.4 provide the registered I&APs with:
   7.4.1 the name of the holder (entity) of this Environmental Authorisation;
   7.4.2 name of the responsible person for this Environmental Authorisation;
   7.4.3 postal address of the holder;
   7.4.4 telephonic and fax details of the holder;
   7.4.5 e-mail address, if any, of the holder; and
   7.4.6 contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the 2014 National Appeals Regulations (as amended).

8. The listed activity, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notifies the registered I&APs of this decision. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided i.e. the listed activity, including site preparation, must not commence until the appeal is decided.

Management of activity

9. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.

10. The EMPr must be included in all contract documentation for all phases of implementation.

Monitoring

11. The holder must appoint a suitably experienced environmental control officer ("ECO"), before commencement of any construction activities to ensure compliance with the EMPr and the conditions contained herein.

12. The ECO must conduct weekly compliance monitoring inspections during the construction phase. Monthly Environmental Compliance Reports must be compiled and submitted to the Competent Authority for the duration of the construction phase. The final Environmental Compliance Report must be submitted to the Competent Authority within six months after construction has been complete.

13. A copy of the Environmental Authorisation, EMPr, audit reports and compliance monitoring reports must be kept at the site of the authorised activity, and must be made available to anyone on request, including a publicly accessible website.

14. Access to the site referred to in Section C must be granted, and the environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.

Auditing

15. In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation and the EMPr. Environmental Audit Reports must be submitted to the Competent Authority every **six (6)** months during the construction phase. The Environmental Audit Report must be prepared by an **independent** person that is not the ECO referred to in Condition 11 and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

    The final Environmental Audit Report must be submitted to the Competent Authority within six months after operation commenced.

    The holder must, within 7 days of the submission of an environmental audit report to the Competent Authority, notify all potential and registered I&APs of the submission and make the report immediately available to anyone on request and on a publicly accessible website (where the holder has such a website).

Specific Conditions

16. Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape.

    Heritage remains include: meteorites, archaeological and/or paleontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artefacts and bone remains; structures and other built

features with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.

17. A qualified archaeologist and/or palaeontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant heritage resources authority.

18. The following visual impact mitigation measures must be implemented:
    18.1 The ground level at site boundary must remain natural ground level.
    18.2 The facility may not exceed the development footprint and building parameters included as part of this Environmental Authorisation.
    18.3 Berms and tree planting must be established to reduce the visual impact of the facility from the R310 and sufficient budget must be allowed for the implementation and maintenance of the tree screens.
    18.4 The architectural and landscaping guidelines/concepts included as part of the final BAR must be adhered to in order to reduce the visual impact of the facility.

19. The following odour management mitigation measures must be implemented:
    19.1 Waste must not be stored for longer than 24 hours at the facility.
    19.2 The readily biodegradable Pure Organic Waste is to be stored in air-tight receptacles, which are frequently emptied and transported to the end-user.
    19.3 An odour control system is to be installed as part of the proposed facility.
    19.4 The facility is to be washed down and kept clean on a daily basis

20. The following stormwater management measures must be implemented:
    20.1 Management of stockpiled material to prevent silt and sediment from washing into roadways and storm drains.
    20.2 Covering of stockpiles during heavy rainfall events with polyethylene sheeting or tarpaulins.
    20.3 Regular sweeping of roadways to remove sediment build up during excavation and removal of material.
    20.4 Silt fences must be erected to contain sedimentation from or to the site.
    20.5 Storage of fuel, paint, cement, oils and other deleterious substances must be stored in secure containers.
    20.6 Provision of a spill kit with adequate training for site staff in its use.
    20.7 Provision of filter socks for waters pumped from the base of excavations to remove silt prior to discharge into stormwater management system.
    20.8 A stormwater management plan must be developed and approved by the municipality. The approved stormwater plan must be submitted to the Department prior to construction activities commencing.

F. GENERAL MATTERS

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activity.

2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.

3. If the holder does not commence with the listed activity within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that activity, and a new application for Environmental Authorisation must be submitted to the Competent Authority. If the holder wishes

to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the Competent Authority prior to the expiry date of the Environmental Authorisation.

4. The holder must submit an application for amendment of the Environmental Authorisation to the Competent Authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for Amendment in terms of Part 1 of the EIA Regulations, 2014 (as amended) must be submitted.

   Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the Competent Authority must only be notified of such changes.

5. The manner and frequency for updating the EMPr is as follows:
   Amendments to the EMPr must be done in accordance with Regulations 35 to 37 of the EIA Regulations, 2014 (as amended) or any relevant legislation that may be applicable at the time.

G. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date on which notification of the decision was sent to the holder by the Competent Authority –

   1.1. submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
   1.2. submit a copy of the appeal to any registered I&APs, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.

2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date on which the holder of the decision sent notification of the decision to the registered I&APs–

   2.1. submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and

   2.2. submit a copy of the appeal to the holder of the decision, any registered I&AP, any Organs of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.

3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered I&AP and the Organs of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.

4. The appeal and the responding statement must be submitted to the address listed below:

   By post: Western Cape Ministry of Local Government, Environmental Affairs and Development Planning
   Private Bag X9186
   CAPE TOWN

8000

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Marius Venter (Tel: 021 483 2659)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

Note: For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to DEADP.Appeals@westerncape.gov.za

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 2659, E-mail DEADP.Appeals@westerncape.gov.za or URL http://www.westerncape.gov.za/eadp.

H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Environmental Authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully

Zaahir Toefy
Digitally signed by Zaahir Toefy
Date: 2021.04.28 09:05:47 +02'00'

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING
DATE OF DECISION: 28 APRIL 2021

CC: (1) Ms. A. Peirson (The Environmental Partnership) E-mail: alma@enviropart.co.za
(2) Mr. Q. Bailey (Cape Winelands District Municipality) E-mail: quinton@capewinelands.gov.za
(3) Ms. S. Barnard (Heritage Western Cape) E-mail: stephanie.barnardt@westerncape.gov.za
(4) Ms. A. Duffel-Canham (CapeNature) E-mail: aduffell-canham@capenature.co.za
(5) Mr. E. le Roux (DEA&DP: Waste Management Licensing) E-mail: etienne.roux@westerncape.gov.za

ANNEXURE 1: LOCALITY MAP

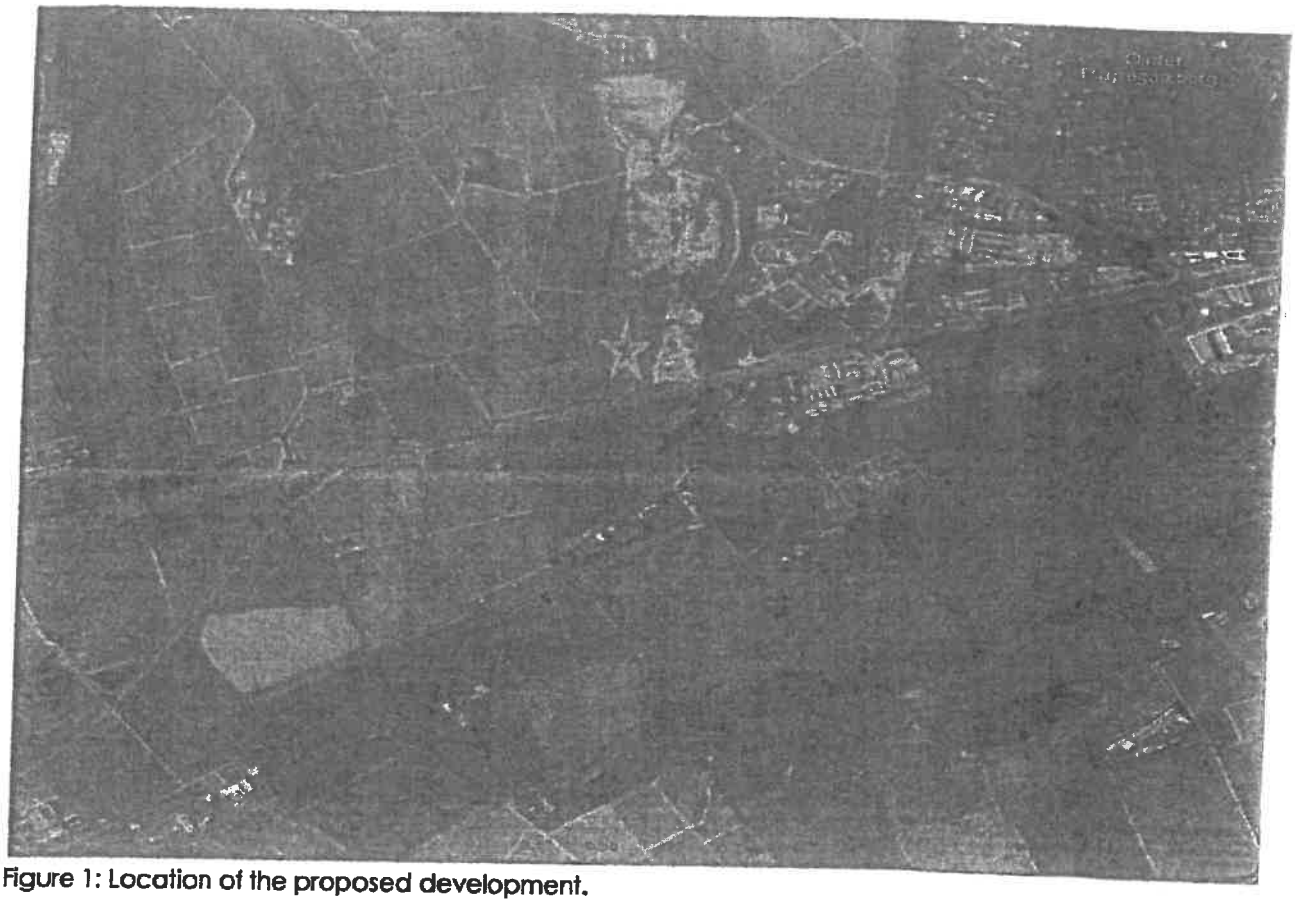


Figure 1: Location of the proposed development.

ANNEXURE 2: SITE DEVELOPMENT PLAN

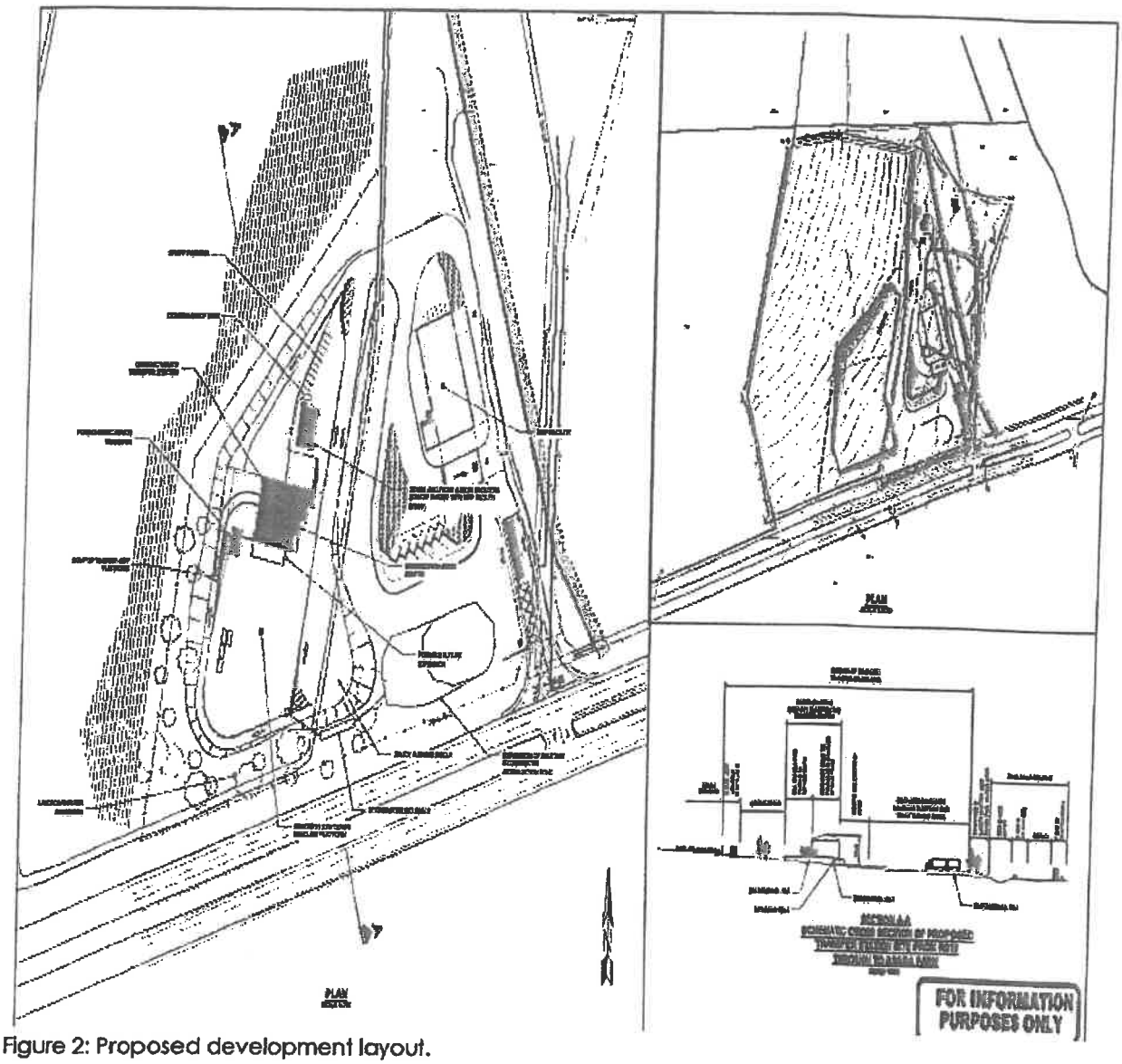


Figure 2: Proposed development layout.

ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, amongst others, the following:

a) The information contained in the Application Form dated 9 November 2020, the final BAR dated 18 December 2020, the EMPr submitted together with the final BAR and the additional information dated 20 April 2021;

b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);

c) The objectives and requirements of relevant legislation, policies and guidelines, including Section 2 of NEMA;

d) The comments received from I&APs and responses to these, included in the BAR dated 18 December 2020; and

e) The balancing of negative and positive impacts and proposed mitigation measures.

No site visits were conducted. The Competent Authority had sufficient information before it to make an informed decision without conducting a site visit.

All information presented to the Competent Authority was taken into account during the consideration of the application for Environmental Authorisation. A summary of the issues that were considered to be the most significant for the decision is set out below.

1. **Public Participation**

The public participation process included:

- identification of and engagement with I&APs;
- the placing of a newspaper advertisement in the 'Eikestadnuus' on 22 November 2018;
- fixing notice boards at the site where the listed activity is to be undertaken 27 November 2018;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activity is to be undertaken, the municipality and ward councillor, and the various Organs of State having jurisdiction in respect of any aspect of the listed activity on 26 and 27 November 2018, as well as on 11 November 2020 and 12 November 2020; and
- making the pre-application draft BAR available to I&APs for public review from 26 November 2018 and the in-process draft BAR from 11 November 2020.

The Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements and all the comments raised and responses thereto were included in the comments and response report.

Specific alternatives, management and mitigation measures have been considered in this Environmental Authorisation and EMPr to adequately address the concerns raised.

2. **Alternatives**

The proposal entails the development of a waste transfer facility on the Remainder of Farm No. 279, Stellenbosch.

The following structures and infrastructure will form part of the proposal:

- A facility building of approximately 1 200m² and 11,5m high from ground level to the top of the roof ridge. The facility building will have the capacity to store one day's waste and will comprise of:
  - a container handling/skip handling area;
  - a tipping hall/drop-off area and area for future conveyer/compaction loading hall and system;
  - ablution facilities;
  - mess/kitchen facilities;
  - site offices;
  - pure-organic waste storage and transfer station;
  - organic mixed waste storage and transfer station; and
  - space for an additional transfer bay.
- In addition to the facility building, the project proposal includes the following associated infrastructure:
  - an access ramp to a raised drop off platform which is approximately 3m above the container/skip handling and storage area;
  - internal roads;
  - upgrading of the R310 median;
  - a parking area;
  - a fence;
  - a landscaped berm, for screening purposes, along the southern and western boundaries of the site;
  - expansion of existing stormwater attenuation pond; and
  - stormwater pipelines and catch pits.

As part of the project, three site alternatives (within the Remainder of Farm No. 279, Stellenbosch) and the "no-go" alternative were considered and are discussed below:

Site Alternatives 1 and 2 are located to south of the R310, on land previously used by Stellenbosch Municipality as part of the waste water treatment works.

2.1. Site Alternative 1:

The development footprint of Site Alternative 1 is 12 200m² in extent. Settlement pond 1, a remnant settlement pond of the waste water treatment works previously used by Stellenbosch Municipality, is located south/south-east of Site Alternative 1. East of the site is the Wynland Water Vereeniging. West of the site is the remainder vacant land of the Remainder of Farm No. 279.

2.2. Site Alternative 2:

The development footprint of Site Alternative 2 is 9 140m² in extent. The site is located just north of the southern boundary of the Remainder of Farm No. 279. East of this site alternative is settlement pond 1 and to the north is the remainder of the vacant land of the Remainder of Farm No. 279. This site alternative is positioned further from the R310 road as opposed to Site Alternative 1. The access road and ramp to the facility will be constructed over a portion of settlement ponds 2 and 3.

Site Alternatives 1 and 2 are not preferred for the following reasons:

- Site Alternative 2 is in close proximity to the floodplain wetland associated with the Veldwagters River, as well as the Veldwagters River itself.
- Developing either of these site alternatives will have potential health risks to employees due to the presence of compounds such as E. coli, sulphate, sodium, and chloride in the settlement ponds located on the site.

- Developing either of these site alternatives will not allow for the clustering of waste management activities which are similar in nature.
- Since these alternatives locate the waste transfer facility and the MRF on opposite sides of the R310, traffic may be hindered because heavy duty vehicles will be turning from the R310 to both the MRF and the waste transfer facility, located north and south of the R310.

2.3. Site Alternative 3 (Herewith Authorised):

The development footprint of Site Alternative 3 is 17 000m² in extent. The site is located north of the R310 and east of the Asara Wine Estate and Hotel. The site is currently cultivated with vineyards, and it is leased from the Stellenbosch Municipality by Asara Wine Estate and Hotel. The existing Devon Valley landfill site is located north of the site and adjacent to the site (to the east) is the MRF, the construction of which is close to completion at the time of assessment.

This alternative is preferred because it will be located adjacent to the MRF and will be able to utilise the existing service connections of the MRF. Therefore, this alternative is more cost effective to develop compared to Site Alternatives 1 and 2.

2.4. "No-Go" Alternative

The "no-go" option was considered and is not preferred for the following reasons:

- Due to the local population increasing in the Stellenbosch area, the volume of waste generated and disposed of is exacerbating the rate at which the municipal landfill site will reach full capacity.
- The pressure on an already over extended landfill site, by not diverting waste, will remain.
- It would also reduce the municipality's opportunity to achieve its waste reduction targets and to improve the green economy by enabling growth in green jobs.

3. Impact Assessment and Mitigation measures

3.1. Activity Need and Desirability:

The airspace/capacity of the Devon Valley landfill site in Stellenbosch is rapidly decreasing and the landfill site is nearing the end of its operational lifespan and therefore requires alternative means of waste disposal. The development of a waste transfer facility to divert and reduce the amount of waste being disposed of at the Devon Valley landfill site, is regarded as a viable option to address this issue. This will result in less landfill airspace being utilised, which in turn will prolong the operational lifespan of the landfill site. The Western Cape Integrated Waste Management Plan (2017- 2022) puts an obligation on municipalities to divert 50% of organic waste streams away from landfill sites by 2020 and a complete ban on organic waste disposed at landfill sites by 2027. In order to achieve this diversion goal by 2022 and later by 2027, Stellenbosch Municipality requires facilities such as the proposed waste transfer facility to collect and divert organic waste for beneficiation. Since authorised off-takers will receive the organic waste from the facility; the proposed facility responds to the need to recycle waste and provides opportunities for waste beneficiation by the private sector. The location of the proposed waste transfer facility is ideally located adjacent to the MRF and to the south of the landfill site, which also enables the sharing of infrastructure with the MRF.

3.2. Biodiversity and Biophysical Impacts:

According to the Botanical Opinion, dated 8 October 2020, from Mr. N. Helme of Nick Helme Botanical Surveys, there is no natural vegetation within Site Alternative 3, as this area comprises cultivated vineyards as well as an old landfill and the current MRF. Therefore, no impacts on indigenous vegetation are anticipated.

Site Alternative 3 was assessed and according to the Addendum to the Freshwater Impact Assessment, dated 8 June 2020, compiled by Dr. L. Day of Liz Day Consulting, there are no surface aquatic features (wetlands or other watercourses) on the site. The site is separated from the Veldwagters River and its floodplain by the MRF and the R310. Site Alternative 3 will have no direct impacts on watercourses.

3.3. Groundwater Impacts

According to the Geohydrological Assessment dated June 2018, compiled by Sduduzo Ndokweni of JG Africa (Pty) Ltd, the main aquifer environment at the site is intergranular and fractured. Due to the weathering characteristics of the Stellenbosch Pluton, the granite typically exhibits primary porosity above the deeper fractured granite. The quaternary deposits play an important role for groundwater recharge into the intergranular and fractured aquifer. The aquifer, in terms of vulnerability and strategic value, is rated as being medium. The impact of the proposed waste transfer facility on the aquifer beneath the site is deemed to have a low to medium impact. However, through the implementation of the specialist recommendations and the EMPr (accepted in Condition 9), impacts on the aquifer will be mitigated to an acceptable level.

3.4. Visual Impacts

According to the Visual Impact Assessment dated June 2019, compiled by Ms. B. Gebhardt, the visual character of the greater landscape is dominated by the rugged mountains and the highly scenic agricultural landscapes that make up the Cape Winelands. The town of Stellenbosch and the Eerste River Valley have cultural value and meaning of long-standing relevance and are of high scenic and historic value. In the more immediate area (to the east and north-east), the landfill, residential suburbs, retail and semi-industrial activities detract from the visual character and quality of the area. Factors such as the hilly topography, the existing landfill and the clusters and avenues of trees, which provides excellent screening, allow for visual absorption capacity ("VAC") within the area. Within the residential areas, existing houses and retail facilities also provide additional screening. Site Alternative 3 is likely to be more visible, given the elevation of the site, but the viewsheds are very similar for all three sites. Visibility of Site Alternative 3 will also depend on where the facility is placed on the site. Although the proposed facility is not visually congruent with the surrounding vineyards and agricultural land, it will be located adjacent to the MRF and landfill site, which will cluster the waste management activities. Additionally, the size and scale of the proposed facility and associated buildings is in keeping with the semi-industrial, retail and other activities, many of which are already visible along this route towards the east (as is the existing landfill site). Visual intrusion with the existing townscape/landscape is therefore considered moderate, with Site Alternative 3 being in closer proximity to similar visual elements. Through the implementation of the specialist recommendations included in Condition 18 and the EMPr (accepted in Condition 9), visual impacts can be mitigated to an acceptable level.

3.5. Heritage Impacts:

According to the Heritage Impact Assessment dated September 2020, complied by Ms. C. Abrahamse of CTS Heritage, the subject property was used as a historic outspan area. Outspans were areas to stop and rest for travellers travelling by ox wagons, or drovers moving large herds of livestock. Veldwachters Outspan has survived into the 21st century as municipal land. The Veldwachters Outspan is partially fallow as it also contains municipal services (water department, sewerage works, municipal waste facilities), cultivated vineyards rented to farmers and several established dams within its boundaries. The site's character as an old outspan has been completely transformed. It is not used by the public and the busy nature of the R310 results in it being regarded more as a movement corridor. Site Alternative 3 would be more visible in the landscape than the other alternative sites and is not supported from a heritage perspective.

However, it also indicated that there has been an industrial node growing in this area since 1953. Rapid growth of the industrial node can be discerned between 1971 and 1989 with the number of factories increasing and the subject site being developed below the R310. Furthermore, the Stellenbosch Municipal Spatial Development Framework (MSDF) identifies the Adam Tas Corridor as an area in which high density residential and commercial land uses are proposed in the future. These land uses would extend to the property immediately east of the Remainder of Farm No. 279. Through the implementation of the visual specialist recommendations included in Condition 18 and the EMPr (accepted in Condition 9), visual impacts of Site Alternative 3 can be mitigated to an acceptable level.

The development will result in both negative and positive impacts.

Negative Impacts:

- Visual and heritage impacts are anticipated however, specialist recommendations have been included in the EMPr as mitigation measure.
- There will be an increase in noise and dust impacts during the construction phase.

Positive Impacts:

- The proposed development will divert a waste stream away from the landfill site, which will prolong the lifespan of the landfill site.
- Prolonging the lifespan of the current Devon Valley landfill site will also enable the municipality to manage the waste produced by its residents without having to transport the waste outside of the municipal boundaries, or create more waste cells in the landfill site. This will allow the municipality to maintain lower rates and a smaller carbon footprint.
- There will be an improvement in the waste management at the landfill site.
- The proposed development provides opportunities for waste beneficiation by the private sector.
- Employment opportunites will be created during the construction and operational phases.

4. National Environmental Management Act Principles

The NEMA Principles (set out in Section 2 of the NEMA, which apply to the actions of all Organs of State, serve as guidelines by reference to which any Organ of State must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between organs of state through conflict resolution procedures; and
- the selection of the best practicable environmental option.

5. Conclusion

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the Competent Authority is satisfied that the proposed listed activity will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the NEMA and that any potentially detrimental environmental impacts resulting from the listed activity can be mitigated to acceptable levels.

END

DEPARTMENT of TRANSPORT & PUBLIC WORKS
Provincial Government of the Western Cape

ROAD NETWORK MANAGEMENT

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www.capegateway.gov.za

REFERENCE: 13/3/5/2-25/9 (Job 18891)
ENQUIRIES: Ms GD Swanepoel

The Municipal Manager
Stellenbosch Municipality
P O Box 17
STELLENBOSCH
7599

Attention: Mr T Serfontein

Dear Sir,

APPLICATION FOR A NEW ACCESS ONTO PROVINCIAL MAIN ROAD 177 (MR177) FOR STELLENBOSCH LANDFILL SITE: PORTION 2 OF FARM MORGENSTER 203, REMAINDER OF FARM 183, REMAINDER OF FARM VELDWAGTERSRIVIER OUTSPAN 280, STELLENBOSCH

1. The following refer:

1.1 The Traffic Impact Statement (TIS) prepared by iCE Group (Boland) dated 14 April 2010.

1.2 Site visits by officials from the Cape Winelands District Municipality (CWDM) and the District Roads Engineer's (DRE) office.

2. Taking into account the above as well as the special requirements relating to this type of access control, this Branch has no objection to allow this new access onto MR177 (R310), subject to the following conditions:

2.1 Access be limited to the position as indicated in the TIS above using the existing median opening and turning lane on MR177.

2.2 The proposed gated access to be upgraded to the following standard:

- The width of the gate to be at least 6.8m;
- The bell mouth to have a minimum radii of 15m;
- Drainage to be addressed properly; and
- The bell mouth at the access must be provided with a permanent surface (tarred).

2.3 A minimum vehicle stacking space of 25m is required between the road reserve fence and the proposed gate providing a total vehicle stacking space of 40m measured from the yellow line on MR177.

2.4 All detail design plans for the above must be submitted to this Branch for final approval with a copy for comment to our agents at the CWDM (Mr ACA Stevens).

2.5 The municipality will be responsible to immediately remove any illegal dumping normally present at such facilities.

2.6 Strict operating hours for public access to the landfill site be implemented upon the opening of the access.

Yours faithfully

ML WATTERS

for EXECUTIVE MANAGER: ROAD & TRANSPORT MANAGEMENT

DATE: 17 · Feb · 2011.

ENDORSEMENTS

1. Cape Winelands District Municipality

   Attention: Mr ACA Stevens (e-mail: aubrey@capewinelands.gov.za)
   Attention: Mr M van Niekerk (e-mail: malan@bolanddm.co.za)

2. District Roads Engineer: Paarl

   Attention: Mr Tsekwa (e-mail: mtsekwa@pgwc.gov.za)

3. iCE Group (Boland)

   Attenion: Mr P van Blerk (e-mail: piet@icegroup.co.za)

4. Mr ML Watters (e-mail)

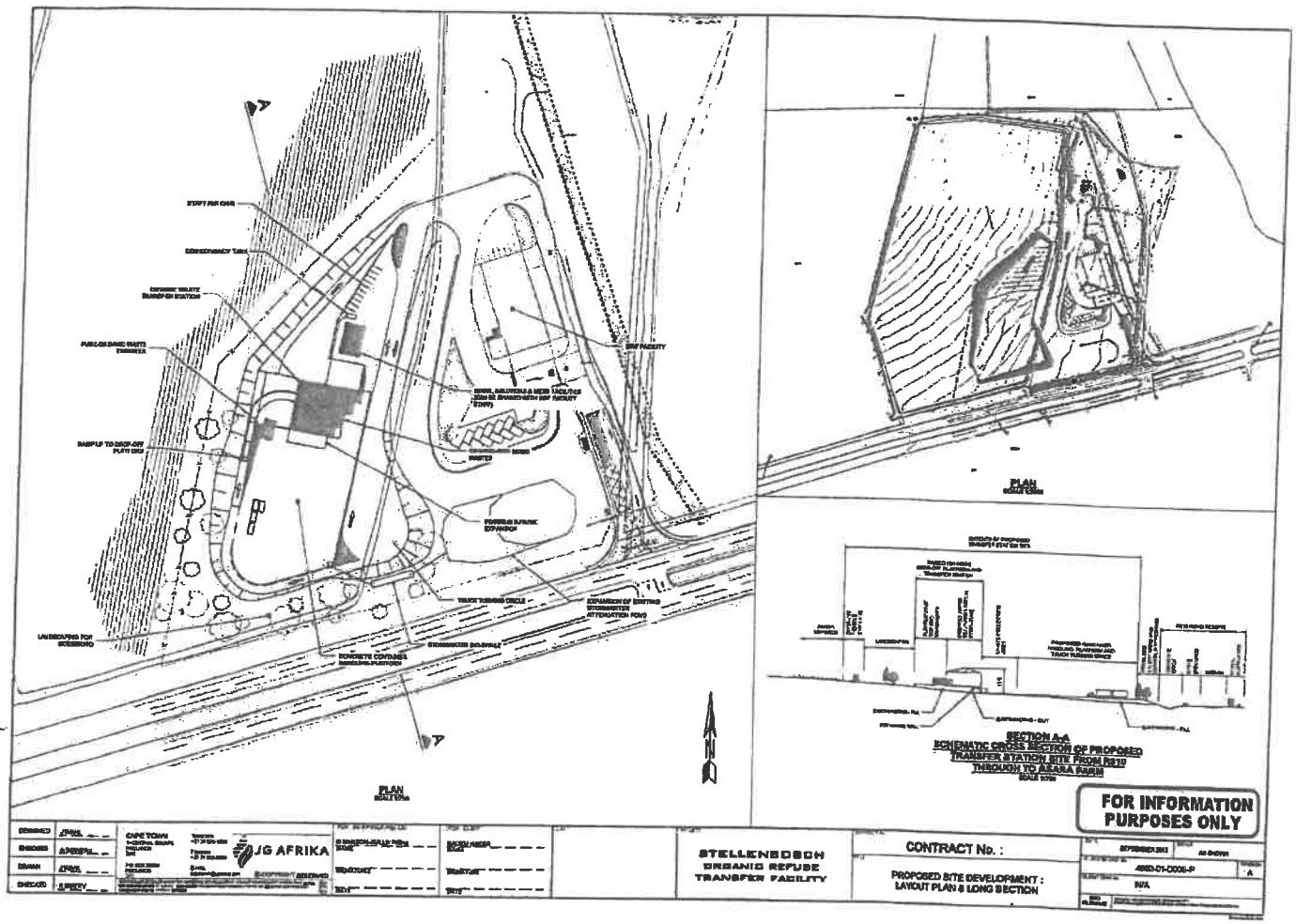
5. Mr B du Preez (e-mail)

6. Trip

7. Planning Section

8. Quads (Room 3-35)

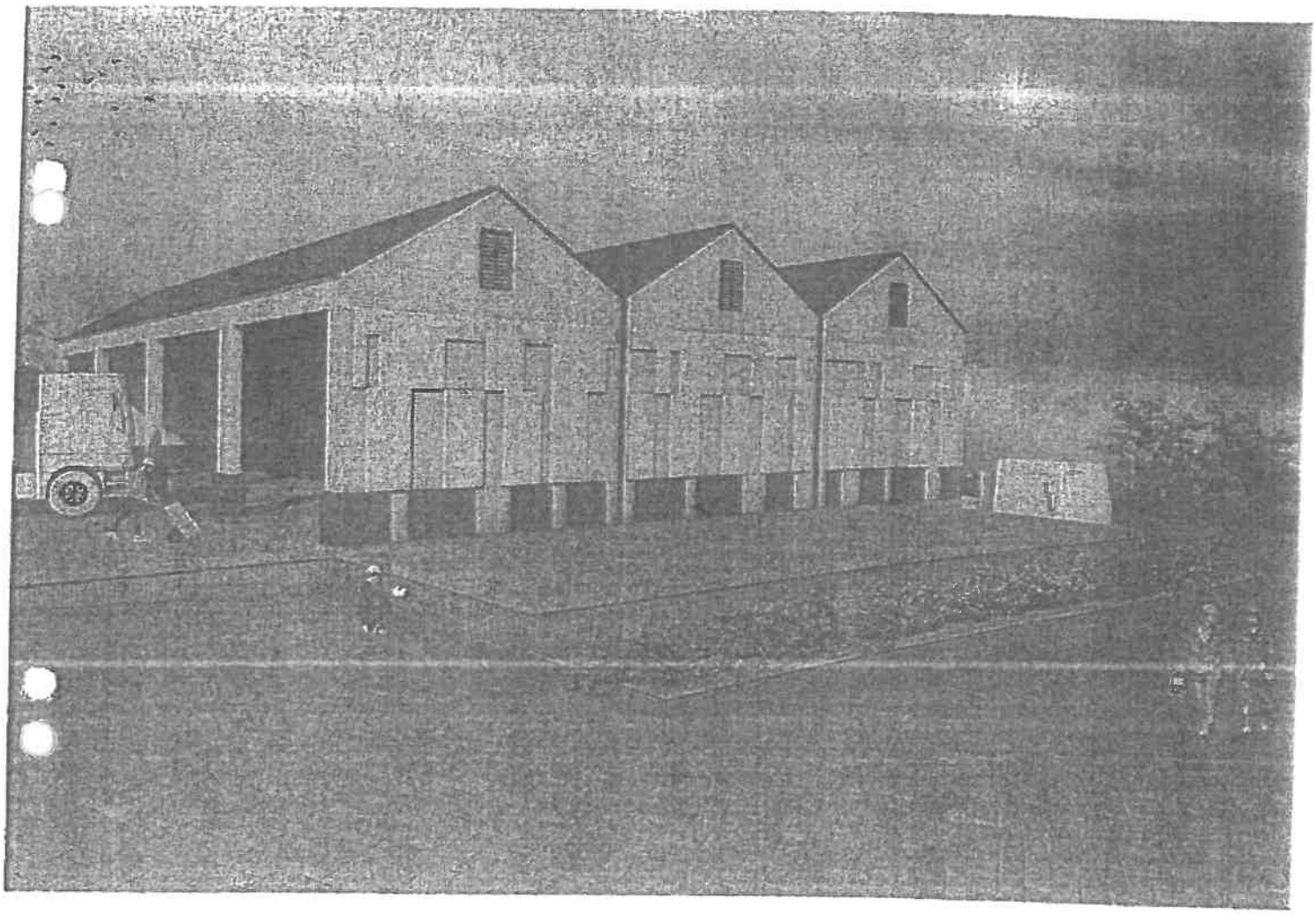

KEY:
Farm boundary
Agriculture and Rural Zone
1/279
RE/279
RE/1/389
1/284


PLAN
PLAN
SECTION A-A
SCHEMATIC CROSS SECTION OF PROPOSED TRANSFER STATION SITE FROM R310 THROUGH TO ASARA FARM
FOR INFORMATION PURPOSES ONLY
JG AFRIKA
CAPE TOWN
STELLENBOSCH ORGANIC REFUSE TRANSFER FACILITY
CONTRACT No. :
PROPOSED SITE DEVELOPMENT : LAYOUT PLAN & LONG SECTION
SEPTEMBER 2021
4660-01-0006-P
A
N/A

ORGANIC WASTE TRANSFER STATION

STELLENBOSCH

21 -06-2020



OSMOND LANGE

CONCEPT

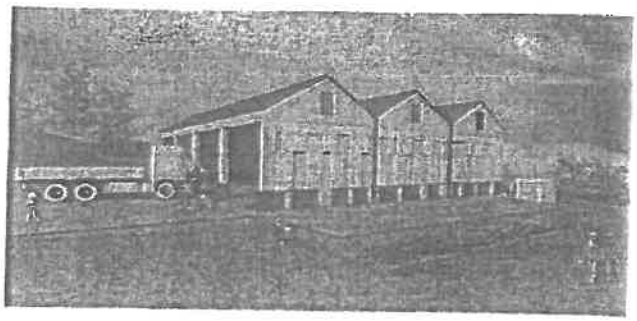
The concept for the Organic Waste Transfer Station was to use an architecture that is reminiscent of historic Stellenbosch and industrial barn building typologies.

The building façade is broken down into the traditional base, middle facade and roof/ gable edge.

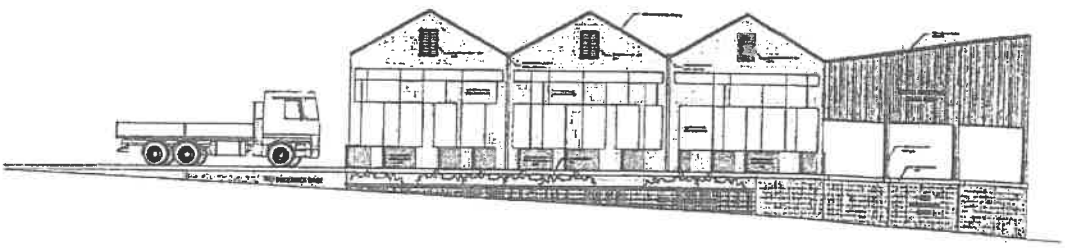
A red brick base at the retaining structures lends a robust looking edge to the building and is also easy to clean from a maintenance point of view. This acts as a plinth to the building.

A modern pattern façade using historic Stellenbosch building proportions was explored. It has a combination of smooth and rough textures. Smooth precast concrete panels offset with textured bagged brickwork speaks of a rustic wine farm style architecture found in the area.

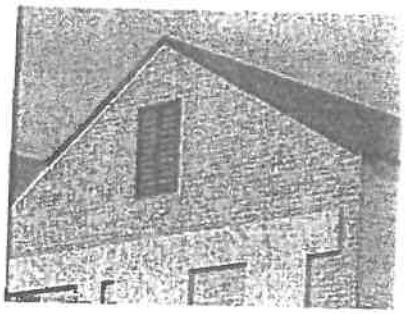
This façade faces onto one of the main roads into Stellenbosch and will create visual interest. Shadows will fall off the pattern relief and create a perception of depth.

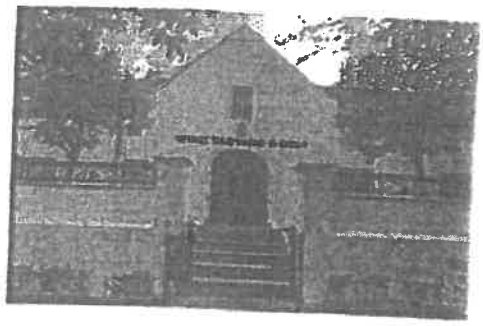


The roof is modulated into three portions to create a sense of manageable scale. A single massive roof structure would not relate to the Architectural language of the area.



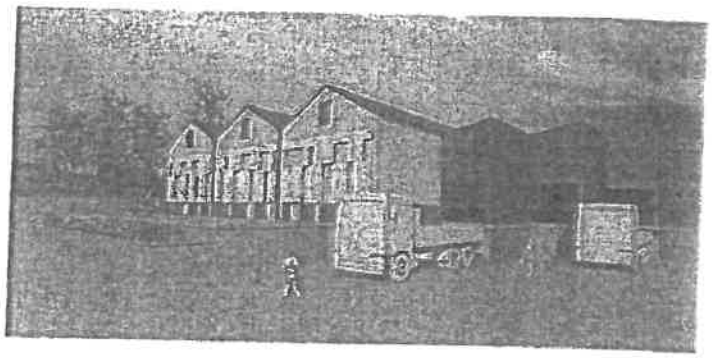
Louvres and gables are treated simply, but are reminiscent of the gables with punctured openings on some of the traditional buildings in the area.

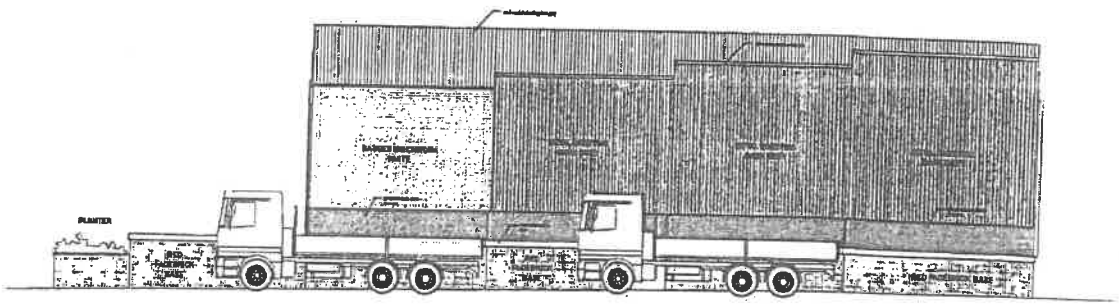




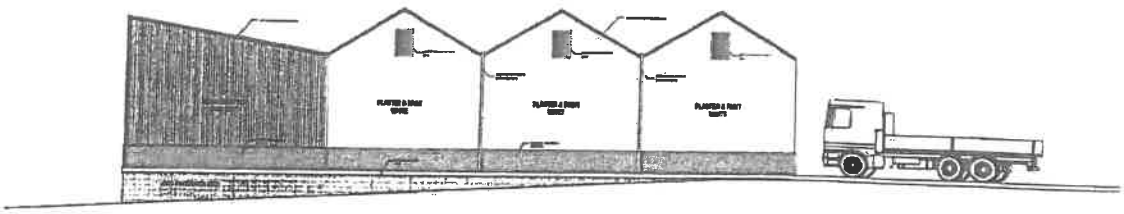
Example of a traditional simple gabled façade vs. the new proposed Stellenbosch Organic Waste Transfer Station.

The truck bay area is treated as a more industrial and contrasted portion of the building – and is the "working" portion of the façade. Dark grey roof sheeting material is proposed to be used to create the envelope.

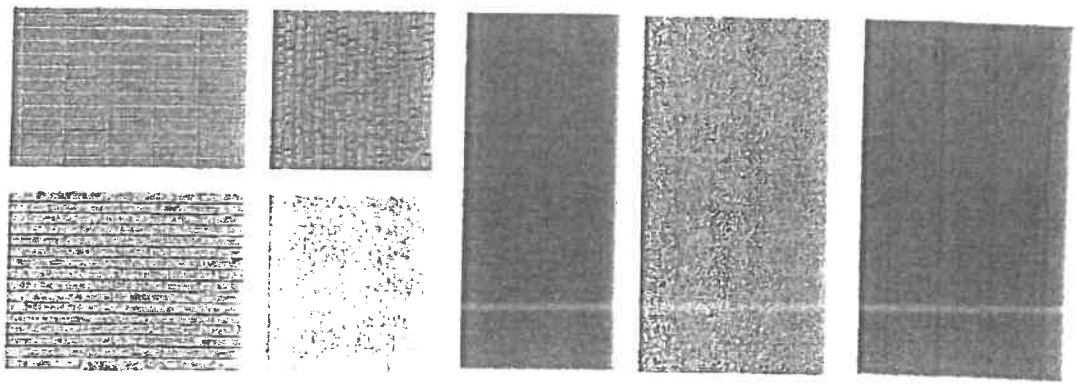




A dark grey base portion of wall which is proposed to wrap around the perimeter of the structure (both externally and internally) This will hide the bio waste residue which could rub off against the walls. An easy to clean epoxy paint will need to be used on these portions of walls.



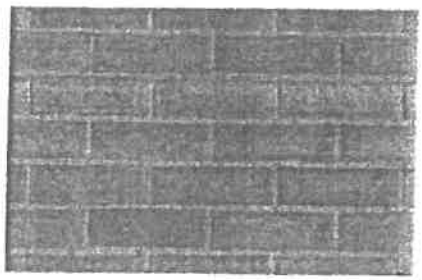
Colours are to be neutral so as to not draw too much attention the building. Simple off-white, dark greys which are off set with a red brick base will create the material pallet.



MATERIAL SPECIFICATIONS

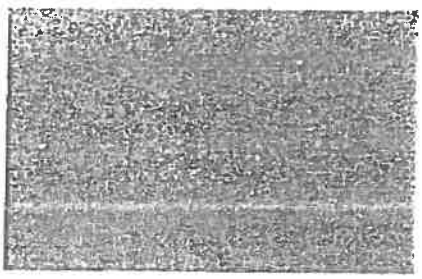
1. Red Brick Base

Corobrick Redwood Facebrick – Satin Finish (222 x 106 x 73)



2. Concrete Floor Slab

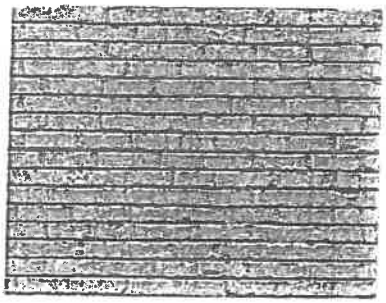
Polished concrete floor slab with aggregate



3. Bagged white brickwork

Colour code : RAL 9033 Signal White

Texture finish



4. Smooth precast concrete panels on feature façade

Painted - Colour code : RAL 9033 Signal White

5. Corrugated metal roof sheeting

Colour : RAL 7043 Traffic Grey B



6. Dark Grey painted walls

Colour : RAL 7043 Traffic Grey B



7. Paving

Interlocker Industrial concrete paver: colour charcoal



JG AFRIKA
EXPERIENCE QUALITY INTEGRITY

Traffic Impact Statement for the Proposed Stellenbosch Solid Waste Refuse Transfer Station

MAY 2020
FINAL ISSUE

Prepared by:

JG AFRIKA (PTY) LTD

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JG AFRIKA

VERIFICATION PAGE	Form 4.3.1
	Rev 13

TITLE: Farm RE/279 -Stellenbosch Waste Transfer Facility - Traffic Impact Statement		
JGA REF. NO. 4780	**DATE:** 31/05/2018	**REPORT STATUS** First Issue

CARRIED OUT BY:	COMMISSIONED BY:
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AUTHOR Avheani Ramawa	**CLIENT CONTACT PERSON** Ms Kim Williams

SYNOPSIS

Prepare a Traffic Impact Statement pertaining to all relevant traffic and transportation engineering aspects for the proposed Stellenbosch Waste Transfer Facility. The facility is proposed on Farm RE/279, located along the southern side of the R310, approximately 389m west of the R310/Vredenburg Rd intersection.

KEY WORDS:

Traffic Impact Statement

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QUALITY VERIFICATION

This report has been prepared under the controls established by a quality management system that meets the requirements of ISO9001: 2008 which has been independently certified by DEKRA Certification under certificate number 90906882

Verification	Capacity	Name	Signature	Date
By Author	Engineer	Avheani Ramawa		31/05/2018
Checked by:	Associate	Iris Wink		31/05/2018
Authorised by:	Executive Associate	Richard Emery		31/05/2018

Filename:	X:\Projects - (In-progress)\4806 Stellenbosch Transfer Station (IW)\Reports\4806 Stellenbosch Waste Transfer Facility - TIS _JG AFRIKA 20180531.docx

Proposed Stellenbosch Solid Waste Refuse Transfer Station
Traffic Impact Statement

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Figure 4-3:Typical access layout
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1 INTRODUCTION

JG Afrika (Pty) Ltd was appointed by The Environmental Partnership, on behalf of their client, to prepare a Traffic Impact Statement (TIS) for the proposed Stellenbosch Solid Waste Refuse Transfer Station (RTS).

This TIS is an amendment of the previous TIS, *Farm RE/279 Stellenbosch Waste Transfer Facility Traffic Impact Statement. May 2018. JG Afrika (Pty) Ltd,* submitted to The Environmental Partnership. The original TIS entailed the proposed development of the portion of Farm RE/279 located south of the R310.

This revised TIS will include the assessment of the portion of Farm RE/279 located north of the R310 as an alternative site for the proposed RTS. The farm portion south of the R310 will henceforth be known as Site Alternative A and the north portion of the farm will be known as Site Alternative B.

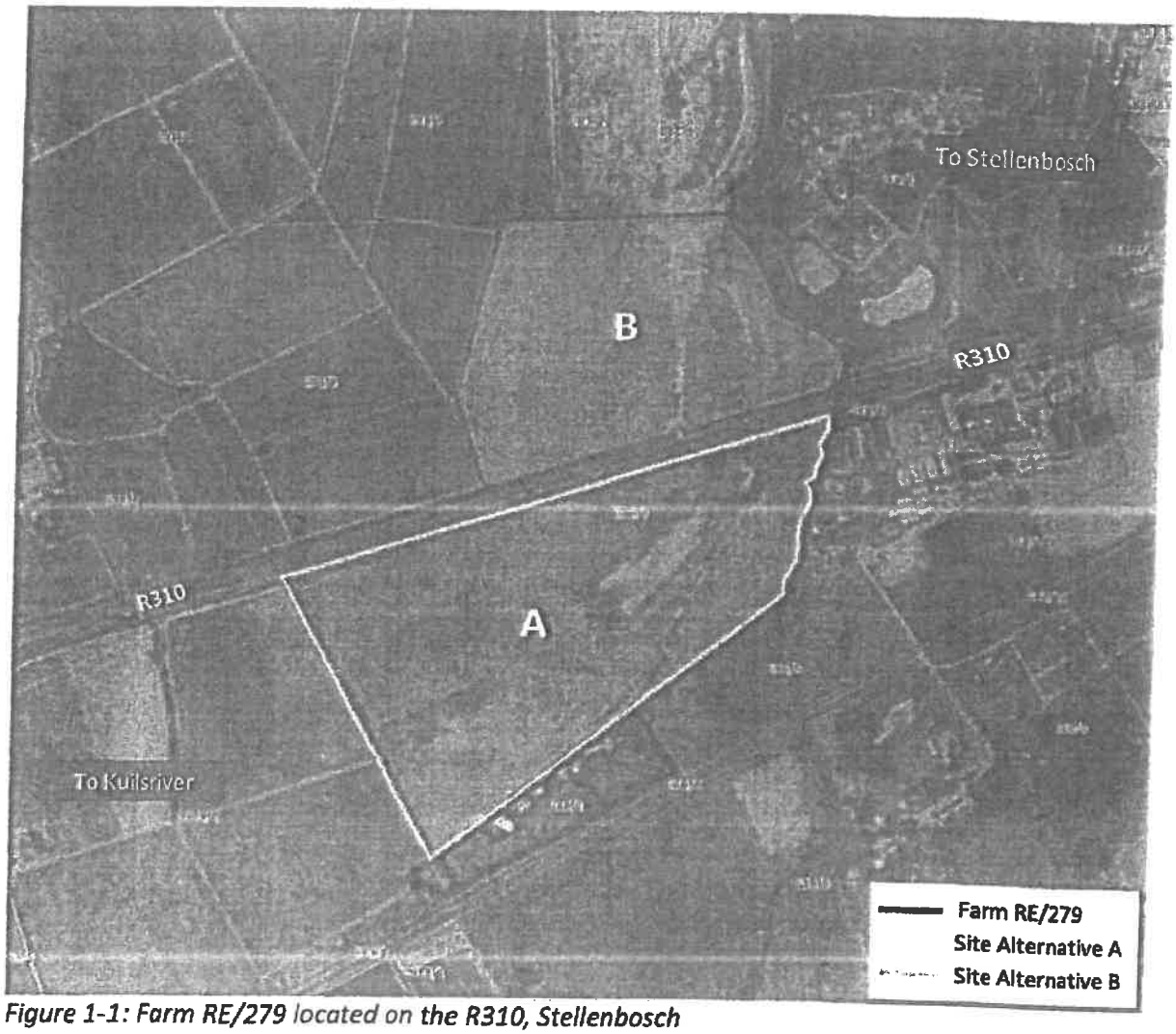


Figure 1-1: Farm RE/279 located on the R310, Stellenbosch

2 BACKGROUND AND SCOPE OF WORK

The Stellenbosch Municipality (SLM) has recognised the need for waste diversion and the development of this proposed organic waste management facility forms part of a larger system of interventions under development by the Municipality. The Municipality aims to divert up to 50% of its organic waste from the landfill by 2022.

The proposed facility will be able to accommodate approximately 3 000 tons of refuse per month. The RTS will receive waste via drop off and diversion activities and will be able to accommodate temporary storage of waste. The proposed facility is to be designed to accommodate the delivery of waste from an estimated ten trucks, undertaking two to three trips per day. The facility will also accommodate off-takers, who will collect waste for beneficiation using their own fleet and resources.

As the facility is expected to generate less than 50 peak hour trips, a Traffic Impact Statement is required.

The report will deal with the items listed below and focuses on the surrounding road network in the vicinity of the site:

- Extent of the traffic study and study area;
- The proposed development;
- Transport design input for the layout and design of the proposed development;
- The existing road network and future road planning proposals;
- Trip generation for the proposed development;
- Traffic impact of the proposed development;
- Recommended road upgrades if necessary;
- Access and circulation requirements;
- Loading and Parking requirements;
- Public Transport;
- Non-motorised Transport; and
- Recommended public transport and NMT upgrades if necessary.

The following guidelines have been used to determine the extent of the traffic study:

- Manual for Traffic Impact Studies, Department of Transport, 1995;
- TRH26 South African Road Classification and Access Management Manual, COTO;
- TMH 16 South African Traffic Impact and Site Traffic Assessment Manual (Vol 1), COTO, August 2016;
- TMH 17 Volume 1: South African Trip Data Manual, COTO, September 2012;
- Stellenbosch Municipality Zoning Scheme By-Law, 2019;
- NMT Facility Guideline, Department of Transport, 2015;
- Google Earth Pro; and
- Chief Surveyor General Website.

3 DEVELOPMENT LOCATION & SURROUNDING ROAD NETWORK

3.1 Site Location

Farm RE/279 is located along the R310 in the Stellenbosch Municipality, between Kuilsriver and Stellenbosch, as shown in **Figure 3-1** below.

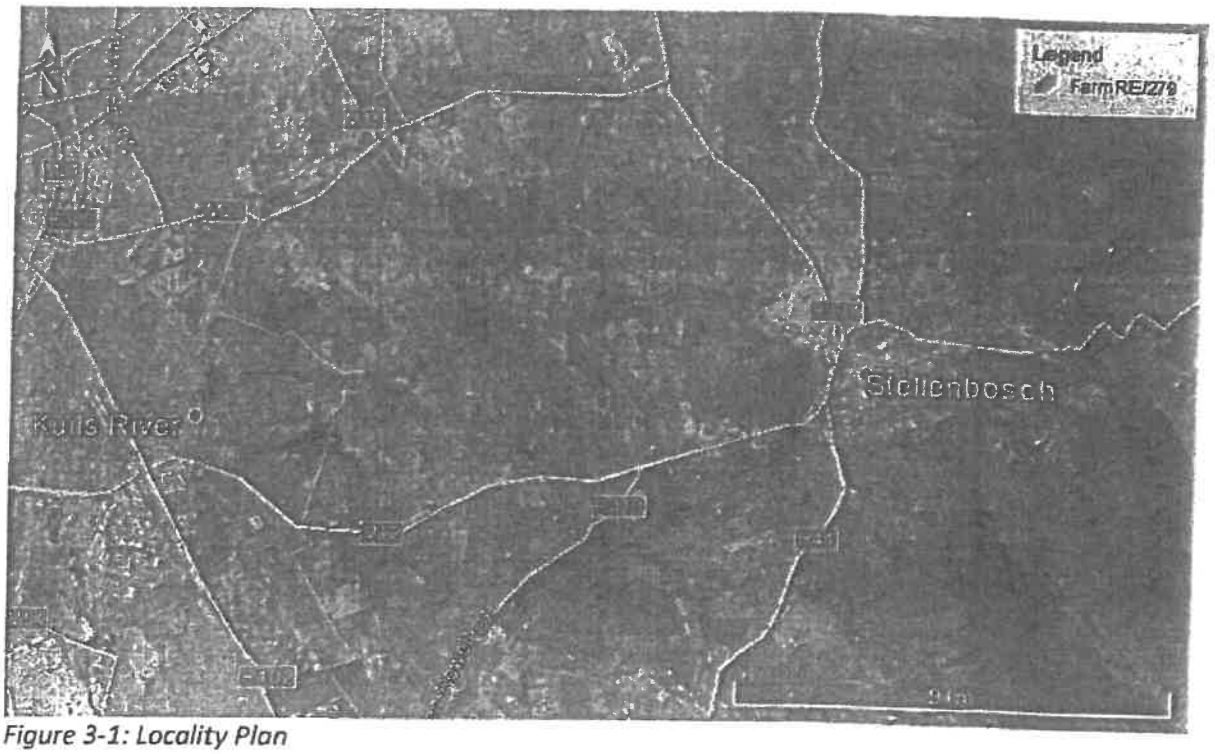


Figure 3-1: Locality Plan

The farm is bounded by the Asara Wine Estate to the west, the Department of Agriculture, Forestry and Fisheries to the east, Droedyke Farm to the south and the Stellenbosch Landfill to the north, shown in **Figure 3-2** below. The proposed site is currently undeveloped. The two site development alternatives are presented in **Figure 3-2**. Site Alternative A, approximately 1.5 hectares in extent, is the portion of Farm RE/279 located south of the R310 and Site Alternative B, approximately 1.2 hectares in extent, is located north of the R310.

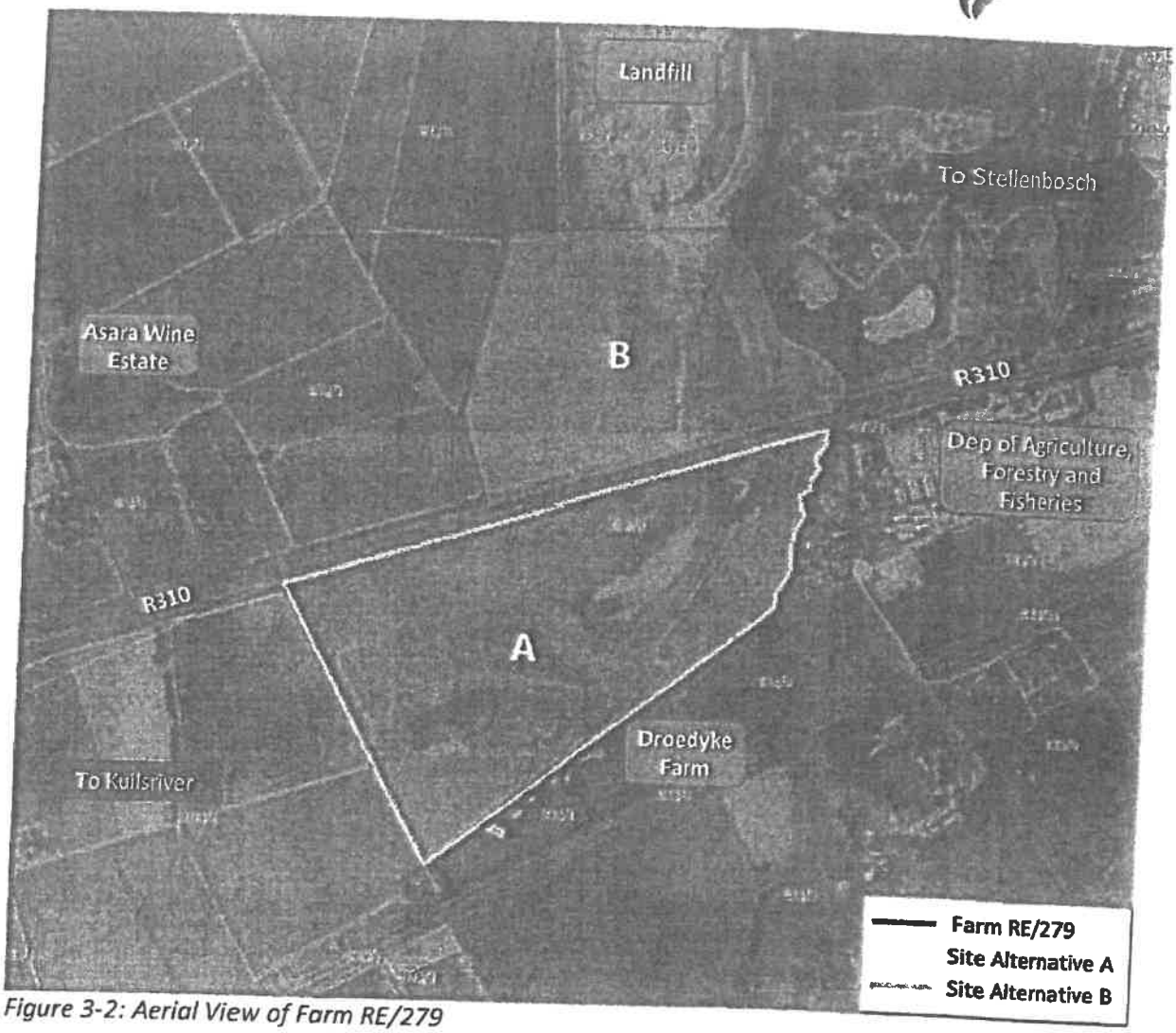


Figure 3-2: Aerial View of Farm RE/279

3.2 Surrounding Road Network

The road classification mentioned below has been derived from the *COTO's South African Road Classification and Access Management Manual (TRH26, 2012).*

R310



The R310 is a Class 1 Expressway.

The road is a dual carriageway with two surfaced lanes per direction and a median island. The R310 passes the site on its the northern boundary. It has a surfaced shoulder on both sides.

4 ACCESS AND PARKING

4.1 Site Access

4.1.1 Site Alternative A

An existing gravel service road, located off the R310, currently serves farms to the south of the site, as shown in **Figure 4-1** below.

The facility footprint is still to be determined, however, the access to the facility is intended to be located off the existing gravel service road located within the property. The gravel service road, internal access road and facility access will need to provide suitable lane widths to accommodate light as well as heavy vehicle traffic. It is advised that the access to the facility be security controlled, while the service road access remains without security control as it services the farms south of the site.

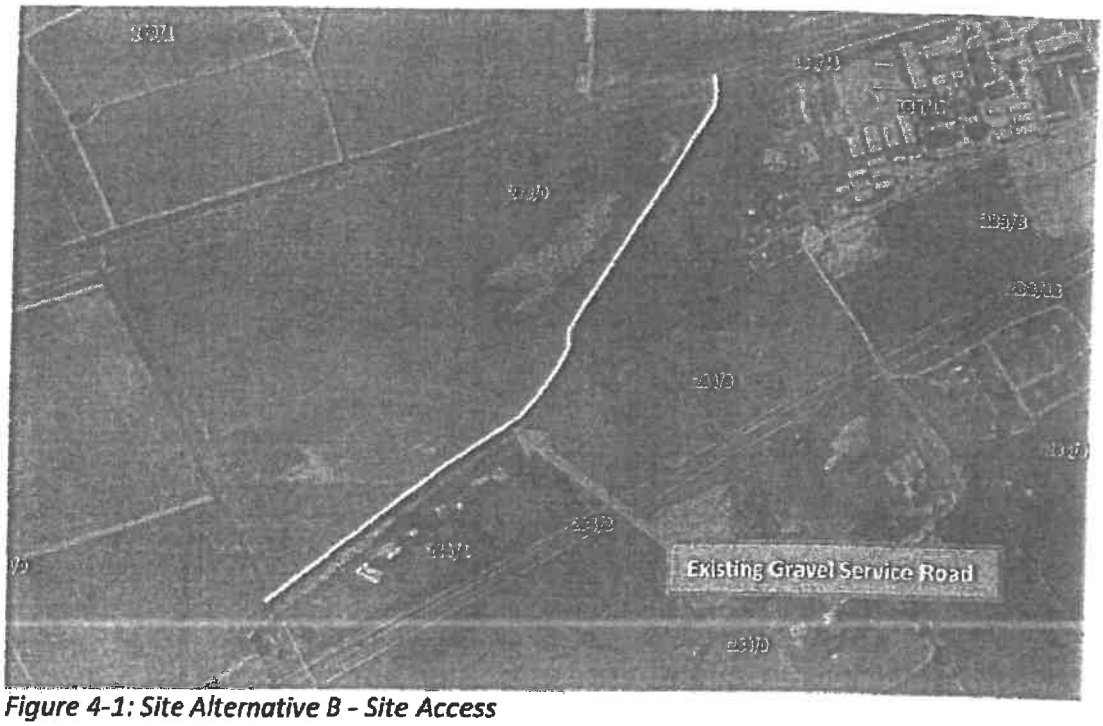


Figure 4-1: Site Alternative B - Site Access

4.1.2 Site Alternative B

Site Alternative B will share an access with the approved Materials Recovery Facility (MRF) to be constructed adjacent to the proposed RTS. The facility footprint has not been finalised but the proposed RTS and MRF will share infrastructure such as the weighbridge, ring road and access control.



Figure 4-2: Site Alternative B – Site Access

Sidewalks with a minimum width of 1.5m will need to be provided on at least one side of the internal roads as well as the access road leading to the proposed facility, to facilitate safe pedestrian movement. Pedestrian crossing points will need to be accommodated at strategic locations to link pedestrian facilities.

It is recommended that the bellmouth of the access road be surfaced in line with the Western Cape Government Department of Transport and Public Works Standard drawing WCS/11/2/C1. Of specific interest is the detail for the through road intersection with Class 4 road or private access (>50 vehicles per day). The median opening on the R310 should be at least 28m wide to accommodate turning movements of trucks. The road marking and signage must adhere to the South African Road Traffic Signs Manual (SARTSM) standards. Shoulder sight distances are adequate provided that vegetation will be cut back and the appropriate splays established at the access roads.

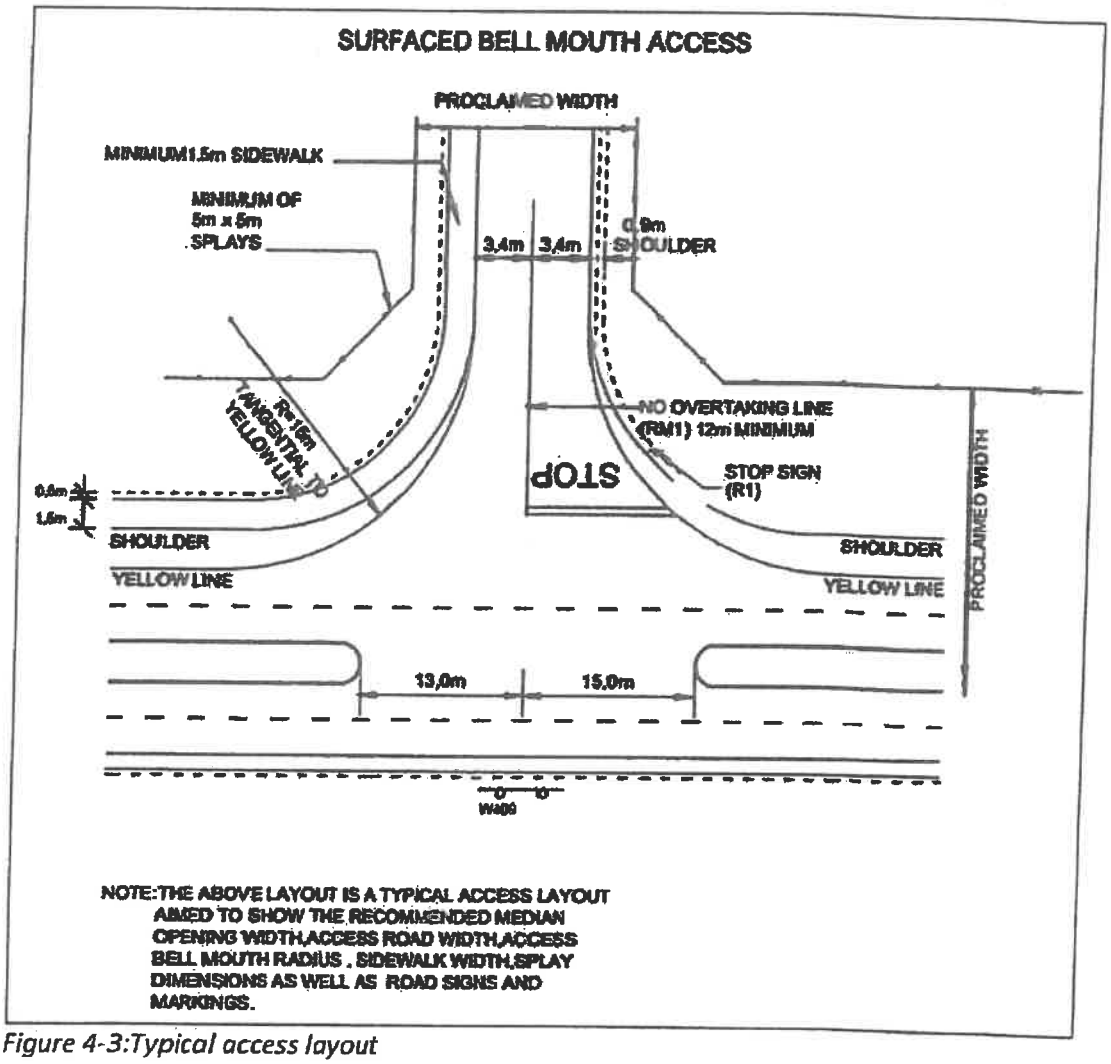


Figure 4-3:Typical access layout

4.2 Access Queuing Analysis

As it is expected that the access points to the proposed RTS will be security controlled, a queuing analysis was conducted, using the highest expected inbound traffic flows, to determine the required stacking space in front of the access booms. The queuing analysis is applicable to both Site Alternatives.

It is estimated that ten trucks will undertake two to three trips per day. Based on a previous TIA conducted for a similar site, it is further assumed that another five trips can be allocated to management / administration staff.

A worst-case scenario of 30 generated peak hour trips is estimated for the site. It is further assumed that a maximum of 21 vehicles will enter the site during peak hours (i.e. 70:30 (in: out split) – see also **Table 5-2.**

It is recommended that the 85th percentile queue length be used as it is applicable to accesses on Class 5 roads. The 85th percentile queue length is the vehicle queue length that will only be exceeded 15 times out of 100.

It is assumed that the access to the proposed RTS will be security controlled via booms or mechanically controlled gate. An average service rate of 30 sec/veh has been used to establish the required stacking space in front of the respective booms/gate.

Table 4-1: Queuing Analysis Results for facility Access

Description	Transfer station Facility
Maximum arrival inbound (vph)	21
Average service rate (sec/veh)	30
Number of channels required (gates)	1
85th percentile queue length (<n vehicles)	1
Average delay (sec)	36.4
Recommended stacking space between kerb line and boom (m)	12

The required stacking distances between the kerb line and the boom/gate for the respective access is 12m to accommodate the largest typical vehicle expected for a site of this nature.

It is recommended to allow for a dedicated entrance and exit lane (i.e. one entrance and one exit). The overhead clearance of both entrance and exit must accommodate the largest expected delivery vehicle.

4.3 Parking

As there are no specific parking ratios provided in the Minimum Off-Street Parking Requirements of the Stellenbosch Municipality Zoning Scheme for this type of industrial development, it is recommended that:

- Parking be provided for management/administration staff (one bay per staff member);
- At least two bays be provided for visitors;
- The delivery vehicles have dedicated facilities to load and offload waste; and
- Parking must adhere to the Stellenbosch Municipality Parking Standards.

A Turning Movement analysis is recommended to ensure safe traffic movements on site and to limit conflict points between different vehicles accessing the site. Pedestrian walkways between the parking bays and the office and entrances to the facility need to be clearly marked to ensure safe walking.

The above is recommended on the assumption that workers and security personnel will travel with public transport and that trucks will leave the site after deliveries.

5 TRAFFIC IMPACT ON EXTERNAL ROADS

The number of trips generated by the proposed development is deemed low. The generated development trips will be less than 50 during the respective morning and afternoon peak hours.

The two Site Alternatives will generate the same number of vehicle trips as the operations will be the same.

The assumptions made in Table 4-1 are made as worst-case scenario for both Site Alternatives:

Table 5-1: Maximum trips assumed for the site (worst case scenario)

Potential trip generator:	Max Assumed Trips generated
The facility is proposed to accommodate delivery from 10 trucks undertaking 2 to 3 trips per day.	A max of 10 heavy vehicles at any time
Based on studies conducted for a similar site, five management/admin staff trips are assumed for the site	5 light vehicles
The site will allow for storage space of organic waste from approximately 20 restaurants. The organic waste can be collected for re-use, however, the recipient must use their own resources and fleet for collection.	15 vehicles (5 light and 10 heavy (small truck))
Total Peak hour trips	**30 trips**

Assuming the TMH17 Volume 1 (in:out) splits for industrial areas, the following development trips were chosen:

Table 5-2: Development trips (max estimated)

Peak hour	Split (In:Out) Industrial Area (park)	Trips (In/Out)
AM	(70:30)	(21/9)
PM	(25:75)	(8/22)

6 ASSESSMENT OF TRAFFIC IMPACT ON THE SURROUNDING ENVIRONMENT

Table 6-1 summarizes the impact of the additional vehicle movements on the surrounding environment.

Table 6-1: Potential Impacts

Environmental Parameter:	**Traffic Congestion**
Issue/Impact/Environmental Effect/Nature:	**Increased Traffic / Vehicle Movement**
Nature of impact:	The vehicle trips generated by the proposed project are not expected to be more than 30 trips during the peak hour, which is deemed low.
Extent and duration of impact:	Local and long term
Intensity of impact:	Low
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)*	Low
Degree to which the impact can be mitigated:	Low – medium
Proposed mitigation:	• Develop a delivery management plan to ensure that the arrival of delivery vehicles on site is distributed over the whole day. • Schedule trips to RTS to occur outside peak hours
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

7 PUBLIC TRANSPORT AND NON-MOTORISED TRANSPORT

In terms of the National Land Transport Act (NLTA) (Act No.5 of 2009), it is a requirement that an assessment of the available public transport services be included in Traffic Impact Assessments. This White Paper on National Transport aims to limit the walking distance to a development from the nearest public transport service to less than 1 km.

The following comments are relevant in respect to the public transport availability for the proposed development.

7.1 Public Transport

7.1.1 Existing Services

Minibus taxis and buses operate along the R310. An informal taxi stop is located approximately 550m east of the Farm (see Figure 5-1). A taxi stop is also located approximately 2.8km east of the Farm at the Stellenbosch Railway Station.

The Vlottenburg Railway Station is located approximately 3km away from the site service road access at the R310, and the Stellenbosch Railway Station on Adam Tas Street is located approximately 2.8km east of the site service road access.



Figure 7-1: Public Transport Facilities around the site

Due to the presence of minibus taxis and buses along the R310, the provision of public transport is deemed adequate. It should be noted that public transport stops/embayments are not allowed on Class 1 roads.

7.1.2 Planned Transport Services

Currently there are no known planned public transport services in the vicinity of the site.

7.2 Non-motorised Transport (NMT)

There are no formal paved sidewalks on the R310 in the vicinity of the two Site Alternatives. It is recommended that sidewalks with a minimum width of 1.5m be constructed along at least one side of the service road site located south of the R310 (Site Alternative A).

Surfaced sidewalks, with widths no less than 1.5m, as specified by DoT's NMT Facility Guideline, with barrier kerbs protecting pedestrians from through traffic and preventing motor vehicles from parking on sidewalks should be provided along the frontage of the development. The sidewalks should be linked seamlessly to the development's internal pedestrian network.

Universal accessibility needs to be ensured by providing suitable dropped kerbs at pedestrian crossing points e.g. at the proposed access to the site.

8 SUMMARY

- This TIS is an amendment of the previous TIS, *Farm RE/279 Stellenbosch Waste Transfer Facility Traffic Impact Statement.*
- It includes the assessment of the portion of Farm RE/279 located north of the R310 as an alternative site for the proposed RTS.

8.1 Site Location

- Farm RE/279 is located along the R310 in the Stellenbosch Municipality, between Kuilsriver and Stellenbosch.
- The farm is bounded by the Asara Wine Estate to the west, the Department of Agriculture, Forestry and Fisheries to the east, Droedyke Farm to the south and the Stellenbosch Landfill to the north.
- Site Alternative A, approximately 1.5 hectares in extent, is the portion of Farm RE/279 located south of the R310 and Site Alternative B, approximately 1.2 hectares in extent, is located north of the R310.

8.2 Access and internal circulation

- Site Alternative A – The facility footprint is still to be determined, however, the access to the facility is intended to be located off the existing gravel service road located within the property.
- Site Alternative B - will share an access with the approved Materials Recovery Facility (MRF) to be constructed adjacent to the proposed RTS. The facility footprint has not been finalised but the proposed RTS and MRF will share infrastructure such as the weighbridge, ring road and access control.
- It is recommended that the proposed access road off the R310 accommodates the following:
  - A surfaced bell mouth on the service road in line with the Western Cape Government Department of Transport and Public Works standard detail drawing;
  - 1.5m sidewalk on at least one side;
  - A 28m wide median opening at the R310 to accommodate turning movements of trucks;
  - The road marking and signage must adhere to the SARTSM Standards; and
  - Shoulder sight distances will be suitable provided that vegetation will be cut back and the appropriate splays established at the service road access.
- The controlled site access is recommended to accommodate a dedicated entrance and exit lane (i.e. one entrance and one exit) with a 12m stacking distances between the kerb line and the boom/gate.
- The overhead clearance of both the entrance and exit of the site access must accommodate the largest expected delivery vehicle.

8.3 Parking

- Based on limited information on the footprint of the development, as well as a lack of Minimum Off-Street Parking Requirements for this type of industrial development in the Stellenbosch Municipality Zoning Scheme, it is recommended that:
  - Parking be provided for management/administration staff with one bay per staff member,
  - At least two bays be provided for visitors and
  - The delivery vehicles have dedicated facilities to load and offload waste.

- A Turning Movement analysis is recommended to limit conflict points between vehicles entering and leaving the site and to verify required space for heavy vehicles travelling through the site. Pedestrian walkways need to be clearly marked to ensure safe walking.
- The above is recommended on the assumption that workers and security personnel will use public transport, and the delivery trucks will leave the site after deliveries or collections.

8.4 Traffic Impact on external roads

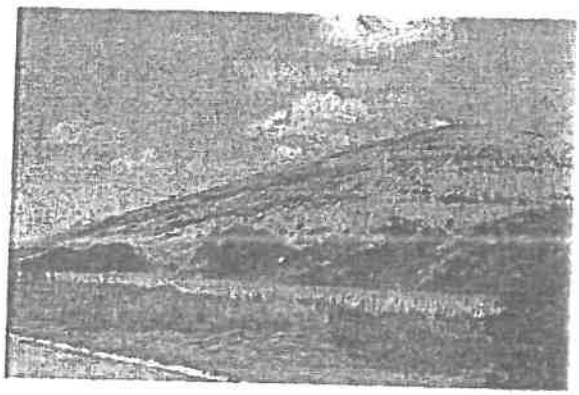
- The number of trips generated by the proposed development is deemed low. The total generated development trips are expected to be less than 50 veh/hr during peak hours.
- A maximum of 30 vehicles are expected during the respective morning and afternoon peak hours.
- The impact from an environment point of view is considered low due to the low number of generated trips.
- Proposed mitigation measures include developing a delivery management plan and to scheduled trip the proposed RTS to occur outside peak hours.

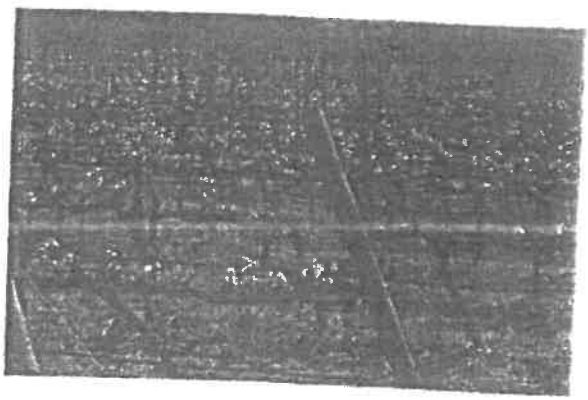
8.5 Public Transport and Non-Motorised Transportation

- Due to the presence of minibus taxis and buses along the R310, the provision of public transport is deemed adequate. It should be noted that public transport stops/embayments are not allowed on Class 1 roads.
- Surfaced sidewalks, with widths no less than 1.5m, as specified by DoT's NMT Facility Guideline, with barrier kerbs protecting pedestrians from through traffic and preventing motor vehicles from parking on sidewalks should be provided along the frontage of the development. The sidewalks should be linked seamlessly to the development's internal pedestrian network.
- Universal accessibility needs to be ensured by providing suitable dropped kerbs at pedestrian crossing points e.g. at the proposed access to the site.

The proposed development is supported from a traffic engineering point of view provided that the recommendations made are adhered to.







Visual Impact Assessment

Final

Stellenbosch Organic Refuse Transfer Station, Stellenbosch Municipality, Western Cape

June 2019

Visual Impact Assessment for the Stellenbosch Organic Refuse Transfer Station, Stellenbosch Municipality, Western Cape

FINAL

Revision one

June 2019

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Report Prepared For:

Environmental Partnership (Pty) Ltd.

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LIST OF ACRONYMS AND ABBREVIATIONS

BA	Basic Assessment
BAR	Basic Assessment Report
DEADP	Department of Environmental Affairs and Development Planning
EIA	Environmental Impact Assessment
EMPr	Environmental Management Plan Report
GPS	Global Positioning System
Ha	Hectares
HWC	Heritage Western Cape
I&APs	Interested and Affected Parties
Km	Kilometers
M	Meters
mamsl	Meters above mean sea level
Mm	Millimetres
NEMA	National Environmental Management Act
RTS	Refuse Transfer Station
ToR	Terms of Reference
VAC	Visual Absorption Capacity
VIA	Visual Impact Assessment
ZVI	Zone of Visual Influence

1 Introduction

1.1 BACKGROUND

The Waste Department of the Stellenbosch Municipality is planning the development of a Refuse Transfer Station (RTS) near the existing Devon Valley Stellenbosch Landfill. The remaining airspace at the Stellenbosch landfill is decreasing and measures to divert waste from the landfill are urgently required. The RTS is intended to receive organic-rich waste streams from the 'Separation-At-Source' programme. This waste will then be beneficiated in order to reduce the quantity of waste going to landfill.

The sites initially proposed for the construction of the facility were shown to be unsuitable following further site investigations together with the findings of the Specialist Aquatic Ecosystems Report and the 100-year floodline study. These sites were collectively referred to as Alternative A in the Engineering Report (JG Afrika, 2018). Two layout and location alternatives on municipal-owned land (on remainder of Farm 279) were then considered, referred to as Alternatives A and B in impact assessment[1]. Following the release of the draft Basic Assessment Report (BAR) and initial public meetings an additional site, adjacent to the existing landfill site, was included in the assessment process. This site is referred to as Alternative C.

Alternative A is situated south of R310 (Adam Tas) road, opposite the Stellenbosch Landfill and immediately north of the old Waste Water Treatment Works maturation pond, which is no longer in use ("Pond 1"). Alternative A is situated to the west of Pond 1, straddling Ponds 2 and 3. Alternative C is located on the northern side of the R310 adjacent to the existing landfill (see Figure 1).

The National Environmental Management Act (NEMA) and NEMA: Environmental Impact Assessment (EIA) Regulations, as amended, require that Basic Assessment (BA) process be undertaken for the proposed development, since it includes listed activities in terms of these regulations. The environmental assessment is being conducted by The Environmental Partnership.

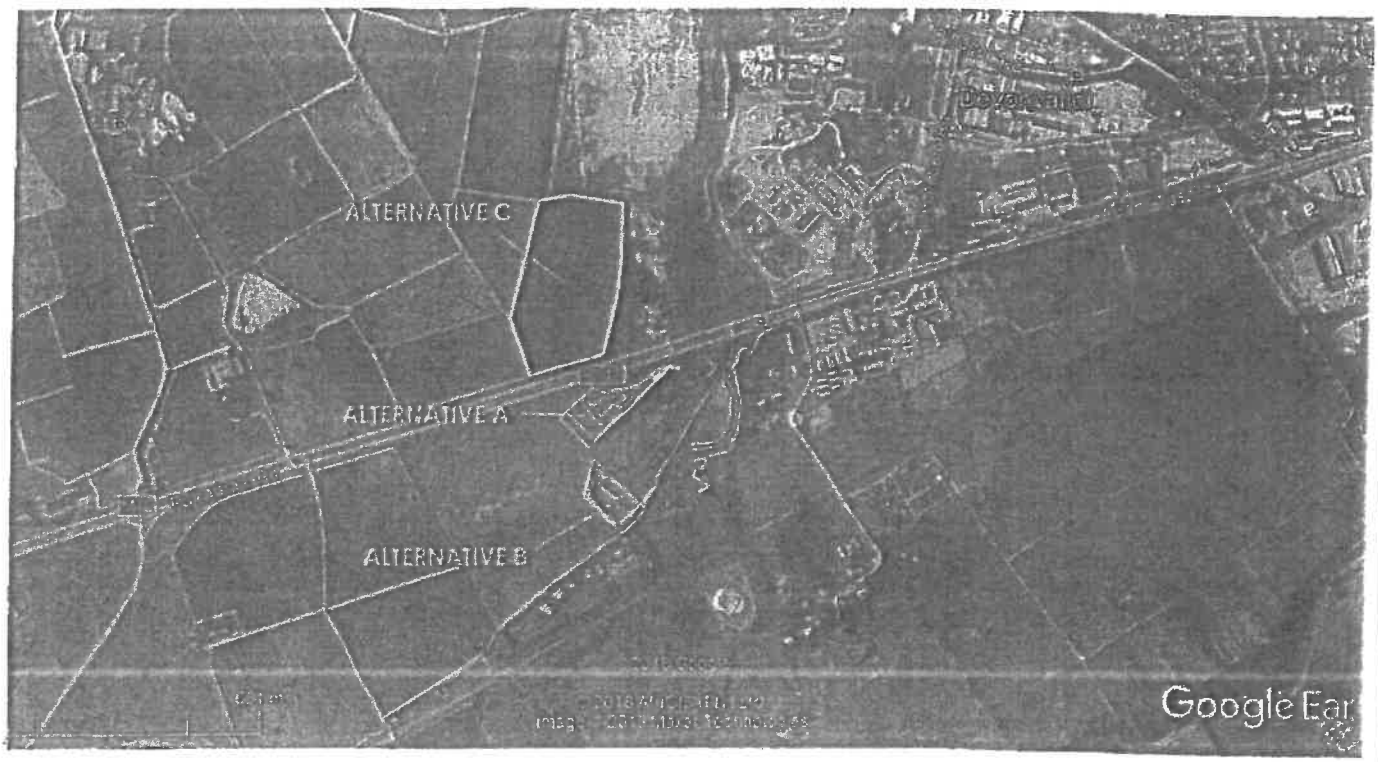
This Visual Impact Assessment should be viewed in conjunction with the BAR, engineering drawings/plans and other specialist studies.

1.2 SCOPE OF WORK

The principal objectives of the study were to establish a visual baseline description of the project's zone of influence, evaluate the landscape character and scenic value of the study area and to identify and assess visual concerns. The scope of the visual study includes:

[1] Referred to as Alternative B and C in the Engineering Report

- Description of the existing visual character and sense of place (baseline) of the area, with an emphasis on the character and sensitivity of the visual landscape, significant views and any other key visual resources;
- Identification of potential visual impacts resulting from the proposed facility;
- Discussion of visual concerns based on:
  - Visual quality;
  - Visual absorption capacity
  - Visibility and visual exposure (viewshed determination);
  - Visual intrusion or integrity with the existing landscape/townscape; and
  - Sensitivity of the viewers.
- Assessment of the significance of the visual impacts; and
- Development of mitigation measures to reduce visual impacts and enhance any positive visual benefits.



Stellenbosch RTS Location Plan	Date: Oct 2018	Complied 1
	Revision: 1	Fig No: 1

1.3 APPROACH AND METHODOLOGY

There is little legislation relating directly to visual impact assessment. However there are guidelines that provide direction for visual assessment as well as a number of laws which aim to protect visual resources and others that apply to specialists in general. The most relevant guidelines are the Guidelines for Involving Visual and Aesthetic Specialists in EIA Processes (2005). The approach to this VIA has been based on the guiding principles outlined in this document.

Given the nature of visual issues, describing and assessing visual impacts in absolute terms is not achievable. Thus, both qualitative and quantitative techniques are required. In this study emphasis has been placed on ensuring that the methodology and criteria are clearly stated and transparent.

In order to meet the terms of reference, the following methodology was applied:

1. All the required data were collected, which included data on topography, existing visual character and quality, plans of the proposed development and other background information;
2. Fieldwork (two site visits) was conducted on the 20 September 2018 and the 11 June 2019. The objectives of the fieldwork were to:
    - familiarise the author with the site and its surroundings;
    - to identify key viewpoints/ corridors and visual receptors;
    - groundtruth the sensitivity of the landscape; and
    - determine the distance from which visual impacts are likely to become discernible.
3. Landscape characterisation was done by mapping the site location and context and describing the landscape character and quality. This considered geological and topographical features, vegetation and land-use.
4. The landscape quality was described using visual appeal criteria, based on Ramsay, Crawford, Arriaza and Young and is explained in the text below.
5. Visual sampling was undertaken using photography from a number of viewpoints in a ~5km radius of the sites. The location of the viewpoints was recorded with a GPS and mapped on Google Earth Pro and photographs were taken at a depth of field between 45-55mm. A selection of these are used in the assessment phase of the VIA to illustrate the likely zone of influence and visibility.
6. The zone of influence was determined. The visual zone of influence (viewshed) is defined as *the area, including all the major observation sites, from which the proposed activities will be visible.* This area varies for each visual intrusion or impact.

7. ArcGIS Spatial Analyst extension was used to calculate the **viewshed** making use of a 20m contour interval SRTM Digital Elevation Model (DEM) as the input raster.

8. Visual concerns and potential impacts were identified;

9. The potential magnitude of visual impacts were evaluated using standard VIA criteria and rating methodologies, explained briefly in Chapter 5 below and further explained in **Annexure A**; and

10. Potential visual impacts were assessed using a methodological framework developed by The Environmental Partnership. This methodology is explained in Chapter 6.

1.4 ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations are pertinent:

1. The VIA report is based on background information provided by The Environmental Partnership and JG Afrika and is assumed to be accurate and representative of the project.

2. Determination of the viewshed does not consider vegetation and built structures. It therefore represents an exaggerated visibility and can be considered the maximum theoretical area from which the proposed development may be visible.

3. Comments and concerns pertaining to visual issues from interested and affected parties (I&APs) have not yet been tabulated and will be considered if required.

4. Planning and heritage implications, although informative of the baseline, are not directly assessed within the scope of the visual study.

1.5 DECLARATION OF INDEPENDENCE

I Belinda Gebhardt, as the appointed independent visual specialist, do hereby declare that:

- I act/have acted as the independent specialist in this application;
- I have perform the work relating to the application in an objective manner, even if this results/has resulted in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and guidelines that have relevance to the proposed activity;
- I have complied with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I have disclosed/will disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing
  - any decision to be taken with respect to the application by the competent authority; and
  - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of Specialist

15 June 2019

Date

Specialist experience and expertise detailed within **Annexure C.**

2 Project Description

The following section provides a brief overview of the proposed facility primarily as it pertains to visual issues; please refer to the engineer's plans and reports and the Basic Assessment Report (BAR) for more detailed information.

The proposed RTS will form part of a larger integrated waste management system for the Stellenbosch Local Municipality. The purpose of the facility is to divert organic waste (excluding garden or green waste) from the landfill and is split into two operational activities namely; drop-off activities and diversion activities. These will involve the collection of Organic-Rich Mixed Waste and Pure Organic Waste.

The Organic-Rich Mixed Waste will be brought to the RTS and transferred to open-top, roll-on roll-off skips/containers and will be collected daily by authorised offtakers, who will beneficiate the waste. The proposed RTS therefore has no long term storage facility.

Similarly, the Pure Organic Waste from the Pure Organic Waste transfer area will be stockpiled (daily) in the receptacles used for transport from the collection drop-offs or alternatively transferred into larger receptacles for transportation to the offtaker(s) (JG Afrika, 2018). Please see BAR for further detail (Environmental Partnership, 2018).

Conceptual layouts for the proposed RTS have been developed for Site Alternatives A and B, which are shown in Figures 2 and 3 respectively. The building layout is the same for both alternatives, but the external layouts were determined by the required vehicle movements for both drop-off and collection activities, together with the dimensions and shape of the proposed sites (JG Afrika, 2018).

Site Alternative C is approximately 6.4 hectares in extent but the waste transfer facility will only be 1.2 hectares maximum. No site plan is available yet however, the facility will look similar to the facility proposed in the first two alternatives. Adjacent to Site C is an approved Material Recovery Facility (MRF). The refuse transfer facility and the MRF would therefore share a weighbridge, ring road, access control etc.

The proposed facility will have a total footprint area of approximately 1.2 hectares (Alternative A and C) and 0.9 hectares (Alternative B). The facility will include:

- A guardhouse with access control at the entrance to site;
- An access road off the R310, with a single dual-direction weighbridge on the incoming lane; over which the drop-off vehicles will drive on entry/exit;
- An access ramp to a raised platform approximately 3m above handling/storage area;
- The container handling and skip storage area which is an enclosed and roofed building with one day's waste storage capacity, a tipping hall and future compaction/loading hall, with a footprint are of about 1,200m^2 (approximately 11,5 m high from ground level to top of roof ridge);

- Site offices, ablution buildings and mess-room (single storey);
- Container storage area;
- Space allowance for an additional transfer bay;
- An on-site conveyer/compactor system (which is excluded from the initial project but may be built at a later date); and
- Stormwater catchpits.

Detailed designs have not yet been completed but the facility will look very similar to the existing RTS at Klapmuts (see plate i to vi below).

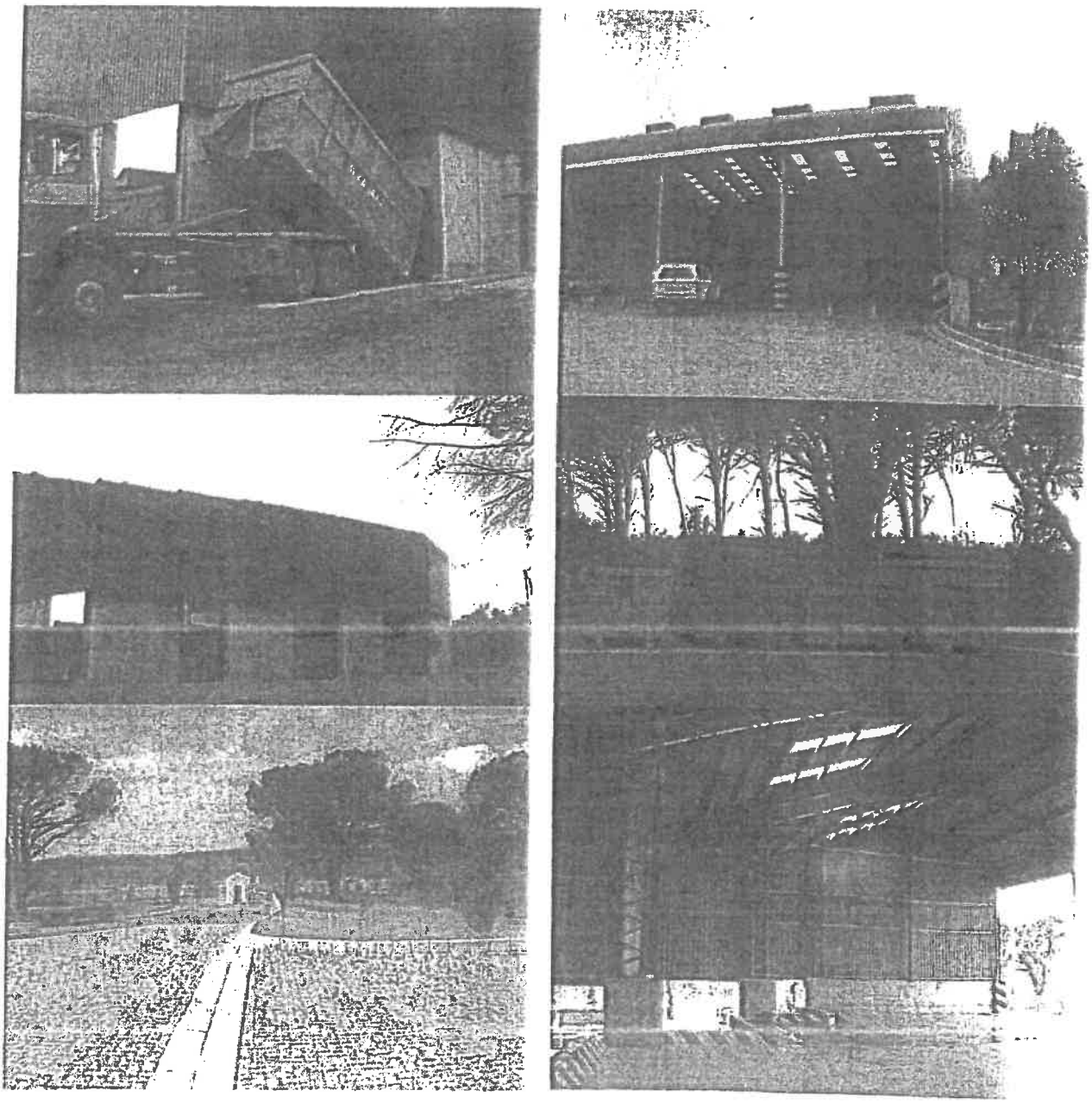
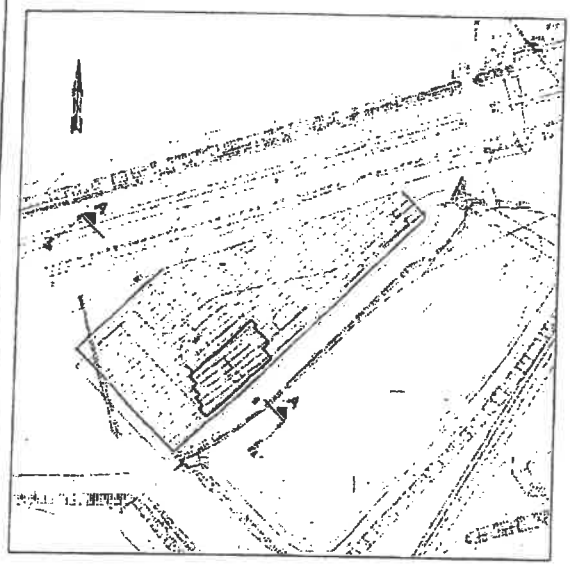
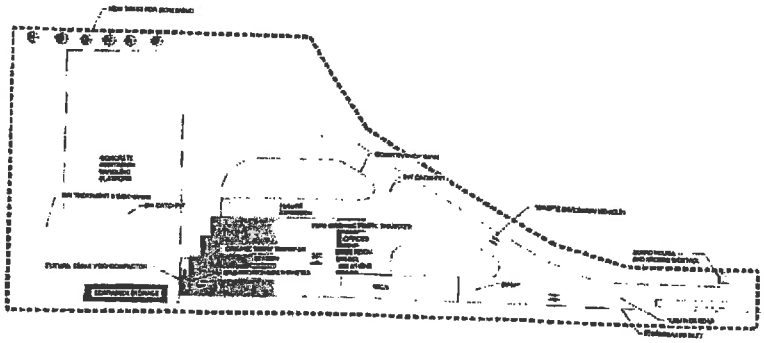
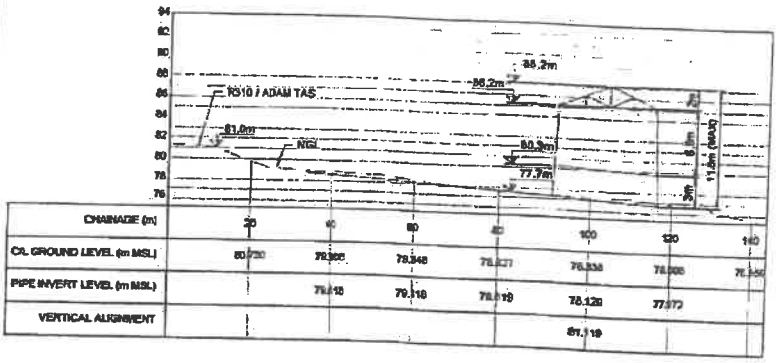


Plate i - vi: Klapmuts RTS





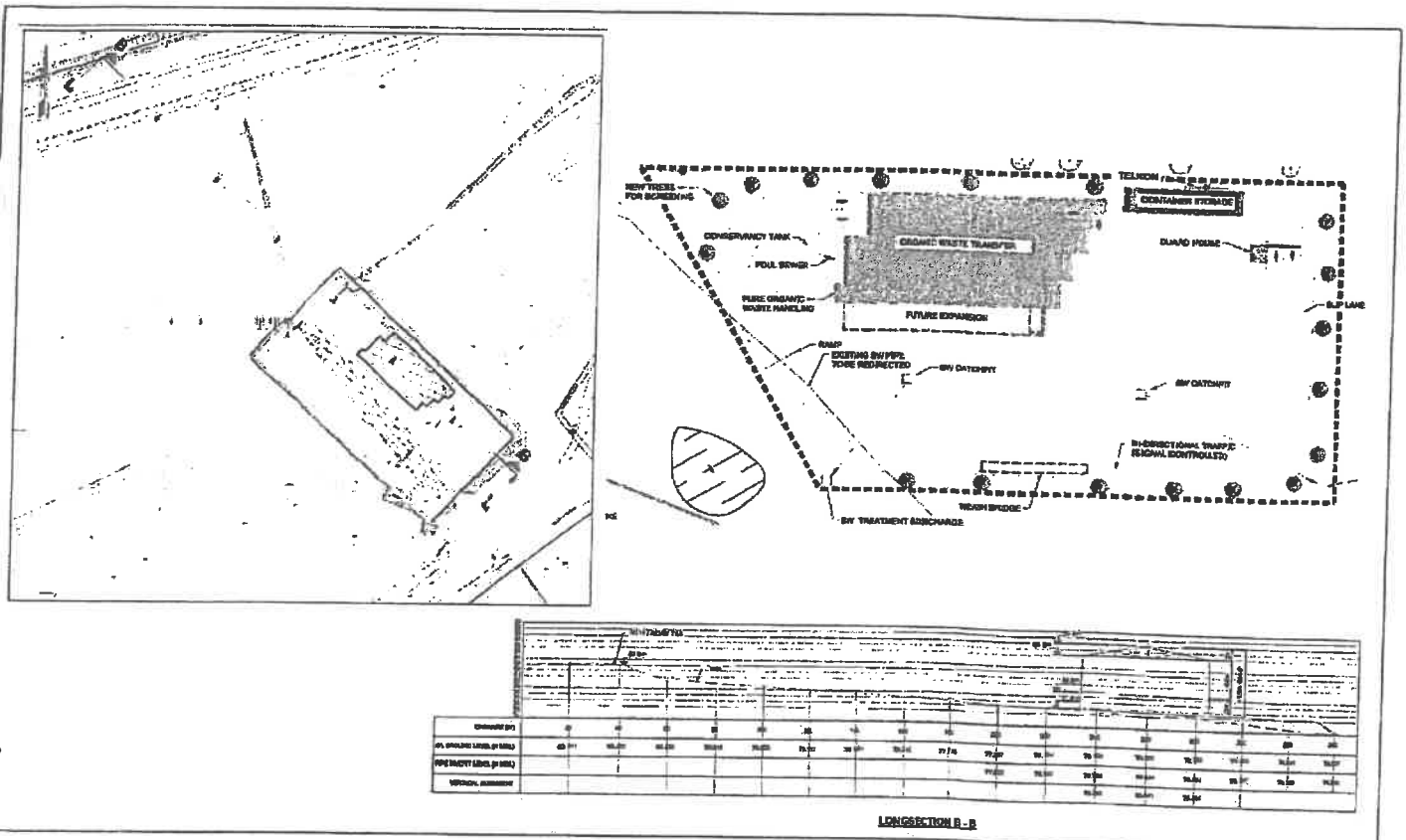


LONGSECTION A - A

Stellenbosch RTS

Layout and Cross-Section Alternative A (JG Afrika, 2018)

Date: Oct 2018	Compiled
Revision:	Fig No: 2



Stellenbosch RTS

Layout and Cross-Section Alternative B (JG Afrika, 2018)

Date: Oct 2018	Complied
Revision:	Fig No: 3

3 Understanding the Visual Context and Character

Landscape character can be defined as the distinct and recognisable pattern of elements, or characteristics, resulting from particular combinations of natural (physical and biological) and cultural (land use) factors (Tudor, 2014). Landscapes are an important resource and significant component of our cultural heritage.

Before the visual character of a landscape can be established, the layers that make up the landscape need to be understood. These layers include climate, geology, topography, vegetation and land use (man-made elements).

3.1 GEOLOGY, CLIMATE AND TOPOGRAPHY

The Cape Winelands landscape in the greater area has a strong correlation with the underlying geology (predominantly the occurrence of granites), the unique combination of soils and the climate which have made this region the centre of viticulture and fruit farming (Oberholzer, 2013).The region has a mild Mediterranean climate influenced by the warm Indian Ocean currents. Summers are dry and hot, with February and March days sometimes rising to over 40 C. Winters are cool, rainy and sometimes windy. Snow is usually seen a couple of times in the winter on the surrounding mountains.

The landscape of the area is geologically derived from the Cape Fold Belt, consisting of a band of parallel ranges of quartzitic sandstone ridges with undulating valleys of shale and granites. The earliest deposits are over 400 million years old, but the mountain ranges are more recent, having been formed some 200 million years ago.

The area is dominated by the striking Hottentots-Holland sandstone mountains of the Table Mountain Group (here represented by the Stellenbosch, Jonkershoek and Groot Drakenstein Mountains). Their rugged peaks form a visually impressive backdrop to the south and south-east.

To the north-east is a hill called Papegaaiberg, beyond which is the Simonsberg Mountain. North-west of the site the undulating Malmesbury Shales and Cape Granites extend into the Swartland. To the south-west of the site Cape Flats Alluvium extends to the peninsula.

Topographically, the sites are located in a hilly region of the Cape Winelands, in the sheltered valley at the entrance to the town of Stellenbosch. Site alternatives A and B are relatively flat and situated at a low elevation around 80 to 70 mamsl (see Figure 4 below). The land falls very gradually to the south, towards the Eerste River (Mapping and Survey). To the east of these sites is the Veldwagters River, which flows southwards to where it joins with the Eerste River. There are steep man-made berms surrounding the edges of the old maturation ponds.

Site alternative C is situated on the lower slopes of the hilly ground to the north of the R310 at a higher elevation than the other two sites. It slopes from north-west to south-east around 110 to 85

mamsl. It is directly adjacent to the existing landfill site which is a prominent hill-like feature in the landscape (see Figure 4).

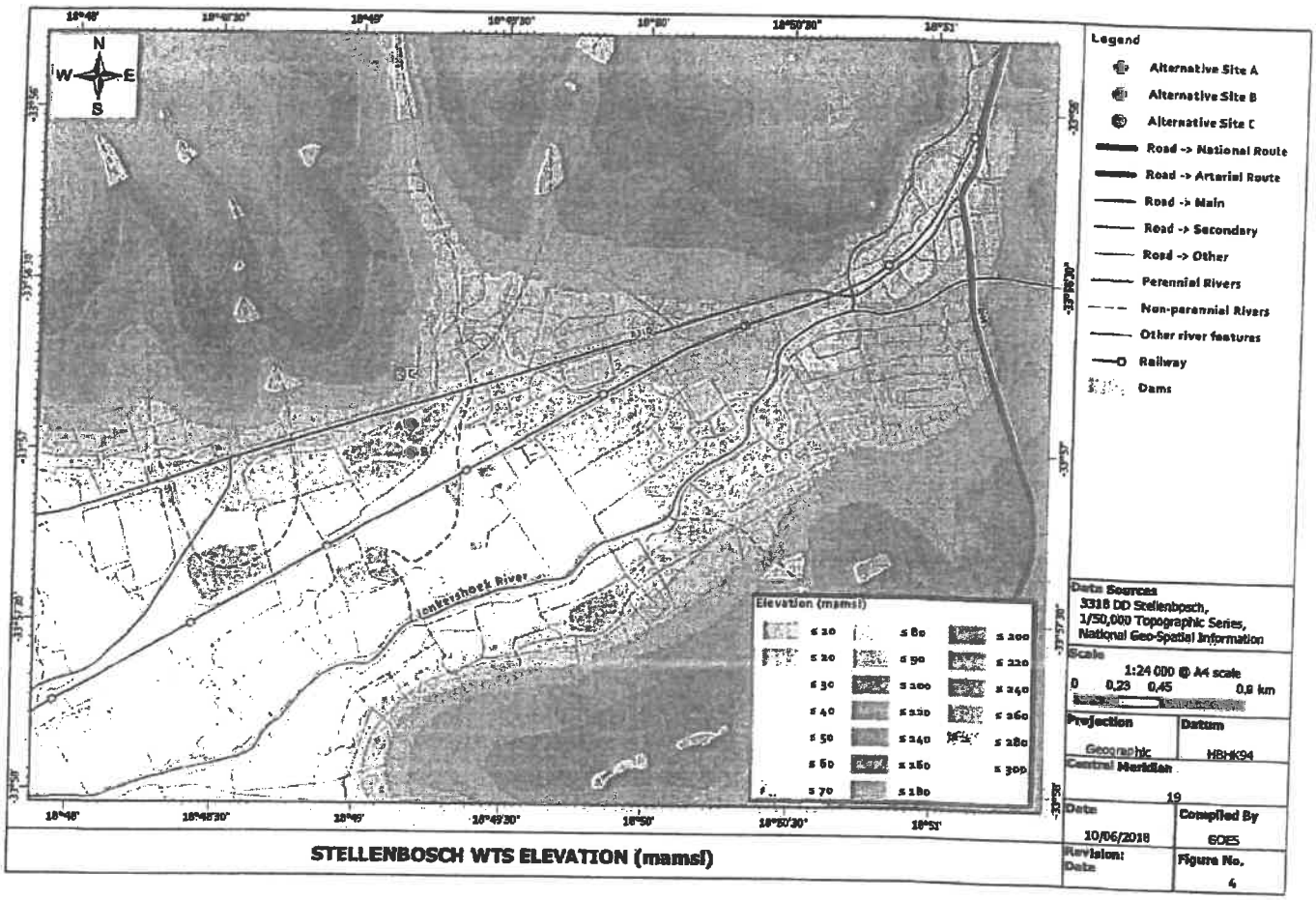
3.2 VEGETATION

According to the SANBI National Vegetation Map (2012) the prominent vegetation type in the area is Swartland Granite Renosterveld (critically endangered), with some Swartland Shale Renosterveld and Cape Winelands Shale Fynbos in the surrounding area (SANBI, 2012 and Mucina and Rutherford, 2006). However, the site and immediate surrounds have been transformed and consist predominantly of agricultural lands, mostly vineyards. Site A and B are disturbed areas, presumably once used for agriculture and then converted into a series of settlement /maturation ponds, which were used by the Stellenbosch Waste Water Treatment Works.

Visually these sites are open, grassy areas with reeds surrounding the bodies of water. Of the three settling ponds only the one near the eastern boundary has a significant amount of water (Pond 1). The wetland marshes are artificial wetlands, with the vegetation largely dominated by bulrushes (*Typhus Capensis)*. Although not pristine, the wetland vegetation on site offers habitat for bird and animal life and is visually pleasing. On the eastern side of the site, there is an area of in-filled land, downstream of which are broad floodplain flats, which although impacted are considered natural wetland features, classified as "floodplain flats" and comprising broad areas of seasonal and perennial marshland (Day, 2018). The wetland extends south out of the site, towards the railway line. Some trees, mostly eucalypts and pines, are dotted around the site, as well as some invasive alien vegetation (see **Plate vii and vii**).

Site C is also no longer covered in natural vegetation and vegetation here consists of planted vineyards. The symmetry of the planted rows of vines with their russet orange colouring in the autumn and green in the summer is visually pleasing and typical of the Cape Winelands area (See **Plate ix**).

Colours of the vegetation display in various shades of green, with the grass and reeds particularly vivid in the winter months. The wetlands and vineyards are of moderate height and offer little screening but clusters and avenues of trees (in the surrounding areas) provide vertical interest and screening (see **Plate x**). Invasive alien vegetation generally detracts from the visual quality but does also provide screening.


N
W
E
S
18°48'
18°48'30"
18°49'
18°49'30"
18°50'
18°50'30"
18°51'
-33°56'
-33°56'30"
-33°57'
-33°57'30"
-33°58'
Lourensrivier River
Elevation (mamsl)
≤ 10
≤ 20
≤ 30
≤ 40
≤ 50
≤ 60
≤ 70
≤ 80
≤ 90
≤ 100
≤ 110
≤ 120
≤ 130
≤ 140
≤ 150
≤ 160
≤ 170
≤ 180
≤ 190
≤ 200
≤ 210
≤ 220
≤ 230
≤ 240
≤ 250
≤ 260
≤ 270
≤ 280
≤ 290
≤ 300
Legend
Alternative Site A
Alternative Site B
Alternative Site C
Road -> National Route
Road -> Arterial Route
Road -> Main
Road -> Secondary
Road -> Other
Perennial Rivers
Non-perennial Rivers
Other river features
Railway
Dams
Data Sources
3318 DD Stellenbosch,
1/50,000 Topographic Series,
National Geo-Spatial Information
Scale
1:24 000 @ A4 scale
0 0,23 0,45 0,9 km
Projection
Geographic
Datum
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4
STELLENBOSCH WTS ELEVATION (mamsl)

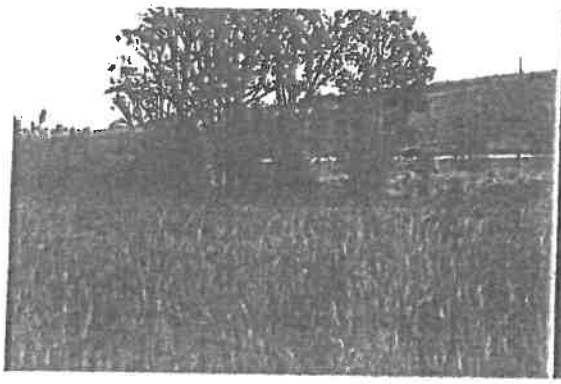


Plate vii: *Typha Capensis* and clusters of trees

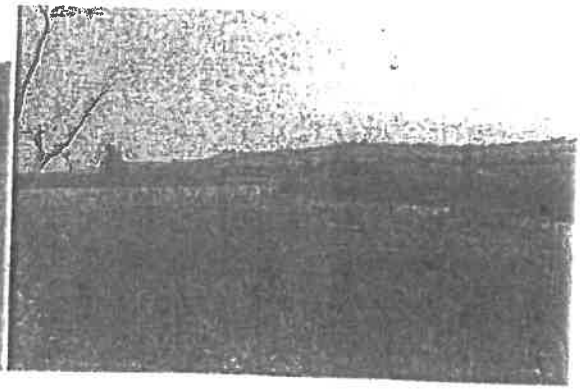


plate viii: Vivid green colours

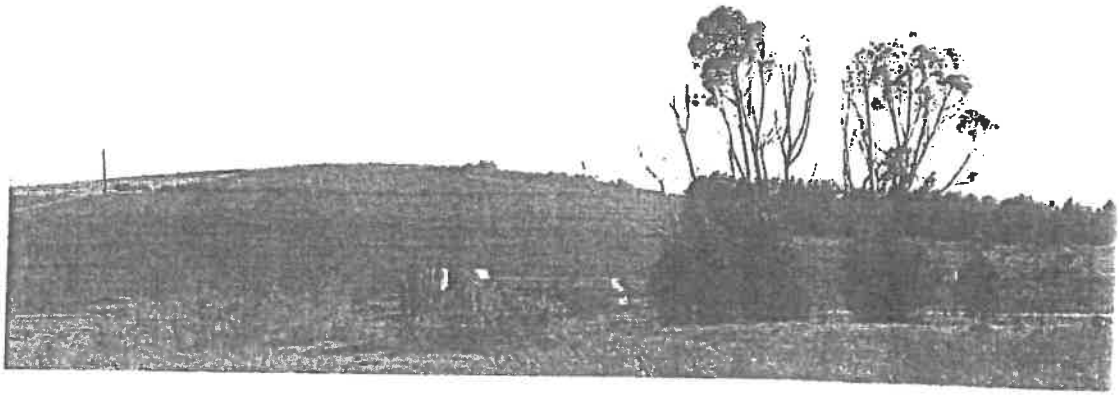


Plate ix: Site C with planted vineyards and rows of windbreaks.



Plate x: Fields and vineyards with avenues/shelterbelts of tall trees

3.3 LAND USE

Also contributing to the visual character of the area are the predominant land uses, which vary across the greater study area.

The greater Cape Winelands area is a cultural landscape of very high scenic value and has been nominated for World Heritage status. Stellenbosch was the second town to be established in South Africa and is a significant tourist attraction known for its Cape Dutch Architecture, broad oak-lined roads and the its close association with the surrounding viticultural landscape.

The sites are situated on the one of the main entrance routes into Stellenbosch, which is considered to be a sensitive scenic resource. Landuse in the surrounding area includes a number of wine estates, some with associated tourism and hotel facilities including Asara, Neethlingshof, Brodyke and Vredenheim. North of the R310 are the Stellnebosch Landfill, a power transfer station and a office/shopping complex (The Woodmill).

The suburb of Onder-Papagaaiberg, is situated north-east on the slopes of the Papegaaiberg Mountain with middle to upper income houses. These vary in architectural style and are single to double storey with a low density. They are interspersed with trees, open spaces and wide roads. The suburb of Khayamandi is situated further towards the north-east and has a finer urban texture with smaller properties. Other industries and facilities (many related to the vitcultural industry) are situated alongside the R310 into Stellenbosch as well as the Oude Libertas Theatre.

South of site alternatives A and B runs the railway line. East of these sites are housing and offices occupied by the Dept of Forestry as well as a riding farm/school and other small pockets of houses.

Site C is located adjacent to a material Recovery Facility, which lies to the east and vineyards of the Asara Hotel and Wine Estate to the west. Directly north of the site is the Stellenbosch Landfill site, which is a prominent and visible feature in the landscape. South of the site is the R310.

The mixed use of the area has a typically semi-urban character with many industries and facilities having a strong association with the surrounding agricultural activities. Visually the vineyards, tourist facilities and activities related to agricultural hinterlands integrate well and provide a scenic route into the town. The existing landfill is very prominent and this and some of the other infrastructure detract from the scenic quality.

3.4 VISUAL CHARACTER

Based on these patterns the landscape character can be described. Visually the sites are defined by the mountains that form a prominent backdrop and the surrounding Cape Winelands landscape which is of significant scenic value and high quality. Sites A and B are bounded by the busy R310 and visually prominent landfill that borders the site to the north; the railway line to the south and the Verwagters River to the east. Site C is bounded by the R310 to the south, landfill facility to the north, Material Recovery Facility to the east and Asara Wine Estate to the west. The R310 (Adam Tas Road)

is one of the main entrance routes into the historic and picturesque town of Stellenbosch and is an important visual corridor.

In the immediate surrounds (particularly close to Site C) the existing landfill, the electrical sub-station and other semi-industrial activities detract from the visual quality along this stretch of the road.

Natural vegetation has been significantly transformed, but the vivid greens of the grass and reeds surrounding the water bodies, the rolling hills covered in vineyards and clusters and avenues of trees together with the magnificent mountain scenery surrounding the area provide beautiful views. In places there are stretches of alien invasive vegetation and urban visual clutter which are visually less appealing.

The overall character can be described as being semi-urban situated along a scenic entrance route into Stellenbosch and set within the broader visual context of the splendid mountain and agricultural scenery (see Plate xi). The existing landfill and other urban visual clutter detract from the visual quality.

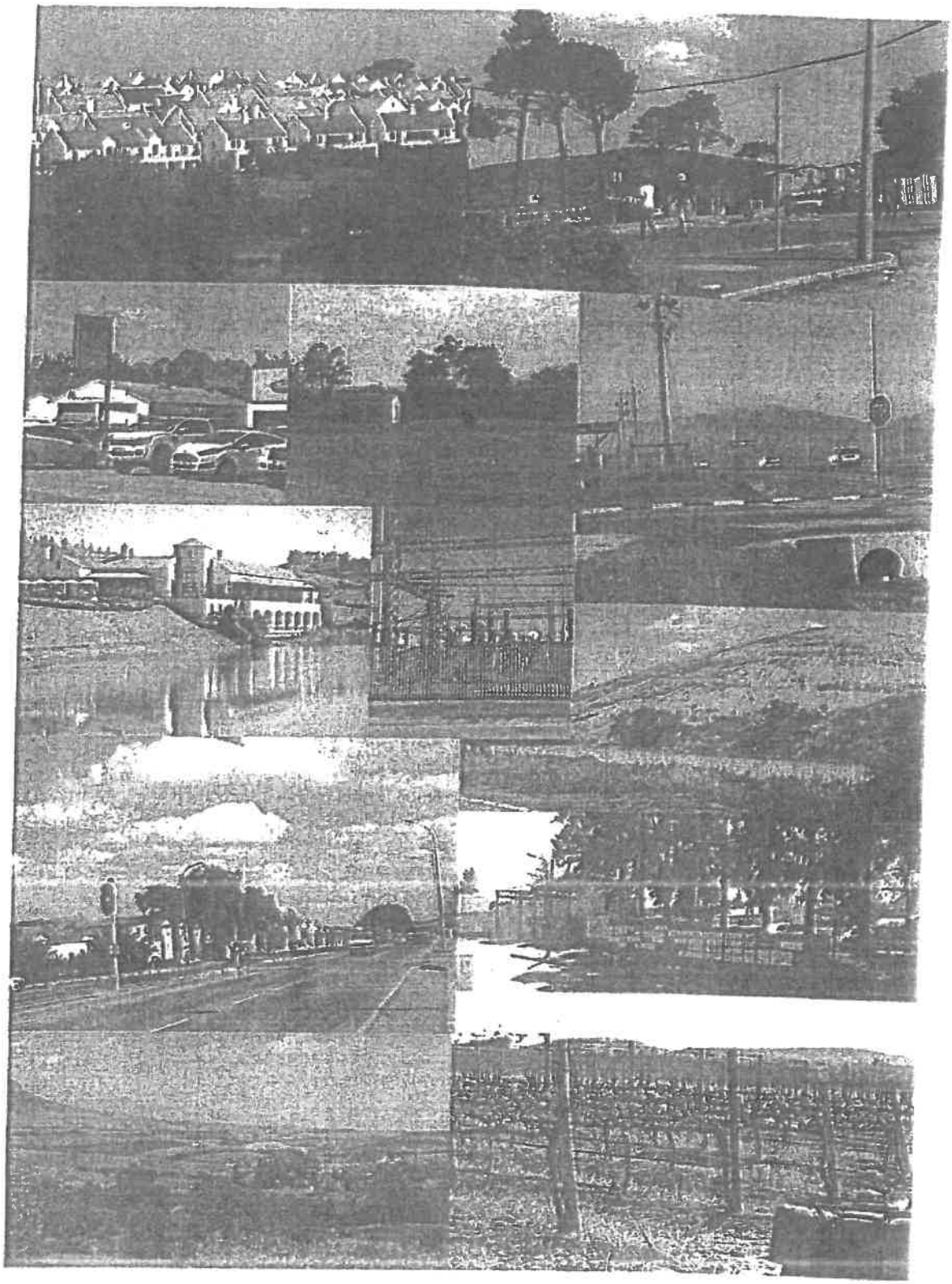


Plate xi: Visual Character

4 Identification of Potential Visual Issues and Impacts

Potential visual issues and impacts identified by the visual consultant are summarised in Table 1 below.

Table 1: Potential Visual Impacts

Visual Issue	Comment
Visual impact of vegetation clearing and construction.	Dust, construction materials, vehicles and plant will have a temporary impact for the duration of the construction period. Vegetation clearing and cut and fill results in visual scarring, visible due to the change in landform and the contrast of colour and texture between the stripped land and existing vegetation.
Visual impact on the physical landscape	Given the relatively flat nature of sites A and B, the proposed development is not anticipated to impact on any natural landforms. These sites have also already been previously filled / modified and water bodies are man-made. Site C is situated at a slightly higher elevation on sloping ground. It may have a local impact on the physical landscape (slope).
Visual impact of buildings and infrastructure on surrounding residents and motorists.	For sites A and B the proposed RTS will be visible from the short stretches of the R310 but is not likely to be visible from Baden Powell Road. It will also be visible from some residential residences close to the site. Most affected will be properties to the south-west of the site with visibility from the east and north-east limited. The visibility the proposed RTS on site C will be mostly from the south of the site, and may have limited visibility from some viewpoints on Papegaalberg. It will be visible from short stretches of the R310 but not highly visible from Baden Powell Road. Visibility to the north is limited by the landfill site and visibility from Asara is limited by local undulations in the topography. Visibility will also be dependent on where the facility is located on the site.
Visual impact on the entrance to Stellenbosch	Given the scenic and tourism value of Stellenbosch and the surrounding agricultural lands, the visual quality of the entrance to the town is considered highly sensitive. The visual nature of the RTS is not highly compatible with this landscape and may impact on this scenic entrance. However, due to the low elevation of site A and B it will not be highly visible if screened. Site C is likely to be more visible but will be located adjacent to existing landfill and waste facilities.
Cumulative impacts resulting in the fragmentation of the rural landscape.	The sites are all located close to the existing landfill site and other semi-industrial types of activities on the outskirts of the urban area. The footprint area of the proposed RTS is relatively small, in comparison to housing estates / shopping malls and other types of urban development. Therefore while it may contribute to the fragmentation of the rural landscape, this is reduced by the size and elevation (site A and B).

Table 2: Visual Quality

VISUAL CRITERIA	COMMENT	RATING
Visual Quality	• The Stellenbosch, Jonkershoek and Groot Drakenstein Mountains provide a rugged and scenic backdrop to the rolling hills covered in fields and vineyards. • The town of Stellenbosch and the Eerste River Valley are of high historic and cultural value and meaning, with long-standing relevance. Much of their evocative significance is due to the beauty of the landscape. • The Stellenbosch winelands landscape is a renowned feature of the Western Cape, known for its scenic quality and is a popular tourist destination. • Signage, lighting and other visual clutter along the R310 detracts from the visual quality. • In the immediate vicinity the existing landfill, electricity transfer station and other semi-industrial and retail activities, detract from the scenic quality. • On sites A and B, the wetland areas, although not pristine or of ecological concern, provide diversity and visual value. Planted vineyards on the slopes of site C are visually attractive and typical of the winelands landscape.	The site is situated within the greater Cape Winelands area (of high scenic value) but the visual quality of the site and immediate surrounds is rated as **medium to high.**

5.2 VISUAL ABSORPTION

Visual absorption capacity (VAC) is the potential for an area to conceal additional human intervention (activities and structures) without significant loss of character or visual quality. Landscapes or townscapes that have a high VAC (i.e. are able to conceal activities and structures) are visually less sensitive than environments that have a low VAC (i.e. are unable to conceal activities and structures).

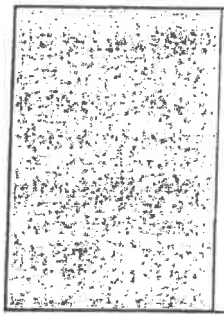
Factors contributing to the VAC include:

- Topography and vegetation that is able to provide screening in a landscape. A topographically diverse landscape is better able to absorb visual impacts and is less sensitive;
- The degree of urbanisation compared to open space / undeveloped land. A highly urbanised landscape is better able to absorb the visual impacts of similar developments; and
- The scale and density of surrounding development. A developed urban fabric that is dense or where buildings and structures are large is better able to offer visual screening.

The VAC of the landscape around the site is summarised in **Table 3** below.

Table 3: Visual Absorption Capacity

VISUAL CRITERIA	COMMENT	RATING
Visual Absorption Capacity	• The topography is hilly and sites A and B are located at a low elevation. This significantly increases the VAC, as visibility is obscured from many viewpoints. Site C is at a higher elevation which increases its visibility but is also surrounded by undulating	High (site A and B) Medium (site C)

	topography, providing good screening. • Clusters of shade trees and planted avenues of trees, many of which serve as windbreaks, provide good screening. • The surrounding area is partially urbanised, particularly to the east and north-east of the sites. Houses, retail and semi-industrial activities help to absorb the visual impact. • The existing landfill is high and visually prominent and contributes to the high visual absorption capacity, screening the sites from many viewpoints. Site C is well screened from the north and north-east by the landfill, which is directly adjacent.	

5.3 VISIBILITY AND VISUAL EXPOSURE

Visibility is partially determined by the Zone of Visual Influence (ZVI) and viewshed area.

Zone of Visual Influence (ZVI)

The distance of a viewer from an object is an important determinant of the visibility, sometimes referred to as the visual exposure. This is due to the visual impact of an object diminishing/attenuating as the distance between the viewer and the object increases. The ZVI is the maximum extent around an object, beyond which the visual impact will be insignificant, primarily due to distance.

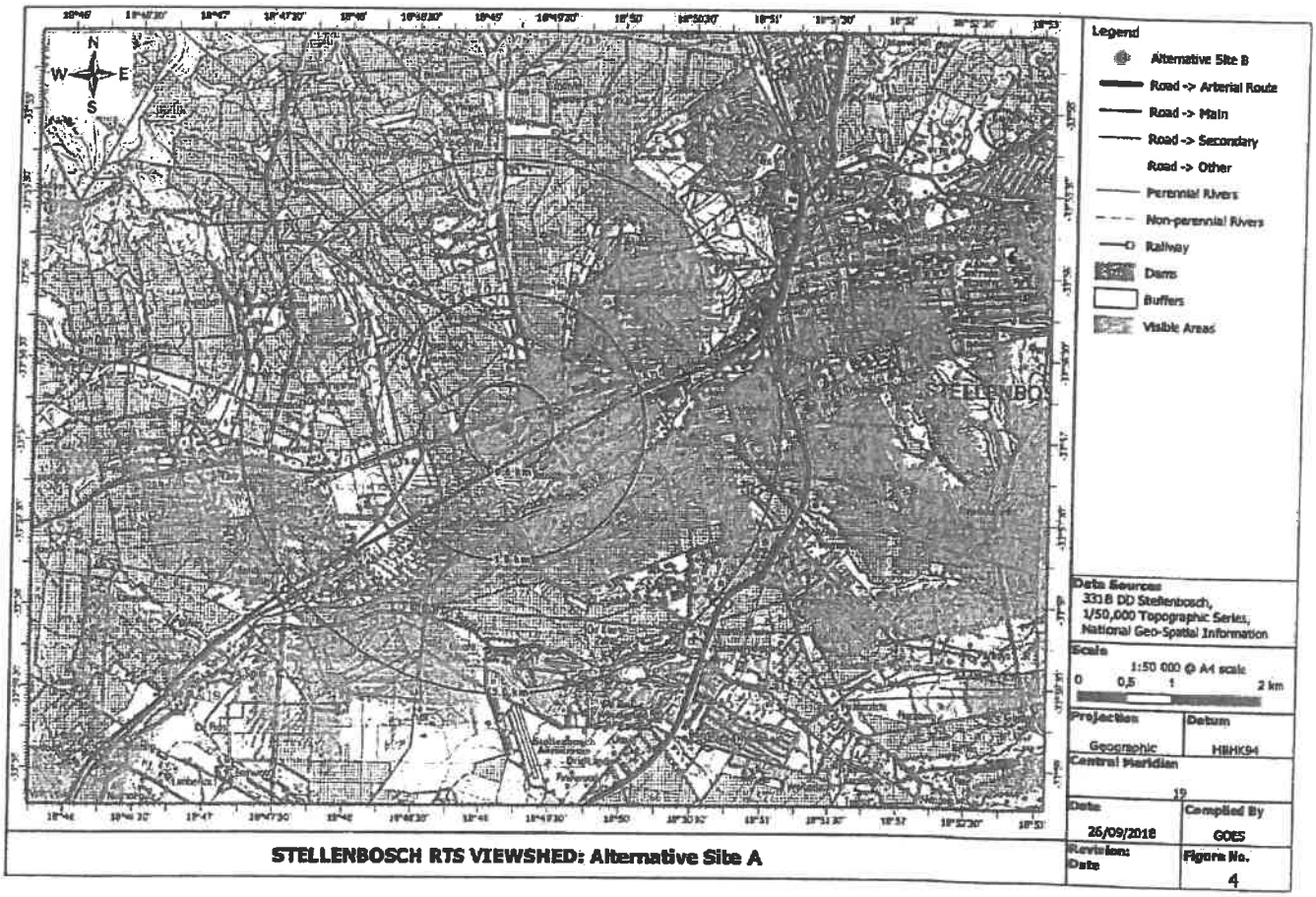
Due to the relatively low elevation of the proposed site and the nature and height of the proposed facility, the project components will appear so small at a distance of ~3km that the visual impact is insignificant. From about 500m the proposed development is likely to be highly visible if not obstructed from view. For the purposes of this project the ZVI was therefore defined as a ***3km radius***. This is further defined as follows (See Figures 5 and 6):

- less than 500m – likely to be highly/clearly visible;
- between 500m and 1,5km – may be visible but unlikely to dominate perception;
- between 1,5km and 3m - even if visible, will not dominate perception; and
- more than 3km – visually of low significance.

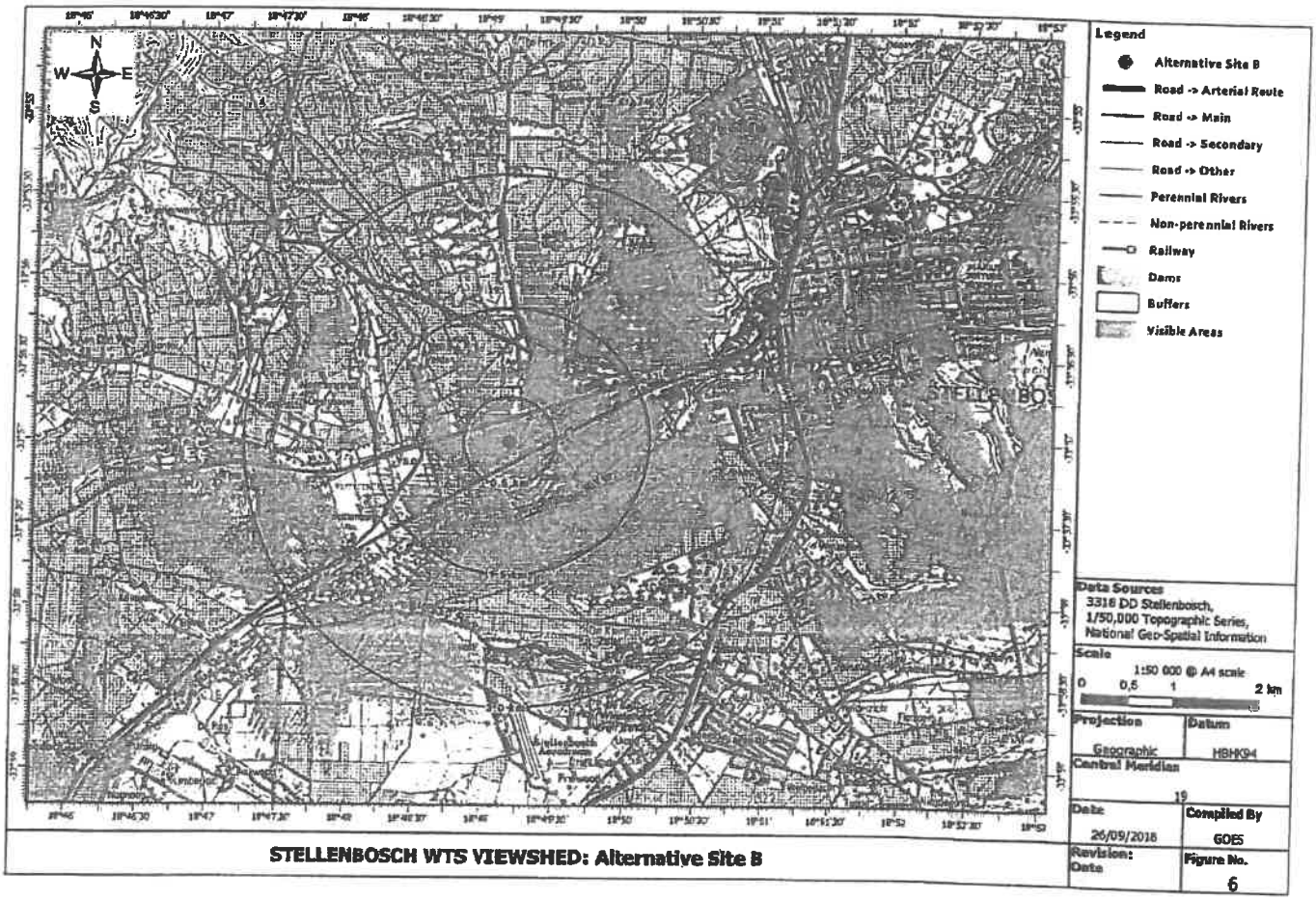
The Viewshed

The viewshed is the topographically defined area, including all the major observation sites, from which proposed structures/activities may be visible. The boundary of the viewshed connects high points in the landscape and demarcates an area of potential visibility. The viewshed calculations are based on worst-case scenario using 360° line-of-sight calculations on a Digital Elevation Model (at 20m contour intervals). The height of existing buildings, trees and small undulations in the surrounding area are not included in the calculation of the viewshed. *It is therefore important to remember that the proposed development will not be visible from all points within the viewshed*, as many views are obstructed by visual elements such as built structures, minor local variations in topography and vegetation. For this reason it is often referred to as the 'zone of theoretical visibility'.

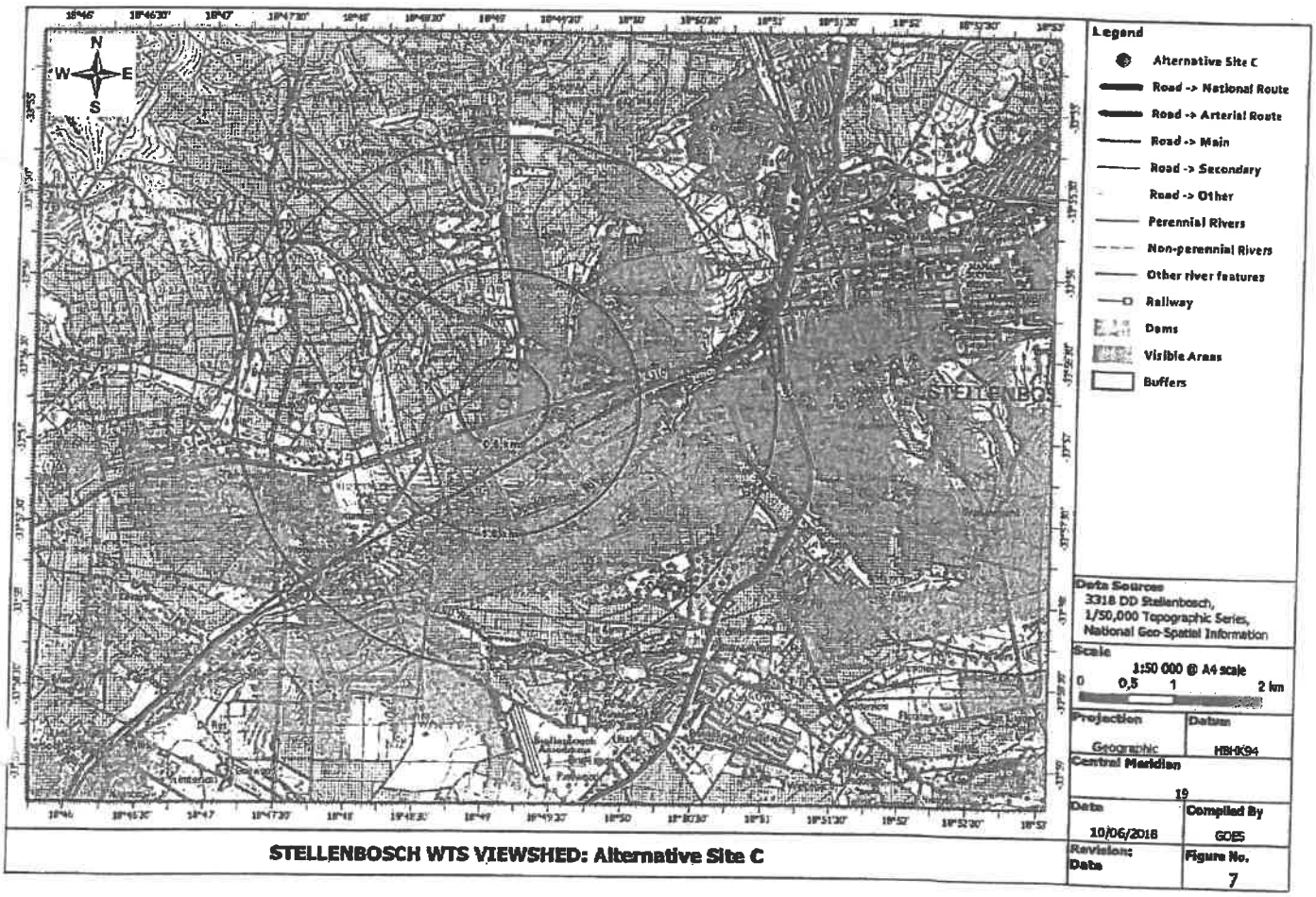
The viewshed for the proposed development is indicated in the pink shaded area in Figure 5 (Alternative A), Figure 6 (Alternative B) and Figure 7 (Alternative 7) below.



STELLENBOSCH RTS VIEWSHED: Alternative Site A



STELLENBOSCH WTS VIEWSHED: Alternative Site B

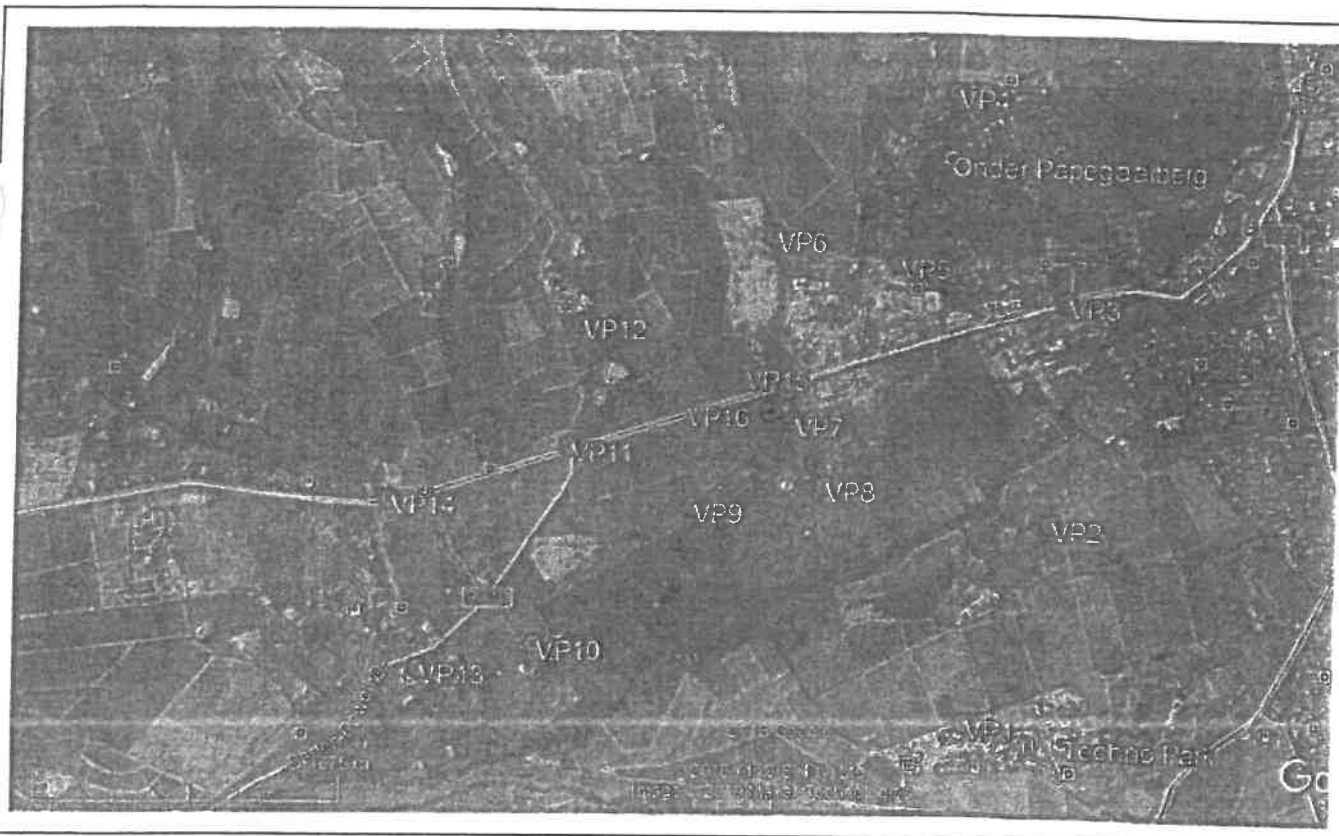


STELLENBOSCH WTS VIEWSHED: Alternative Site C

- The viewshed areas for the for site alternatives A and B are almost identical, with Alternative B having marginally more visibility to the north-west on the slopes of Drieheuwels and a few other small, isolated patches to the north-west.
- The viewshed area for site alternative C is also very similar, with marginally more visibility along the R310 and Baden Powell Road.
- The viewshed area is relatively confined and predominantly concentrated to the south-east, south and south-west of the sites.
- The south-western slopes of the Papegaaiberg are included in the viewshed area, but from most viewpoints within this area the site is screened by existing vegetation, buildings and the landfill.
- Khayamandi is excluded from the viewshed area.
- About a 3km stretch of R310 (Adam Tas) adjacent to the sites is included in the viewshed area. Another 2km stretch further west falls within the viewshed, but visibility of site alterative A and B from this stretch is very limited by undulations in the road. Site alternative C is likely to be more visible from the R310 than alternative A and B due to its elevation.
- A short stretch of Baden Powell road is included in the viewshed near Vlottenburg; but in reality visibility is limited by buildings, trees and minor undulations.
- Farmsteads and residential areas that fall within the viewshed area closest to the site are those that lie to the south and south-west. These include the Brodyke Farm, Troughend Farm, housing next to the Dept. Forestry, Libertas Estate and sections of Die Boord. From many of the viewpoints within these areas views of the proposed RTS will be obscured. Sections of Asara are also included in the viewshed area. From higher elevations and certain viewpoints the proposed facility on all three sites may be visible. Alternative C is in closer proximity but to the east out of the main line of view. Alternative A and B may be visible to the south-east but further away and more likely to be obscured by vegetation.
- The golf course, Kleine Zalze and Techno Park are excluded from the viewshed area, although glimpses of the proposed development will be visible from the road on the north-western road boundary road of the Techno Park.
- Although the viewsheds for all three sites are very similar, due to the elevation of site alternative C, more of the facility is likely to be more prominently visible from much of the visible area, particularly the R310.

Visibility from Viewpoints

The potential visibility of the proposed project was further gauged by photographs, taken from within a radius of about 5km of the site. From these photographs 16 viewpoints were included in the report. These are indicated on **Figure 7**, represented in the accompanying photographs (**Plates xii - xxx**) and discussed in **Table 4** below.



Stellenbosch RTS
Location of Viewpoints

Date: Jun 2019	Compiled by: GEBH
Revision: 2	Fig No: 7

Table 4: Viewpoints and Visibility

SECTION A					
VIEWPOINT	WAYPOINT REFERENCE	LOCATION DESCRIPTION	DIRECTION	APPROX DISTANCE	VISIBILITY
VP 1	205	Techno Park	NW	2km	Site A and B Visible. Site C highly visible
VP 2	203	Road past Libertas Estate	NWW	1,7km	May be marginally visible.
VP 3	200	R310 at Oude Libertas Theatre	SWW	1,8km	Not visible.
VP 4	199	Onder Papegaaiberg – entrance to Middelvlei	SW	2km	Not visible.
VP 5	190	Devon Valley Road	SW	1km	Not visible.
VP 6	197	Stellenbosch Landfill	S	900m	Site A and B visible. Site C not visible from this side of landfill.
VP 7	214	Dept. Forestry housing	100m	W	Not visible from houses (behind berm). Sites A and B will be *highly* visible from top of berm
VP 8	218	Troughend Horse Farm	500m	NW	Not visible due to fall of land and trees - may be visible from some elevated positions on farm.
VP 9	176	Brodyke Farm	400m	NE	Sites A and B highly visible where it is not screened by tall trees that surround most of the dwellings. Site C visible where not screened by trees.
VP 10	223	Barrique Restaurant at Vredenheim	1,6km	NE	Not visible.
VP 11	184	Intersection Baden Powell Drive and M12/R310 (Adam Tas)	900m	NEE	Sites not visible as road dips down.
VP 12	181	Asara Hotel	1km	SE	Sites A and B visible from dam wall, obscured from many viewpoints by vegetation and undulations. Site C obscured by undulations in topography.
VP 13	225	Viottenburg Rd off Baden Powell Drive	2,2km	NE	Not visible.
VP 14	221	Corner M12 and Stellenbosch Kloof Rd	2km	NEE	Not visible.
VP 15	-	R310	250m	NW	Site C highly visible.
VP 16	-	Close to eastern boundary of site A overlooking wetlands.	200m from site C 220m from site B 62m from site A	NW	All sites highly visible

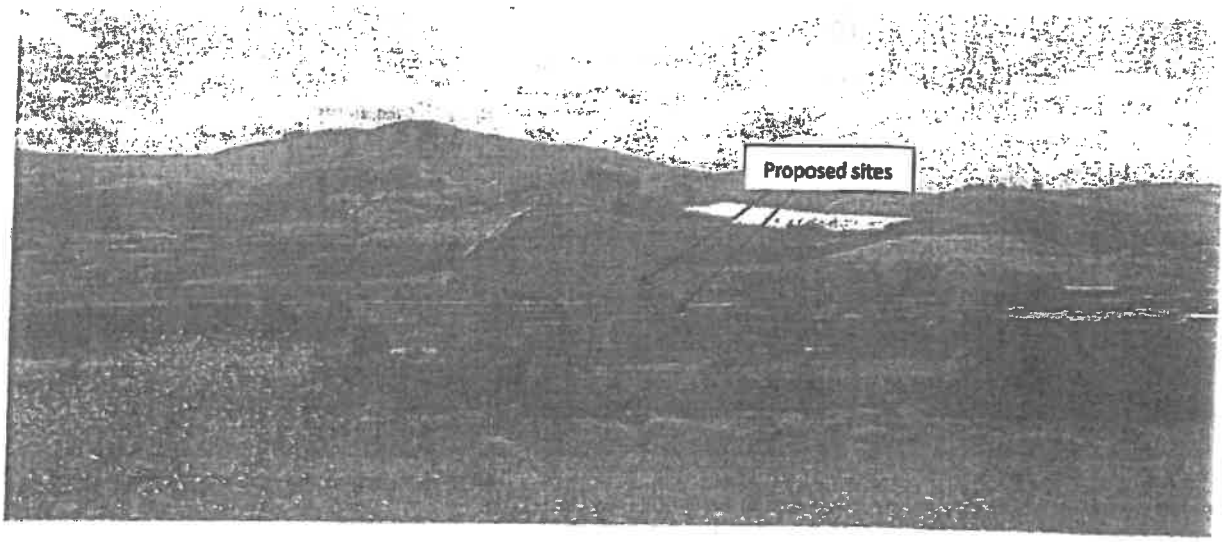


Plate xi: VP1: From edge of Techno Park

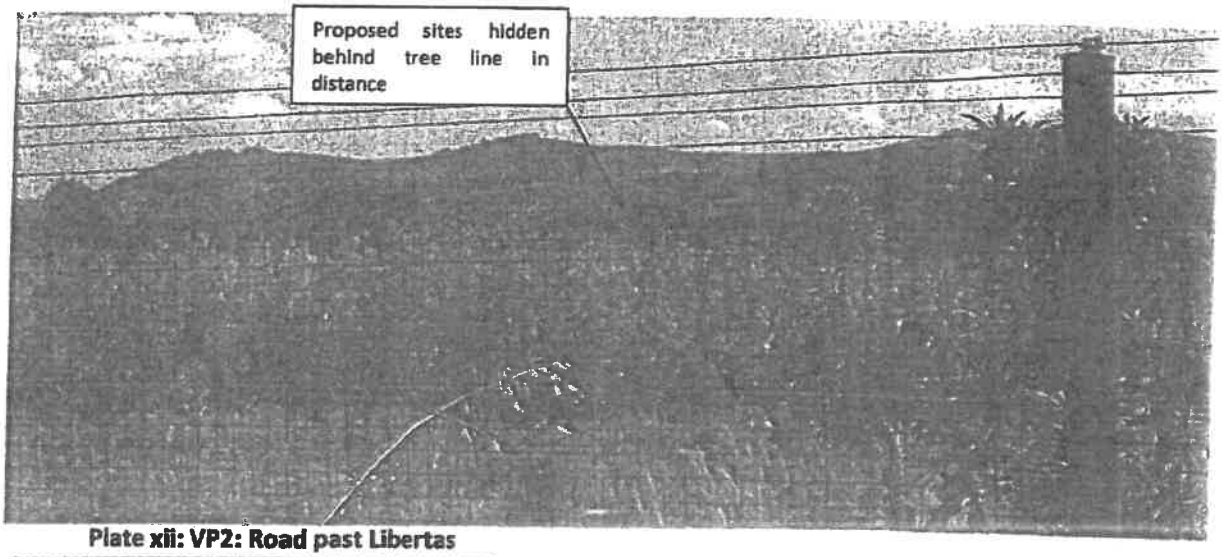


Plate xii: VP2: Road past Libertas

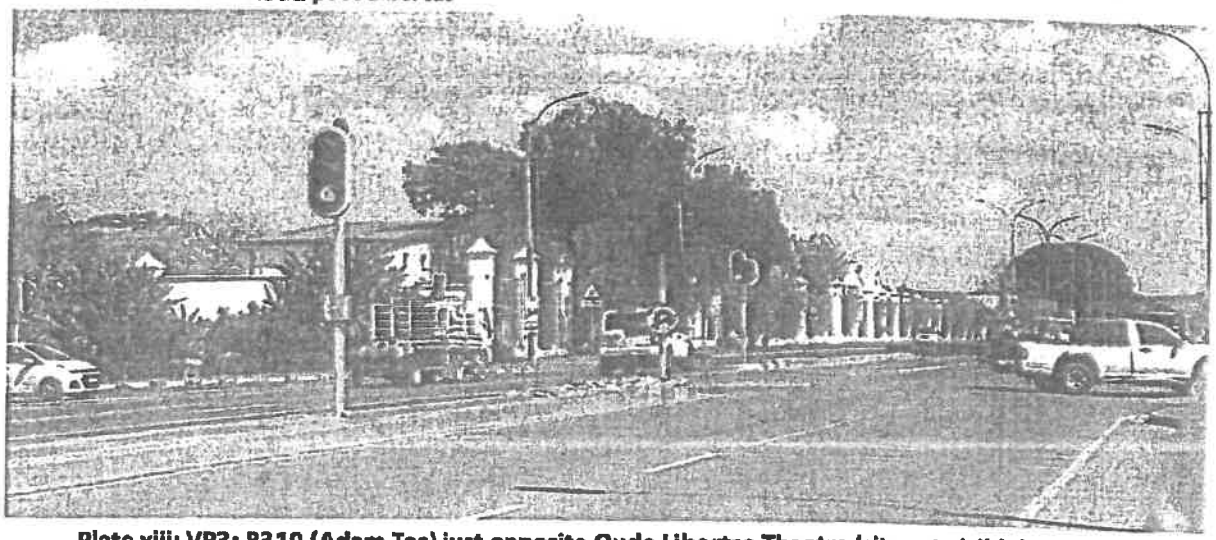


Plate xiii: VP3: R310 (Adam Tas) just opposite Oude Libertas Theatre (site not visible):

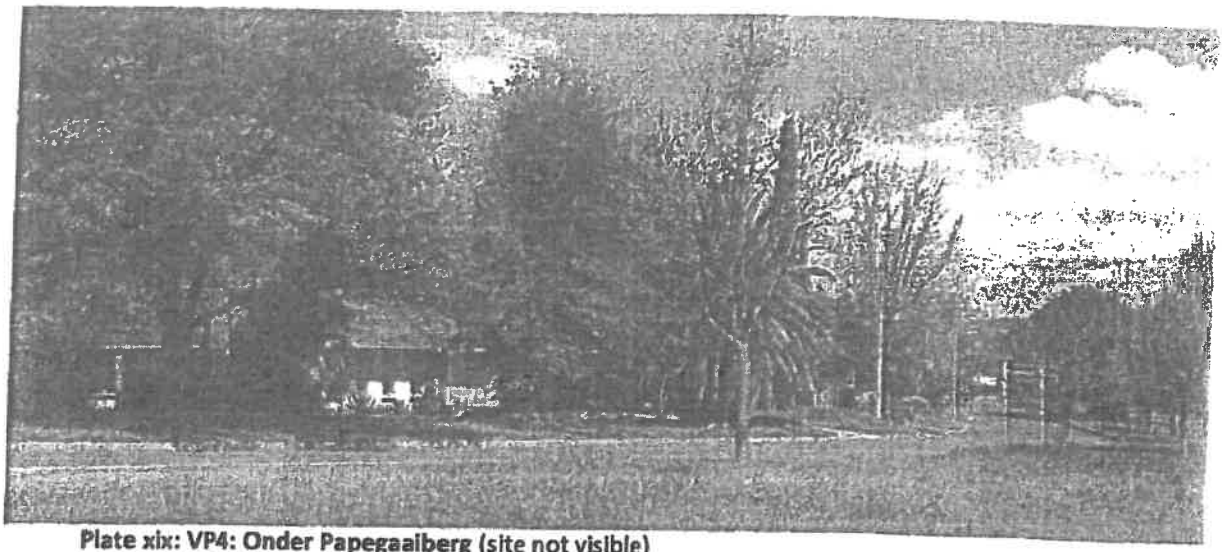


Plate xix: VP4: Onder Papegaaiberg (site not visible)

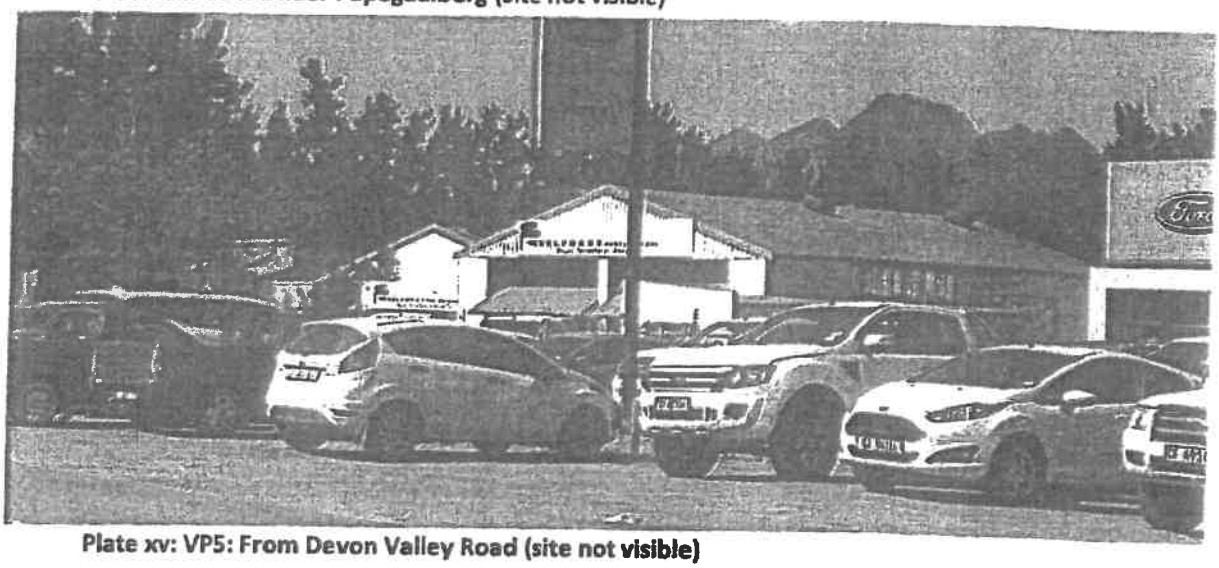


Plate xv: VP5: From Devon Valley Road (site not visible)

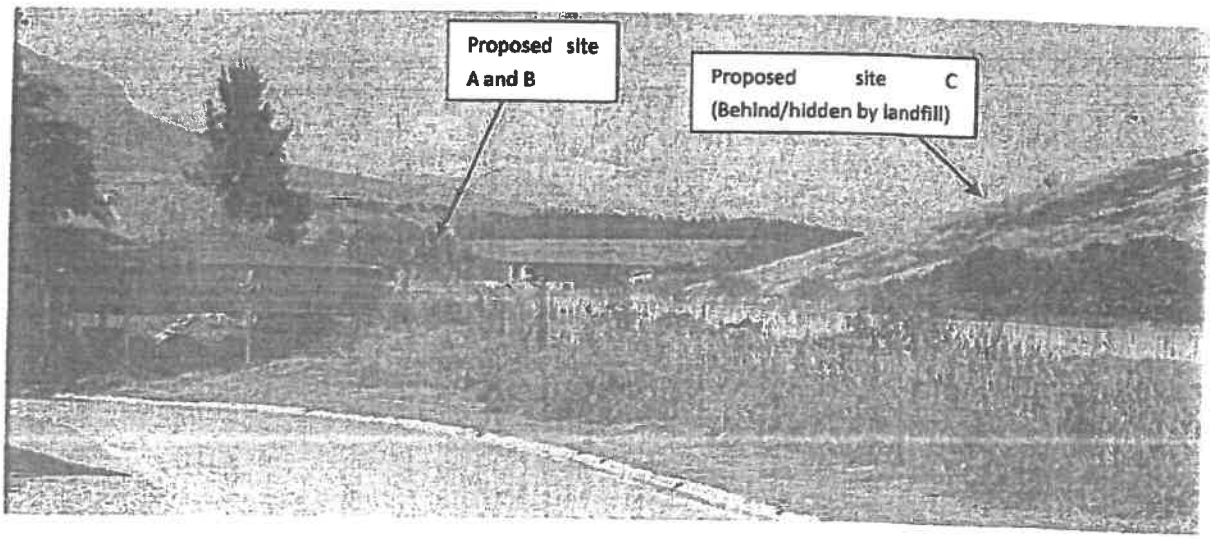


Plate xvi: VP6: Stellenbosch Landfill



Plate xvii: VP7: Housing near Dept. Forestry facility (site not visible behind berm – sites highly visible from top)

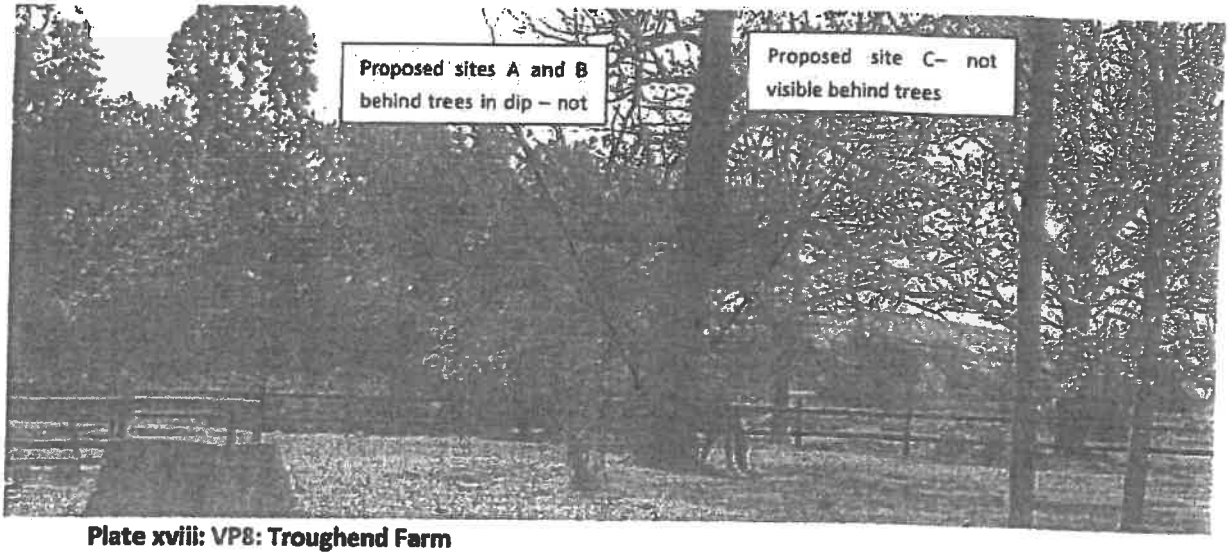


Plate xviii: VP8: Troughend Farm

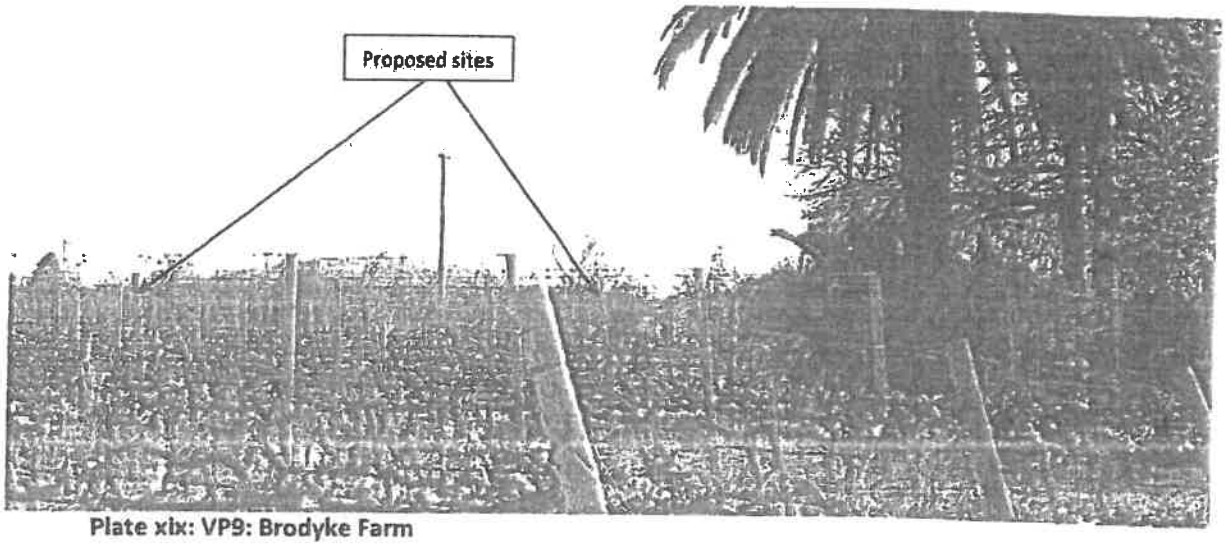


Plate xix: VP9: Brodyke Farm

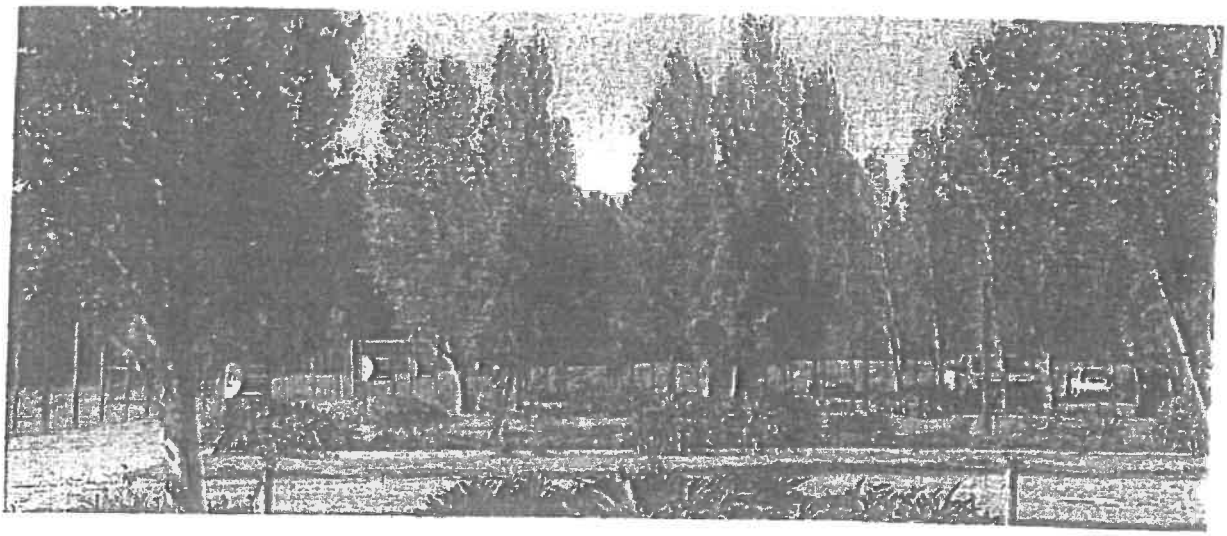
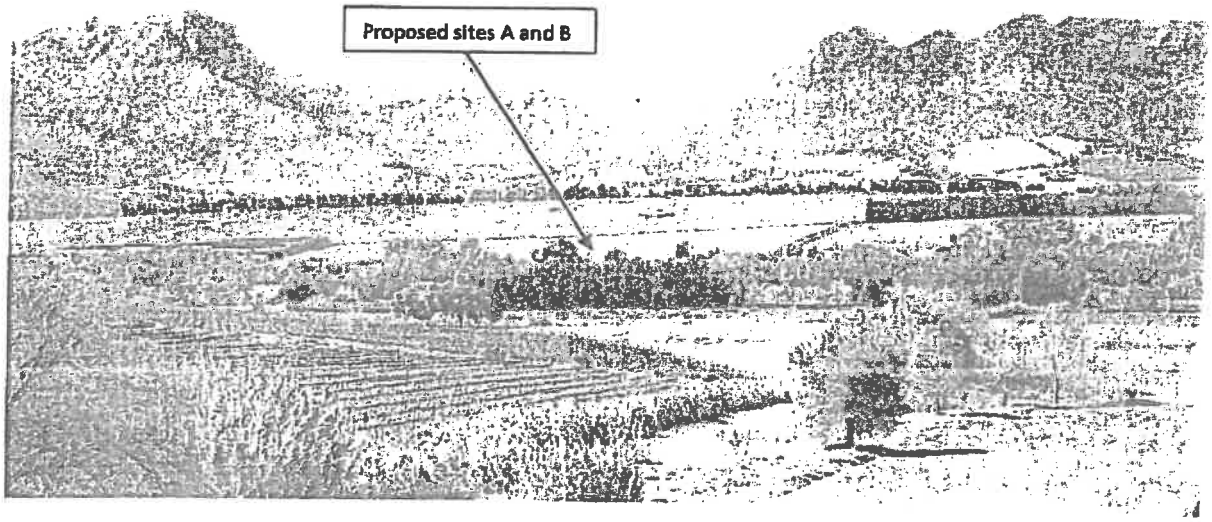


Plate xx: VP10: Barrique Restaurant at Vredenheim (site not visible behind trees)



Plate xxi: VP11: Intersection of Baden Powell and Adam Tas (site not visible due to dip in road)



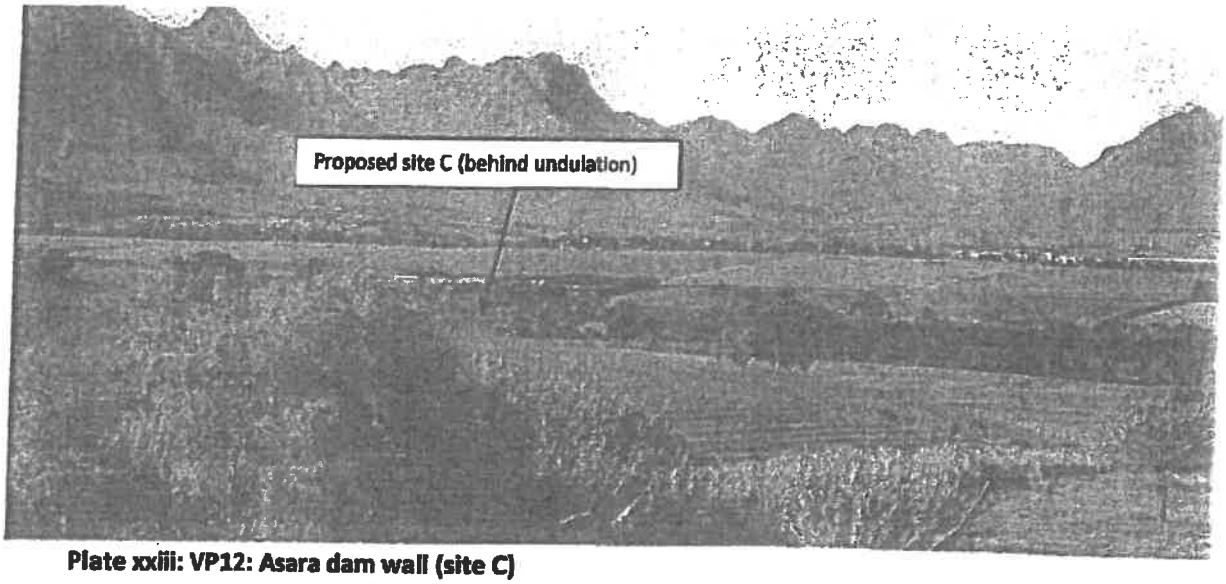


Plate xxiii: VP12: Asara dam wall (site C)

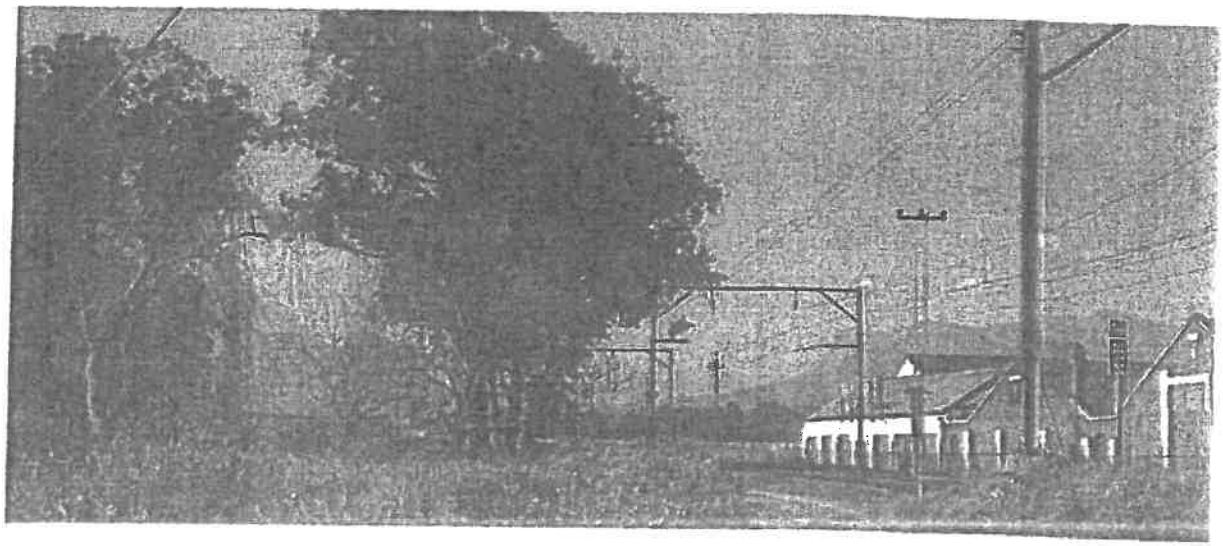


Plate xxiv: VP13: Just off Baden Powell near Volttenberg (site not visible)



Plate xxv: VP14: Corner R310 and Stellenbosch Kloof Road (site not visible)



Plate xxvi: VP 15 R310, Site C highly visible

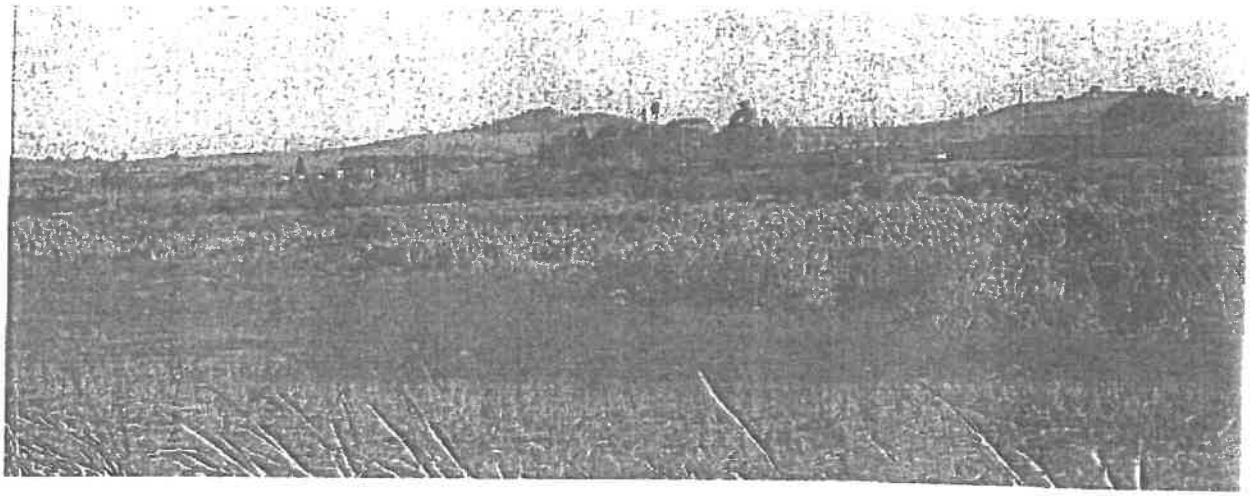


Plate xxvii: VP 16: close to boundary of site A looking north-west



Plate xxviii: VP 16: close to boundary of site A looking at site C

5.4 VISUAL INTRUSION (INTEGRITY)

The previous section considers how visible the proposed activities will be in the landscape. This should be considered together with what effect this visibility will have on the existing visual character/landscape. This is referred to as the level of visual intrusion (or visual integrity). Thus landscape (or visual) intrusion refers to the compatibility of the proposed activities with the existing landscape and/or townscape.

Factors which influence visual intrusion include:

- Consistency of type of development with the existing land use of the area;
- Sensitivity of the natural environment to proposed development;
- The extent to which the texture (density) and layout of the proposed design is congruent with the current built environment;
- Congruency of proposed buildings with other buildings and architectural styles, if relevant; and
- The scale and size of the activities in comparison to nearby existing activities.

The visual intrusion or integrity is summarised in **Table 5** below.

Table 5: Visual Intrusion

VISUAL CRITERIA	COMMENT	RATING
Visual intrusion	• The proposed facility is not generally congruent with the rural and natural components of the surrounding landscape. • The route into Stellenbosch is scenic and considered to be sensitive to visual intrusion. • The proposed facility (especially at site C) is more congruent with the existing landfill, electric transfer station and other semi-urban activities in the vicinity. • The size and scale of the proposed facility and associated buildings is consistent with other facilities and structures related to the wine industry visible along the R310 (mostly to east of site). • Although not completely dissimilar to agricultural storage/ workshed spaces, the proposed facility is less congruent with the texture and density of the surrounding farmsteads (mostly to the west of the site) and residential suburban pockets. • The proposed facility is about 11,5m high - the approximate equivalent to a ~3 storey dwelling. Higher than most farmsteads and residential homes, but as high, or lower, than some of the hotels and other buildings in the area.	Moderate

5.5 VIEWER SENSITIVITY

Visual receptors are important insofar as they inform visual sensitivity. They can include human viewers or valued viewpoints. The level of visual impact considered acceptable is dependent to some degree on the sensitivity of the visual receptors.

Table 6 below indicates the categories of viewer sensitivity as identified in the DEA&DP Guidelines of 2005.

Table 6: General categories of sensitivity for visual receptors (DEA&DP, 2005):

HIGH	MODERATE	LOW
• Residential areas • Nature reserves • Scenic routes / trails	• Sporting and recreational areas • Places of work	• Industrial areas • Active mining areas • Visually severely degraded areas

Various groups of viewers have been identified for the proposed upgrades and their sensitivity is summarised in **Table 7** below.

Table 7: Viewer Sensitivity

VISUAL RECEPTOR	COMMENT	RATING
Residents	• Residents living in the surrounding area are considered sensitive viewers as the scenic quality of the landscape is a big motivating factor for living the area. • Residents most likely to be directly affected will be farmsteads to the south-east, south and south-west within a 3km radius. • Visibility from the closest two residential areas (Oner-Papegaalberg and Khayamandi) is very limited. Views from most properties are obscured by vegetation other buildings, the existing landfill and other undulations in the landscape.	Moderate
Tourists	• Tourists coming into Stellenbosch and staying in the surrounding area are considered to be sensitive viewers as the scenic quality of the landscape is a big motivating factor for visiting the area. • Asara Wine Estate is situated adjacent to site C and overlooks sites A and B. Visibility is however limited by vegetation and undulations in the topography.	Moderate
Motorists	• The R310, Baden Powell Drive and Devon Valley Road, are busy roads with high viewer numbers. The sites are located adjacent to the R310, which is one of the main entry roads into Stellenbosch and is considered to be a sensitive scenic route. However, the proposed development is only likely to be visible for very short stretches of the R310 and is not highly visible from the other two roads. Screening is also possible, and will be particularly effective at site A and B, given their low elevation. • The sites may also be visible from some of the smaller farm and residential roads in the immediate vicinity, but these are less highly trafficked and visibility is often limited by trees and undulations.	Moderate-high

6 Impact Assessment and Mitigation Measures

6.1 ASSESSMENT OF THE SIGNIFICANCE OF VISUAL IMPACTS

6.1.1 Methodology

The following rating methodology, as provided by the Environmental Partnership was used to assess the visual impact:

Table 8: Impact Rating Methodology (Environmental Partnership, 2017)

Rating	Criteria
Extent	• Immediate (the site and immediate surrounds); • Local (adjacent residential areas); • Regional (Western Cape); • National (Country wide); and • International.
Duration	• Short term (0-5 years); • Medium term (5-15 years); and • Long term (operational life of the development).
Intensity	• Low (where natural, cultural and social functions and processes are not affected); • Medium (where the affected environment is altered but natural, cultural and social functions and processes can continue); and • High (where the affected environment is altered but natural, cultural and social functions and processes are altered to the extent that it will temporarily or permanently cease).
Probability	• Low probability (possibility of impact occurring is low); • Probable (where there is a distinct possibility that it will • occur); • Highly probable (where the impact is most likely to occur); and • Definite (where the impact will occur).
Significance	• Very Low (where natural, cultural and social functions and processes are essentially unaffected or insignificantly affected); • Low (where natural, cultural and social functions and processes are slightly affected); • Low to Medium (where natural, cultural and social functions and processes are slightly affected causing a minor change in functions and processes but are still able to continue); • Medium (where the affected environment is altered but natural, cultural and social functions and processes can continue); • Medium to High (where natural, cultural and social functions and processes are altered and most likely the impact will not allow functions and processes to continue, but in some cases, the function or process may continue); and • High (where the affected environment is altered but natural, cultural and social functions and processes are altered to the extent that it will temporarily or permanently cease).
Reversibility	• Irreversible(the activity will lead to an impact that is permanent); • Partially reversible (The impact is reversible to a degree e.g. acceptable re-vegetation measures can be implemented but the pre-impact species composition and/or diversity may never be attained. Impacts may be partially reversible within a short (during construction), medium (during operation) or long term (following decommissioning) timeframe; and • Fully reversible (The impact is fully reversible, within a short, medium or long term

[redacted]	timeframe).

In all instances (-) indicates a perceived negative / adverse impact and (+) is a perceived positive / beneficial impact.

The identified visual impacts are assessed according to this methodology in Tables 9 to 13 below:

6.2 ASSESSMENT OF VISUAL IMPACTS

Table 9: Visual Impact of Construction Activities

IMPACT	Visual impact of construction activities and vegetation clearing.				
	ALTERNATIVE A and B		ALTERNATIVE C		NO-GO ALTERNATIVE
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION	
DESCRIPTION:	Dust, vehicles, plant and equipment as well as vegetation clearing and cut and fill (scarring) will have a temporary impact for the duration of the construction period. If mitigation measures are not implemented these impact can persist. Additionally alien plant seed in the topsoil used for construction can infest natural vegetation. However with effective mitigation measures these impacts can be reduced and reversed post construction. This impact is the same for all alternatives.				No construction activities.
NATURE OF IMPACT	Negative	negative	negative	negative	Neutral
EXTENT OF IMPACT	Local	Local	Local	Local	N/A
DURATION OF IMPACT	Short term	Short term	Short term	Short term	N/A
INTENSITY OF IMPACT	Medium	Medium - Low	Medium	Medium – Low	N/A
PROBABILITY OF OCCURENCE	Definite	Definite	Definite	Definite	N/A
SIGNIFICANCE RATING OF IMPACT	Medium	Medium - Low	Medium	Medium - Low	N/A
REVERSIBILITY	Fully reversible if all plant and construction materials removed post construction and affected areas re-		Fully reversible if all plant and construction materials removed post construction and affected areas re-vegetated where		N/A

	vegetated where appropriate.	appropriate.	
PROPOSED MITIGATION MEASURES	See section 6.3		

Table 10: Visual Impact on Physical Landscape

IMPACT	Visual impact on the physical landscape.				
	ALTERNATIVE A and B		ALTERNATIVE C		NO-GO ALTERNATIVE
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION	
DESCRIPTION:	Cut and fill activities can have an impact on natural landforms. The proposed sites A and B are relatively flat and have already been previously filled / modified and the water bodies are man-made. Given these factors the proposed development is not anticipated to significantly impact on any natural landforms. Alternative B may require more cut and fill activities as it is straddling two of the ponds, but visually the impact is not significant enough to alter the rating and was rated the same for both these alternatives. Site C is located on sloping ground at a higher elevation. Cut and fill activities may therefore result in changes to the landform and these are likely to be fairly visible due to the elevation of the site. However, the area is relatively small and impacts will be limited. Ensuring that cut and fill activities are managed to limit erosion and impacts on surrounding land is important.				No construction activities.
NATURE OF IMPACT	Negative	Negative	Negative	negative	Neutral
EXTENT OF IMPACT	Immediate	Immediate	Immediate	Immediate	N/A
DURATION OF IMPACT	Long term	Long term	Long term	Long term	N/A
INTENSITY OF IMPACT	Low	Low	Low	Low	N/A

	Alternative C is at a higher elevation. It will therefore be more visible and screening possible, but not as effective. It will however be close to the existing landfill and waste facilities and share some of this infrastructure, this will increase visual congruency and lessen the visual impact. Visibility of infrastructure on site C will also depend on its location on the site. Architectural guidelines that help integrate the facility with existing buildings (cellars etc.) along this route can also significantly mitigate this impact.				
NATURE OF IMPACT	Negative	negative	Negative	Negative	Neutral
EXTENT OF IMPACT	Local	Local	Local	Local	N/A
DURATION OF IMPACT	Long term	Long term	Long term	Long term	N/A
INTENSITY OF IMPACT	A: Medium B: Medium-Low	A: Medium-Low B: Medium-Low	Medium	Medium-Low	N/A
PROBABILITY OF OCCURENCE	Definite	Definite	Definite	Definite	N/A
SIGNIFICANCE RATING OF IMPACT	Medium	Medium-Low	Medium	Medium-Low	N/A
REVERSIBILITY	This visual impact can be fully reversed if all the buildings and infrastructure were removed from the site and the land rehabilitated.		This visual impact can be fully reversed if all the buildings and infrastructure were removed from the site and the land rehabilitated.		N/A
PROPOSED MITIGATION MEASURES	See section 6.3				

Table 12: Visual Impact on the Entrance to Stellenbosch

IMPACT	Visual impact on the entrance to Stellenbosch

	ALTERNATIVE A and B		ALTERNATIVE C		NO-GO ALTERNATIVE
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION	
DESCRIPTION:	Given the scenic and tourism value of Stellenbosch and the surrounding agricultural lands, the visual quality of the entrance to the town is considered highly sensitive. The visual nature of the RTS is not highly compatible with this landscape and may impact on this scenic route. However, the proposed facility (particularly if located at site C) is next to the existing landfill and other semi-urban activities which lie between the site and the town. Alternative B is set back further from the R310 and so will have a slightly lower impact on this route. The low elevation of the sites A and B will also make effective mitigation possible. Mitigation at site C is also possible particularly if it is well located on the site.				No buildings and infrastructure.
NATURE OF IMPACT	Negative	Negative	Negative	Negative	Neutral
EXTENT OF IMPACT	Local	Local	Local	Local	N/A
DURATION OF IMPACT	Long term	Long term	Long term	Long term	N/A
INTENSITY OF IMPACT	A: Medium-High B: Medium	A: Medium B: Medium-Low	Medium-high	Medium	N/A
PROBABILITY OF OCCURENCE	Definite	Definite	Definite	Definite	N/A
SIGNIFICANCE RATING OF IMPACT	A: High B: Medium - high	A: Medium – High B: Medium	High	Medium-high	N/A
REVERSIBILITY	This visual impact can be fully reversed if all the buildings and infrastructure were removed from the site and the land rehabilitated.		This visual impact can be fully reversed if all the buildings and infrastructure were removed from the site and the land rehabilitated.		N/A

PROPOSED MITIGATION MEASURES	See section 6.3	

Table 13: Cumulative impacts resulting in the fragmentation of the rural landscape.

IMPACT	Cumulative visual impacts resulting in the fragmentation of the rural landscape.				
	ALTERNATIVE A and B		ALTERNATIVE C		NO-GO ALTERNATIVE
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION	
DESCRIPTION:	Visually incongruent elements outside the urban edge can lead to the visual fragmentation of the Winelands landscape. The sites are located close to the existing landfill site and other semi-industrial types of activities on the outskirts of the urban area (particularly site C). The footprint area of the proposed RTS is relatively small, in comparison to developments which often lead to the fragmentation of the rural landscape such as housing estates and shopping malls. Therefore while the proposed facility may contribute to the fragmentation of the rural landscape, it is a limited contribution of relatively low significance.				No buildings and infrastructure.
NATURE OF IMPACT	Negative	Negative	Negative	negative	Neutral
EXTENT OF IMPACT	Local	Local	Local	Local	N/A
DURATION OF IMPACT	Long term	Long term	Long term	Long term	N/A
INTENSITY OF IMPACT	Cumulative visual impacts are difficult to assess in absolute terms or according to standard rating criteria as detailed in Section 6.1.				N/A
PROBABILITY OF OCCURENCE	The proposed facility is not highly congruent with the Cape Winelands rural landscape				N/A

SIGNIFICANCE RATING OF IMPACT	and is situated on a visually sensitive route into Stellenbosch. However the size and scale of the facility is in keeping with the semi-industrial, retail and other activities, many of which are already visible along this route towards the east (as is the existing landfill site). Additionally the proposed facility is not dissimilar to some agricultural sheds and workshop areas, although the scale is generally larger. The elevation and height of the facility will also make screening possible. If approved, the landscaping layout should aim at screening the facility and visually integrating the site with the surrounding rural areas. This impact is the same for both alternatives.		N/A
REVERSIBILITY	This visual impact can be fully reversed if all the buildings and infrastructure were removed from the site and the land rehabilitated.	This visual impact can be fully reversed if all the buildings and infrastructure were removed from the site and the land rehabilitated.	N/A
PROPOSED MITIGATION MEASURES	See section 6.3		

6.3 MITIGATION MEASURES

The following mitigation measures should be implemented to reduce the visual impacts:

Design Phase

1. Appoint a landscape architect with experience in cultural landscapes to prepare landscape plans, details and specifications for the proposed facility and to monitor the implementation thereof.
2. If site C is selected the facility should be sensitively placed on the site – at as low an elevation as possible and close to the existing materials recovery facility.
3. Employ an architect to review the facility plans and implement design changes that will assist in integrating the facility with the landscape.
4. Sufficient berms and tree planting must be implemented to reduce the visual impact of the facility from the R310.
5. Sufficient budget must be allowed for the implementation and maintenance of the tree screens.
6. Ground level at site boundary must remain natural ground level.
7. Any construction offices/temporary ablutions and related facilities must be sensitively placed on the site where they will be least visible from key viewpoints and the R310.
8. Indigenous, water-wise vegetation must be used as far as possible.
9. Natural wetland areas, as delineated by the fresh water specialist (east of site A and B), must be left unaffected.
10. Low level, unobtrusive and contextually appropriate signage must be used.
11. Outdoor lighting should be fitted with reflectors to minimise light spillage and the use of motion sensor or self-dimming lights used where possible.
12. Lighting poles and mounting height must be high enough to ensure light is well directed with as little light spill as possible.

Construction Phase

1. Site perimeter (building zone) must be clearly demarcated.
2. The construction footprint must be kept as small as possible, to avoid unnecessary disruption.
3. No blanket clearing or removal of vegetation outside of the building zone is allowed, unless for rehabilitation purposes as per a rehabilitation plan.
4. The handling and transportation of materials which may generate dust must be avoided during high wind conditions.
5. The building site and construction facilities must be well maintained and strictly controlled.
6. Dust and litter control measures must be included in the Environmental Management Programme (EMPr)
7. No dumping in unauthorised and/or highly visible areas is permitted.

Operational Phase

1. All areas disturbed or affected by construction activities, must be rehabilitated (including topsoil and re-vegetation) after construction.
2. Internal roads and drainage for runoff should be appropriately stabilised to avoid erosion and visual scars.
3. Sufficient funds must be allocated to ensure ongoing maintenance of buildings and landscaped areas.

7 Conclusions and Recommendations

7.1 FINDINGS AND RECOMMENDATIONS

The following key findings are pertinent to the visual issues considered for the proposed project:

1. The visual character of the greater landscape is dominated by the rugged mountains and the highly scenic agricultural landscapes that make up the Cape Winelands. The town of Stellenbosch and the Eerste River Valley have cultural value and meaning of long-standing relevance and are of high scenic and historic value. In the more immediate area (to the east and north-east) the landfill, residential suburbs, retail and semi-industrial activities detract from the visual character and quality of the area.

2. VAC is high primarily due to the hilly topography, the existing landfill and the clusters and avenues of trees, which provides excellent screening. Within residential areas existing houses and retail facilities also provide screening.

3. Visibility of the proposed facility is reduced at sites A and B by the flat topography, low elevation and the high visual absorption capacity of the surrounding landscape. Alternative B is likely to be less visible from the sensitive R310, but both alternatives could be screened. Alternative C is likely to be more visible, given the elevation of the site but the viewsheds are very similar for all three sites. Visibility of site C will also depend on where the facility is placed on the site.

4. The ZVI was defined as being highly visible within approximately 500m, with visibility beyond 1,5km unlikely to dominate perception and visibility beyond 3km of low significance.

5. The proposed development is generally not congruent with the rural landscape and the route into Stellenbosch is scenic and considered to be sensitive to visual intrusion. The proposed facility is more congruent with the existing landfill, electric transfer station and other semi-urban activities in the vicinity. The size and scale of the proposed facility and associated buildings is consistent with other facilities and structures related to the wine industry visible along the R310 (mostly to east of site). Visual intrusion with the existing townscape/landscape is therefore considered moderate, with site C being in closer proximity to similar visual elements but more visible.

6. Sensitive viewers include tourists, residents and motorists, particularly on the R310 into Stellenbosch.

7. The most significant visual risks or impacts include:
   - The impact of construction and particularly vegetation clearing, which was rated as a medium-low impact with mitigation;

- The impact on the physical landscape form, which was rated as a very low;
- Visual impact of the buildings and associated infrastructure on residents and motorists was rated as medium impact and medium-low impact with mitigation;
- Visual impact on the entrance to Stellenbosch was rated as a medium-high impact for Alternative A and a medium impact for Alternative B, with mitigation; and
- The cumulative visual impact - visually incongruent elements outside the urban edge can lead to the visual fragmentation of the Winelands landscape. The site is located close to the existing landfill site and other semi-industrial types of activities on the outskirts of the urban area. The footprint area of the proposed RTS is relatively small, in comparison to developments which often lead to the fragmentation of the rural landscape such as housing estates and shopping malls. Therefore while the proposed facility may contribute to the fragmentation of the rural landscape, it's contribution is relatively limited.

8. Careful landscaping, which focuses of ameliorating the visual effects of the hard surfaces and screens the facility from the R310, can effectively mitigate many of these impacts.

9. From a visual perspective the No-Go Alternative is the preferred alternative with least impact. Alternative B is marginally preferred from a visual perspective as it is set back further from the R310 and there is more space available for screening from the R310. However, it will be more visible from properties to the south-west. Site C is at a higher elevation and likely to be more prominently visible from short sections of the R310. However grouping the facility with similar activities and sharing infrastructure makes sense and may help to reduce the visually intrusive elements / visual clutter.

10. If site C goes ahead, the facility must be placed at as low an elevation as possible and close to the landfill and MRF.

11. Planted screening along the R310 is important to reduce the visual impact for all three sites and space should be allowed for this and it must be included in budgeting. Clever architectural design of the facility (particularly for site C) will also help to ameliorate the visual impact of the facility.

12. With effective mitigation provided in Section 6.3 of this report, all three sites can be considered visually acceptable.

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Annexure A

Visual Assessment Rating Criteria

Visual Assessment Methodology

Quality

Criteria
Visual quality is high when: • The landscape offers dramatic, rugged topography and /or visually appealing water forms are present; • Pleasing, dramatic or vivid patterns and combinations of landscape features and vegetation are found; • The landscape is without visually intrusive or polluting urban, agriculture or industrial development (i.e.it reveals a high degree of integrity); and/or • Outstanding or evocative features and landmarks are present; and • The landscape/townscape is able to convey meaning.

VAC

High	Moderate	Low
The area is effectively able to screen visual impacts: • Undulating or mountainous topography and relief; • Good screening vegetation (high and dense); • Is highly urbanised in character; and • Existing development is of a scale and density to absorb the visual impact.	The area is partially able to screen visual impacts: • Moderately undulating topography and relief; • Some or partial screening vegetation; • A relatively urbanised character; and • Existing development is of a scale and density to absorb the visual impact to some extent.	The area is not able to screen the visual impacts: • A flat topography; • Low growing or sparse vegetation; • Is not urbanised; and • Existing development is not of a scale and density to absorb the visual impact to some extent.

Visibility

Not Visible	Marginally Visible	Visible	Highly visible
Proposed activities cannot be seen	Proposed activities are only just visible / partially visible	Proposed activities are visible although parts may be partially obscured	Proposed activities are clearly visible (usually in foreground)

Visual Intrusion

High	Moderate	Low
The development/activity results in a noticeable change or is discordant with the surroundings: • Is not consistent with the existing land use of the area; • Is not sensitive to the natural environment; • Is very different to the urban texture and layout; • The buildings and structures are not congruent / sensitive to the existing architecture / buildings; and • The scale and size of the activities are different to nearby existing activities.	The development/activity partially fits into the surroundings but is clearly noticeable : • Is moderately consistent with the existing land use of the area; • Is moderately sensitive to the natural environment; • Is moderately consistent with the urban texture and layout; • The buildings and structures are moderately congruent / sensitive to the existing architecture / buildings; and • The scale and size of the activities are moderately similar to nearby existing activities.	The development/activity results in a minimal change to the surroundings and blends in well: • Is consistent with the existing land use of the area; • Is highly sensitive to the natural environment; • Is consistent with the urban texture and layout; • The buildings and structures are congruent / sensitive to the existing architecture / buildings; and • The scale and size of the activities are similar to nearby existing activities.

Viewer Sensitivity

High	Moderate	Low
• Residential areas • Nature reserves • Scenic routes / trails	• Sporting and recreational areas • Places of work	• Industrial areas • Active mining areas • Visually severely degraded areas

Annexure B

CV and Project Experience

BELINDA GEBHARDT

Curriculum Vitae



I have over 15 years working experience in the environmental and development sectors. During this time I have had extensive experience in conducting and managing a broad range of environmental projects. I have particularly focussed on Visual Impact Assessment (VIA), Environmental Impact Assessment (EIA), State of the Environment Reporting and Environmental Management Frameworks. I also have experience in environmental training, capacity building and materials development, including experience with illiterate and semi-literate communities. I was also involved with voluntary work for the Botanical Society of South Africa for a period of 5 years.

Personal Details:

Physical Address:	15 Rover Road, Rondebosch, 7700
Postal Address:	PO Box 749 Rondebosch, 7701
Tel:	021 6863750 / 084 3052119
Email:	belinda@gebhardt.co.za
Nationality:	South African (ID No: 7406270049085)
Marital Status:	Married

Qualifications and Professional Affiliation:

- BL Hons (Landscape Architecture): University of Pretoria, 1996.
- MPhil in Environmental Management: University of Cape Town, 2003.
- SACLAP (South African Council for Landscape Architecture Professionals) Reg. No.: 99098.
- CEAPSA (Certified with the Board of Environmental Assessment Practitioners, South Africa).

Employment History:

- 2015 - current **Independent Consultant**, Visual Impact Assessment.
- 2009 – 2011 **Independent Consultant**, Visual & Environmental Impact Assessment.
- 2003 - 2009 **SRK Consulting** Environmental Department Cape Town: Environmental Scientist.

	Environmental Planning and Monitoring, Environmental Impact Assessment, Visual Impact Assessment, State of the Environment Reporting. Primary duties included project management, management of specialist teams, conducting public participation processes, report writing and compilation, basic GIS, onsite inspections, assessment and analysis of environmental and social factors, budget management and client liaison.
• 2002 - 2003	**University of Cape Town:** Full-time student (MPhil).
• 1998 - 2002	**Abalimi Bezekhaya**, Khayelitsha Office, Cape Town: Greening Co-ordinator. Co-ordination and implementation of school and community greening projects and events, training and material development. Primary duties included management of the School and Community Greening Programme, facilitating workshops and training courses for children, teachers, caretakers and other community members. Planning and implementation of greening projects and community events such as Arbour Day and assistance with the running of the garden centre and urban agriculture programmes.
• 1997 - 1998	**South African Environmental Project**, Cape Town: Assisted in the Development of the draft EIA Guidelines for the Kingdom of Lesotho, assisted with the running of the volunteer programme and compilation of articles for the website and newsletter.

Summary of Expertise:

- Visual Impact Assessment;
- Project Management;
- Report Writing;
- Editing and Proof Reading;
- Public Consultation;
- Environmental Impact Assessment;
- Environmental Management Frameworks and State of the Environment Reporting;
- Environmental Management and Monitoring Plans and Guidelines; and
- Material Development and Training.

Key Skills:

- Excellent communication skills, verbal and written;
- Computer skills including working knowledge of MSWord, Excel, Photoshop Elements 9, PowerPoint;

• Outstanding organisational and administrative skills; • Ability to work well in a team, as team leader or in support role; and • Ability to take initiative.
Hobbies and Interests:
Gardening, reading and creative writing.
Key Projects :
A list of key project experience available on request.
References:
1. **Chris Dalgliesh:** SRK Consulting. CDalgliesh@srk.co.za 021 6593060 2. **Tim Hart:** ACO. tim.hart@aco-associates.com 021 7064104 3. **Kate Steyn:** Independent Consultant. Katesteyn24@gmail.com 084 5730723

Belinda Gebhardt: Key Project Experience

Key Experience:	
Visual Impact Assessment	
Name of Project:	Visual Impact Assessment for Somerset West Casino (Somerset West, Western Cape)
Client:	Abland
Project Description:	Visual Impact Assessment
Project duration/date:	2017
Name of Project:	Visual Impact Assessment for Upgrades to the N2 Kraalbosch to De Vleie (Wilderness, Western Cape)
Client:	The Environmental Partnership
Project Description:	Visual Impact Assessment
Project duration/date:	2017
Name of Project:	Visual Impact Assessment for Re-Development of the Athlone Power Station (Cape Town, Western Cape)
Client:	WSP, Parsons Brinckerhoff
Project Description:	Visual Impact Assessment
Project duration/date:	2017
Name of Project:	Visual Impact Assessment for Development of Site 460 (St Helena Bay, Western Cape)
Client:	ACO Associates
Project Description:	Visual Impact Assessment
Project duration/date:	2017
Name of Project:	Application for Exception for a Visual Impact Assessment for the Vette Rivier Prospecting (Western Cape)
Client:	Eco Impact
Project Description:	Visual Impact Assessment
Project duration/date:	2016
Name of Project:	Visual Impact Assessment for the BioTherm Esizayo Wind Farm (Matjiesfontein)
Client:	WSP, Parsons Brinckerhoff
Project Description:	Visual Impact Assessment
Project duration/date:	2016
Name of Project:	Visual Impact Assessments for the BioTherm Maralla Wind Farms (x2) (Sutherland)
Client:	WSP, Parsons Brinckerhoff
Project Description:	Visual Impact Assessment
Project duration/date:	2016
Name of Project:	Visual Impact Assessments for the BioTherm Solar Projects (x7) (Aggeneys, Northern Cape)
Client:	WSP, Parsons Brinckerhoff

Project Description:	Visual Impact Assessment
Project duration/date:	2016
Name of Project:	Visual Impact Assessment for the Robben Island Photovoltaic Plant (Cape Town)
Client:	WSP, Parsons Brinckerhoff
Project Description:	Visual Impact Assessment
Project duration/date:	2016
Name of Project:	Visual Impact Assessment for the Portion 15 of Farm 281, Suidestrand (Agalhas, Overberg)
Client:	Luchrist Eiendomsbeleggings
Project Description:	Visual Impact Assessment
Project duration/date:	2015
Name of Project:	Visual Impact Assessment for the Exxaro Eerstelingsfontein Coal Mine
Client:	WSP, Parsons Brinckerhoff
Project Description:	Visual Impact Assessment
Project duration/date:	2011
Name of Project:	Proposed Upgrade of R310 Corridor between the N2 and Polkadraai Road (Stellenbosch)
Client:	SRK Consulting
Project Description:	Visual Impact Assessment
Project duration/date:	2011
Name of Project:	Stellenbosch Landfill (Stellenbosch, Western Cape)
Client:	Stellenbosch Municipality
Project Description:	Visual Impact Assessment
Project duration/date:	2010
Name of Project:	Gamsberg Zinc Project (Aggeneys, Northern Cape)
Client:	Black Mountain Mining (Pty) Ltd
Project Description:	Visual Baseline
Project duration/date:	2009
Name of Project:	Worcester Hills Development (Worcester, Western Cape)
Client:	Worcester Land Trust
Project Description:	Visual Impact Assessment
Project duration/date:	2008
Name of Project:	Levendal (Suider-Paarl, Western Cape)
Client:	Levendal Developments
Project Description:	Visual Impact Assessment
Project duration/date:	2007
Name of Project:	Ben Schoeman Dock: Berth Deepening EIA (Cape Town)
Client:	Transnet Projects
Project Description:	Visual Impact Assessment
Project duration/date:	2007
Name of Project:	BRWM Municipal Landfill (Western Cape)
Client:	BRWM Municipality
Project Description:	Visual Impact Assessment
Project duration/date:	2006
Name of Project:	Anura Winelands Estate (Klapmuts, Western Cape)
Client:	Thymen Bothma

Project Description:	Visual Impact Assessment
Project duration/date:	2005
Name of Project:	Pulp United Paper Mill (Richards Bay, KZN)
Client:	Pulp United
Project Description:	Visual Impact Assessment
Project duration/date:	2005
Name of Project:	Redevelopment of several municipally owned precincts near the Mossel Bay Beachfront (Mossel Bay, Western Cape)
Client:	AttPower Developments
Project Description:	Visual Sensitivity
Project duration/date:	2005
Name of Project:	Pearly Beach Waste Water Treatment Works (Pearly Beach, Western Cape)
Client:	Overstrand Municipality
Project Description:	Visual Impact Assessment
Project duration/date:	2003 – 2004
Name of Project:	Erf 324 (Rooi Els, Western Cape)
Project Description:	Visual Impact Assessment
Project duration/date:	2003
Name of Project:	NDC Mining EIA (West Coast, Western Cape)
Client:	NDC Mining Company
Project Description:	Visual Impact Assessment
Project duration/date:	2003
Name of Project:	St Francis Bay Golf Estate (St Francis Bay, Eastern Cape)
Project Description:	Visual Impact Assessment
Project duration/date:	2003

Environmental Impact Assessment

Name of Project:	Klue Street Link Road (Worcester, Western Cape)
Client:	Worcester Land Trust
Project Description:	Basic Assessment
Project duration/date:	2008 – 2009
Name of Project:	Rochester Road (Philippi, Cape Town)
Client:	Rochester Park Pty. Ltd
Project Description:	Basic Assessment
Project duration/date:	2007 – 2009
Name of Project:	Altona Developments (Worcester, Western Cape)
Client:	Altona Developments Pty Ltd.
Project Description:	Environmental Impact Assessment
Project duration/date:	2006 – 2009
Name of Project:	Levendal Developments (Suider Paarl, Western Cape)
Client:	Levendal Developments Pty Ltd.
Project Description:	Environmental Impact Assessment
Project duration/date:	2006 – 2009
Name of Project:	Bakhuis Bauxite Mining ESIA (Suriname, South America)
Client:	BHP Billiton

Project Description:	Environmental and social impact assessment
Project duration/date:	2005 – 2009
Name of Project:	BHP Billiton Coermotibo Three Hills Bauxite Deposits (Coermotibo, Suriname, South America)
Client:	BHP Billiton
Project Description:	Environmental and Social Impact Assessment
Project duration/date:	2005
Name of Project:	Bordjiesrif Environmental Experiential Centre (Cape Point, Table Mountain National Park)
Client:	South African National Parks
Project Description:	Environmental Impact Assessment
Project duration/date:	2003-2005
Name of Project:	Buffels Bay Recreational Area Upgrade (Cape Point, Table Mountain National Park)
Client:	South African National Parks
Project Description:	Environmental Impact Assessment
Project duration/date:	2003-2004
Name of Project:	Vodacom Base Station Installations (Cape Town and surrounds)
Client:	Vodacom
Project Description:	Environmental Impact Assessments
Project duration/date:	2003 – 2006
Name of Project:	NDC Mining EIA (West Coast, Western Cape)
Client:	NDC Mining Company
Project Description:	EIA for the proposed diamond mining on the West Coast
Project duration/date:	2003
Name of Project:	Vissershok Landfill Extension (Cape Town)
Client:	City of Cape Town
Project Description:	EIA for the proposed landfill extension
Project duration/date:	2003 – 2004
Name of Project:	Worcester Effluent Disposal Site and Pipeline (Worcester, Western Cape)
Client:	KWV, Distell and Brenn-O-Kem
Project Description:	EIA for the proposed effluent disposal site and pipeline in Worcester
Project duration/date:	2004

State of the Environment Reporting and Environmental Management Frameworks

Name of Project:	City of Cape Town Environmental Management Frameworks (Districts A,D,G,H)
Client:	City of Cape Town
Project Description:	Environmental Management Frameworks
Project duration/date:	2009
Name of Project:	City of Cape Town Environmental Management Frameworks (Districts B, C , E)
Client:	City of Cape Town
Project Description:	Environmental Management Frameworks
Project duration/date:	2008 – 2009
Name of Project:	Western Cape State of the Environment Report (Western Cape)
Client:	Dept. Of Environmental Affairs and Development Planning
Project Description:	Management and compilation of Western Cape State of the Environment Report
Project duration/date:	2004 – 2005
Name of Project:	Knysna State of the Environment Report Framework (Knysna, Western Cape)
Project Description:	State of the Environment Report Framework and Guideline Document

Project duration/date:	2004 – 2005

Environmental Management and Monitoring Plans, Guidelines and Auditing

Name of Project:	Hopewell Conservation Project (Nelson Mandela Bay Municipality, Eastern Cape)
Client:	Hopewell Conservation Project Pty Ltd.
Project Description:	Landscaping Guidelines
Project duration/date:	2010
Name of Project:	Rochester Road EMP (Philippi, Cape Town)
Client:	Rochester Park Pty Ltd.
Project Description:	Environmental Management Plan
Project duration/date:	2008
Name of Project:	Kristensen Oceanfront Restaurants Environmental Audits (Cape Town)
Client:	Kristensen Oceanfront Restaurants
Project Description:	Environmental Audit
Project duration/date:	2004 / 2005 / 2006
Name of Project:	Kwanonquaba EMP (Mossel Bay, Western Cape)
Project Description:	Environmental Management Plan
Project duration/date:	2007
Name of Project:	Coermotibo Three Hills Bauxite Deposits EMP (Coermotibo, Suriname, South America)
Client:	BHP Billiton
Project Description:	Environmental Management Plan
Project duration/date:	2006

Stellenbosch Organic Refuse Transfer Station –VIA Addendum Report

September 2020

1 Background

The Waste Department of the Stellenbosch Municipality is planning the development of a Refuse Transfer Station (RTS) near the existing Devon Valley Stellenbosch Landfill as a means to decrease and divert waste from the landfill, which is urgently required.

In 2019 a Visual Impact Assessment was undertaken to evaluate the visual impacts of the proposed Stellenbosch Refuse Transfer Station (RTS). Three alternative sites were considered: Alternative A is situated south of R310 (Adam Tas Rd), opposite the Stellenbosch Landfill and immediately north of the old Waste Water Treatment Works maturation pond, which is no longer in use ("Pond 1"). Alternative A is situated to the west of Pond 1, straddling Ponds 2 and 3. Alternative C is located on the northern side of the R310 adjacent to the existing landfill (see Figure 1 in VIA report).

Subsequent to the VIA report, plans have been refined and further detail regarding visual mitigation developed. An addendum comment/statement was requested to fully consider these measures.

2 Findings of the 2019 VIA:

For ease of reference the main findings of the VIA done in 2019 were as follows:

1. **The visual character** of the greater landscape is dominated by the rugged mountains and the highly scenic agricultural landscapes that make up the Cape Winelands. The town of Stellenbosch and the Eerste River Valley have cultural value and meaning of long-standing relevance and are of high scenic and historic value. In the more immediate area (to the east and north-east) the landfill, residential suburbs, retail and semi-industrial activities detract from the visual character and quality of the area.

2. **VAC** is high primarily due to the hilly topography, the existing landfill and the clusters and avenues of trees, which provides excellent screening. Within residential areas existing houses and retail facilities also provide screening.

3. **Visibility** of the proposed facility is reduced at sites A and B by the flat topography, low elevation and the high visual absorption capacity of the surrounding landscape. Alternative B is likely to be less visible from the sensitive R310, but both alternatives could be screened.

Alternative C is likely to be more visible, given the elevation of the site but the viewsheds are very similar for all three sites. Visibility of site C will also depend on where the facility is placed on the site.

4. The ZVI was defined as being highly visible within approximately 500m, with visibility beyond 1,5km unlikely to dominate perception and visibility beyond 3km of low significance.

5. The proposed development is generally not congruent with the rural landscape and the route into Stellenbosch is scenic and considered to be sensitive to visual intrusion. The proposed facility is more congruent with the existing landfill, electric transfer station and other semi-urban activities in the vicinity. The size and scale of the proposed facility and associated buildings is consistent with other facilities and structures related to the wine industry visible along the R310 (mostly to east of site). Visual intrusion with the existing townscape/landscape is therefore considered moderate, with site C being in closer proximity to similar visual elements but more visible.

6. **Sensitive viewers** include tourists, residents and motorists, particularly on the R310 into Stellenbosch.

7. The most significant **visual risks** or impacts include:
   - The impact of construction and particularly vegetation clearing, which was rated as a medium-low impact with mitigation;
   - The impact on the physical landscape form, which was rated as a very low;
   - Visual impact of the buildings and associated infrastructure on residents and motorists was rated as medium impact and medium-low impact with mitigation;
   - Visual impact on the entrance to Stellenbosch was rated as a medium-high impact for Alternative A and a medium impact for Alternative B, with mitigation; and
   - The cumulative visual impact - visually incongruent elements outside the urban edge can lead to the visual fragmentation of the Winelands landscape. The site is located close to the existing landfill site and other semi-industrial types of activities on the outskirts of the urban area. The footprint area of the proposed RTS is relatively small, in comparison to developments which often lead to the fragmentation of the rural landscape such as housing estates and shopping malls. Therefore while the proposed facility may contribute to the fragmentation of the rural landscape, it's contribution is relatively limited.

8. Careful landscaping, which focuses of ameliorating the visual effects of the hard surfaces and screens the facility from the R310, can effectively mitigate many of these impacts.

9. From a visual perspective the No-Go Alternative is the preferred alternative with least impact. Alternative B is marginally preferred from a visual perspective as it is set back further

from the R310 and there is more space available for screening from the R310. However, it will be more visible from properties to the south-west. Site C is at a higher elevation and likely to be more prominently visible from short sections of the R310. However grouping the facility with similar activities and sharing infrastructure makes sense and may help to reduce the visually intrusive elements / visual clutter.

10. If site C goes ahead, the facility must be placed at as low an elevation as possible and close to the landfill and MRF.

11. Planted screening along the R310 is important to reduce the visual impact for all three sites and space should be allowed for this and it must be included in budgeting. Clever architectural design of the facility (particularly for site C) will also help to ameliorate the visual impact of the facility.

12. **With effective mitigation** all three sites can be considered visually acceptable.

3 Summary of additional information

Site Alternative C has become the developer's preferred site due to residential development which is planned for the other pockets of land. A layout plan for Alternative C has therefore been developed in greater detail, as indicated in the main Environmental Impact Assessment Report.

Additionally architectural and landscaping concept plans have been developed.

3.1 ARCHITECTURAL CONCEPT (OSMOND LANGE, 2020):

- The concept for the Organic Waste Transfer Station was to use an architecture that is reminiscent of historic Stellenbosch and industrial barn building typologies.
- The building façade is broken down into the traditional base, middle facade and roof/ gable edge.
- A red brick base at the retaining structures lends a robust looking edge to the building and is also easy to clean from a maintenance point of view. This acts as a plinth to the building.
- A modern pattern façade using historic Stellenbosch building proportions was explored. It has a combination of smooth and rough textures. Smooth precast concrete panels offset with textured bagged brickwork speaks of a rustic wine farm style architecture found in the area.
- This façade faces onto one of the main roads into Stellenbosch and will create visual interest.
- Shadows will fall off the pattern relief and create a perception of depth (Osmond Lange, 2020)

impacts will be mitigated to an extent by the proposed architecture and landscaping measures.

Visual congruency and integration

As previously concluded the proposed development is generally not congruent with the rural landscape and the route into Stellenbosch is scenic, and considered to be sensitive to visual intrusion. However, given the size and scale of the proposed facility and the proposed architectural measures it is visually relatively consistent with other facilities and structures related to the wine industry visible along the R310.

In summary, with reference to the additional information:

1. From a visual perspective the No-Go Alternative remains the preferred alternative with least impact.
2. Alternative B is still marginally preferred from a visual perspective as it is set back further from the R310 (an important gateway to a historically significant landscape) and there is more space available for screening from the R310. Please note however, it will be more visible from properties to the south-west.
3. Alternative C is likely to be more visible from sections of the R310. However, grouping the facility with similar activities and sharing infrastructure does curtail the visual clutter from sprawling into the landscape.
4. The proposed architectural guidelines and landscaping plans will help to reduce the visual impact of the facility on the landscape and should be included as conditions of approval for any of the alternatives.

Belinda Gebhardt

OFFICE COPY

Friedlaender, Burger & Volkmann - Land Surveyors

Beacon Descriptions

B ..... 12mm Iron peg in concrete
All other beacons .... 12mm Iron peg

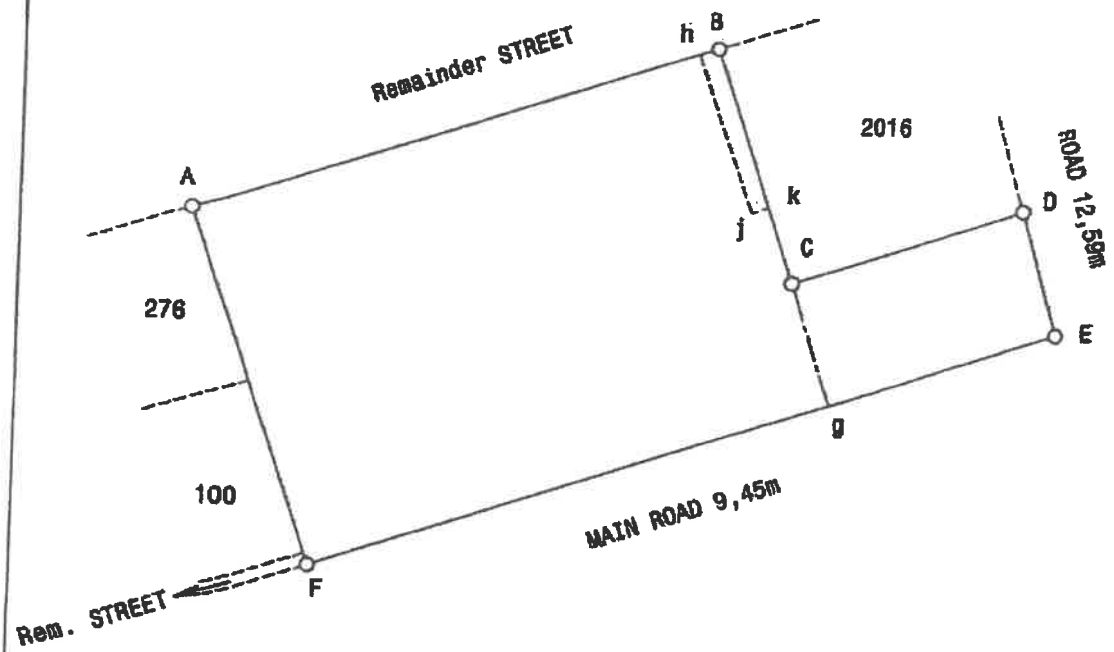
S.G. No.
4663/2008

Approved.

for
Surveyor - General
Date : 2008.09.22

SHEET 2 OF 2 SHEETS

T | N



ERF 2098 (PORTION OF ERF 2015) KLAPMUTS

Administrative District of Stellenbosch

Surveyed in February 2008
by me

SCALE 1 : 1250

PLS 0907 M B Straughan Pr Land Surveyor

ERF2098 KLAPMUTS

JG AFRIKA
EXPERIENCE QUALITY INTEGRITY

STELLENBOSCH MUNICIPALITY: WASTE DEPARTMENT

SOLID WASTE REFUSE TRANSFER STATION
PRELIMINARY DESIGN REPORT
(SPECIALIST ENGINEERING REPORT)

June 2020
REVISION 2

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

Prepared by:

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Project director: C Wise

VERIFICATION PAGE

Form 4.3.1

Rev 13

TITLE:

STELLENBOSCH SOLID WASTE REFUSE TRANSFER STATION: PRELIMINARY DESIGN REPORT: ENGINEERING

JGA REF. NO.	DATE:	REPORT STATUS
4653	30 June 2020	Final

CARRIED OUT BY:	COMMISSIONED BY:
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AUTHOR	**CLIENT CONTACT PERSON**
John Coetzee, Aiden Bowers, Richard Emery	P. Novella

SYNOPSIS

The Stellenbosch Municipality has planned the development of a Refuse Transfer Station near the existing Devon Valley landfill site which is intended to receive organic-rich waste streams from the separation-at-source programme which is to be beneficiated in order to reduce the quantity of waste going to landfill.
JG Afrika (Pty) Ltd was appointed as specialist solid waste and municipal engineers, in terms of Tender No. B/SM 28/16.

KEY WORDS:

Organic Waste, Recycling, Refuse Transfer Stations, Waste to Energy, Refuse Derived Fuels

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QUALITY VERIFICATION

This report has been prepared under the controls established by a quality management system that meets the requirements of ISO9001: 2014 which has been independently certified by DEKRA Certification under certificate number 90906882

Verification	Capacity	Name	Signature	Date
By Author	Specialist Engineer	A Bowers		29/06/20
Checked by:	Executive Associate	R Emery		29/06/20
Authorised by:	Technical Director	C Wise	pp	29/06/20

Filename:	Stellenbosch Organic RTS Preliminary Design Report.docx

STELLENBOSCH WASTE DEPARTMENT

SOLID WASTE REFUSE TRANSFER STATION PRELIMINARY DESIGN REPORT: ENGINEERING

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STELLENBOSCH MUNICIPALITY:
SOLID WASTE DEPARTMENT

SOLID WASTE REFUSE TRANSFER STATION
PRELIMINARY DESIGN REPORT: ENGINEERING

1 INTRODUCTION

1.1 Background Information

The remaining airspace at the Stellenbosch Landfill at Devon Valley (owned and operated by Stellenbosch Local Municipality (SLM)) is rapidly decreasing and measures to divert waste from landfill are urgently required. The Municipality has recognised the need for waste diversion and has initiated/implemented a number of projects towards reducing the quantities of waste going directly to landfill. The development of this proposed organic waste management facility forms part of a larger system of interventions under development by the municipality. The Municipality implemented a separation-at-source (S@S) program that diverted approximately 2% of the total waste stream in 2016 (Aurecon MRF Report, 2016). The Municipality is also in the process of constructing a materials recovery facility (MRF) that is a key component to the increased roll-out of the separation-at-source program that could result in significant diversion of waste from landfill in the short to medium term.

The proposed refuse transfer station (RTS) is intended to receive the residual mixed waste fraction ("black bag") left behind after S@S has removed the recyclable fraction. This residual waste is seen to have a high organic component which is suitable for beneficiation through a number of possible waste treatment options, reducing the amount of residual waste disposed to landfill. The facility is also expected to receive "pure" organic wastes (POW), e.g. from restaurants, fruit and vegetable shops, etc.

1.2 Terms of Reference, Description and Scope of Work of the Project

In terms of Tender No. B/SM 28/16, JG Afrika (Pty) Ltd was appointed on 21 November 2017 by the SLM for "The Provision of Professional Services Design, Tender Documentation and Construction Monitoring for the Stellenbosch Refuse Transfer Station.

The Scope of Work for the project is to provide professional consulting engineering services for the report stage of the project[1], and in particular to produce a technical engineering report aligned to the environmental process being undertaken as an independent appointment by The Environmental Partnership. This design report will also support a Municipal Infrastructure Grant (MIG) application. The content of the original draft report has been updated as the environmental process findings have shed new light on previous assumptions. This version also includes an alternative position for the facility. The primary objectives of this report to provide the technical support into the environmental process and MIG application.

2 LIST OF ACRONYMS AND ABBREVIATIONS

SLM	Stellenbosch Local Municipality
DEA	Department of Environmental Affairs
DEA:DP	Department of Environmental Affairs & Development Planning (Western Cape)
DWAF	Department of Water Affairs (Now reffered to as DWS)
DWS	Department of Water and Sanitation
IWMP	Integrated Waste Management Plan
JGA	JG Afrika (Pty) Ltd
MBT	Mechanical Biological Treatment
MIG	Municipal Infrastructure Grant
MRF	Materials Recovery Facility
MRs	DWAF Minimum Requirements Trilogy, 1998
MSW	Municipal Solid Waste
NEMA	National Environmental Management Act (Act 107 of 1998), as amended
NEMWA	National Environment Management: Waste Act (Act 59 of 2008)
NGL	Natural Ground Level
OWRF	Organic Waste Reduction Facility
OHS	Occupational Health and Safety
P&Gs	Preliminary and General (Construction Industry)
RTS	Refuse Transfer Station

[1] ECSA Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000, (Act No.46 of 2000)

ROD	Record of Decision
S@S	Separation at source
SPMA	South Peninsula Municipal Area
SLM	Stellenbosch Local Municipality
VAT	Value Added Tax
WMF	Waste Management Facility
WWTW	Waste Water Treatment Works
POW	Pure organic waste
ORMW	Organic-rich mixed waste

3 SOURCES OF INFORMATION

The following documents and reports have been used to undertake a technical investigation and study for the site development of the proposed Organic Waste Management Facility (*aka* "Solid Waste Refuse Transfer Station"):

1. *"Input into the basic assessment process to assess the environmental implications of the proposed Stellenbosch waste transfer facility, Stellenbosch, Western Cape". Specialist aquatic ecosystems report. July 2018. Prepared by Prepared by Liz Day of Freshwater Consulting cc*

2. *Farm RE/279 Stellenbosch Waste Transfer Facility Traffic Impact Statement. May 2018. JG Afrika (Pty) Ltd. [Revised June 2020].*

3. *Stellenbosch Refuse Transfer Facility. Floodline Study. July 2018. JG Afrika (Pty) Ltd.*

4. *"Oostenberg Refuse Transfer Station and Materials Recovery Facility: Civil, Mechanical & Electrical Engineering Design and Implementation: Comparative Analysis of Alternative Technologies"*: Jeffares and Green (Pty) Ltd (March 2006): City of Cape Town. Department of Waste Management.

5. *National Environmental Management Waste Act* (NEMWA): (Act 59 Of 2008).

6. *The National norms and standards for disposal of waste to landfills R634, R635 and R636* (23 Aug 2013).

7. *"Western Cape Integrated Waste Management Plan: 2017 – 2022"* issued by the Directorate Waste Management: Western Cape Government: Department of Environmental Affairs and Development Planning (DEA&DP).

8. *"Motivation for the Development of Norms and Standards for the Treatment of Organic Wastes in South Africa":* (Department of Environmental Affairs: German Cooperation: GIZ: 2017).

9. *Materials Recovery Facility Design Development Report*, Aurecon 2016

4 PROJECT AREA

A number of potential sites were considered for the development of the Organic Refuse Transfer Station (RTS), all in close proximity to the Devon Valley Landfill Site. The sites initially proposed, collectively known as Alternative A, proved to be unsuitable following further site investigations together with the findings of the Specialist Aquatic Ecosystems Report and the 100-year floodline study.

Alternative A

The portion of land immediately south of the Devon Valley Landfill (and north of the R310) was initially considered as this area is licensed for waste management activities. Recyclable recovery infrastructure and a public drop-off is currently being developed on this land, and therefore the integration of an organic RTS would effectively ensure that the main components of MSW are managed on one site. This site was not considered viable since it is almost centrally traversed by a large diameter, pressurised water pipe which divides the site into two smaller areas. The costs and technical risk associated with relocating the pipe were considered prohibitive.

The second consideration for Alternative A was on the parcel of land south of Adam Tas Road, between an existing gravel road and the Veldwagter River. The site was deemed not feasible due to the position of the 1:100 floodline and recommended setbacks by the freshwater ecologist, which reduced the site to an unusably small area.

Alternatives B, C and D

Alternatives B and C are sited on the 'Droe Dyke' parcel of land, also south of Adam Tas, but to the west of Alternative A. The proposed site for Alternative D is to the north of Adam Tas and west of the MRF facility, on land currently leased to the Asara Wine Estate.

Figure 4.1 presents the sites considered as Alternative A. The newly proposed positions for the facility, referred to as Alternatives B, C, and D are also shown and are as described in further detail in the sections following.

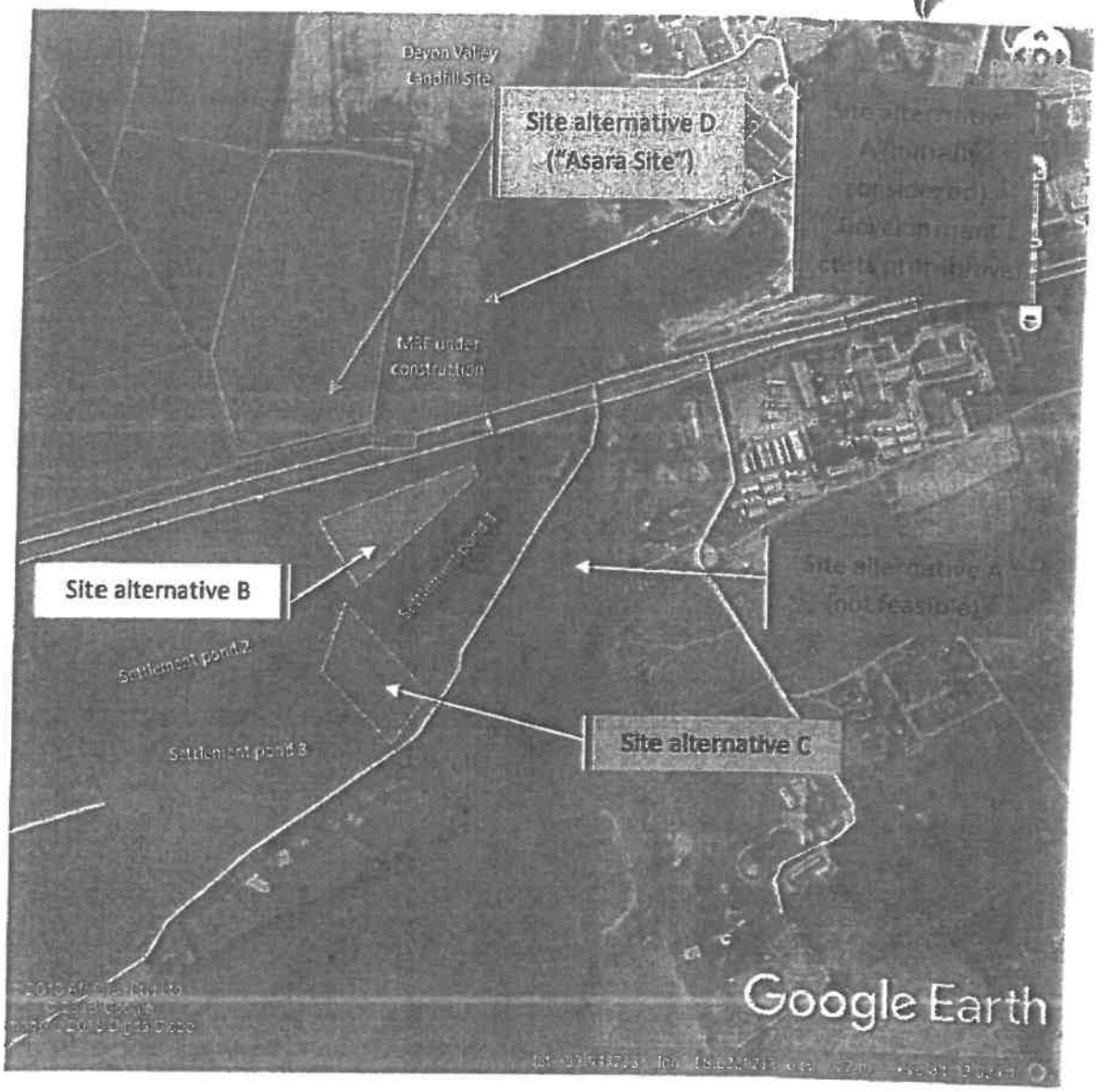


Figure 4.1: Proposed Site Alternatives – Stellenbosch RTS

4.1 Site Alternative B

The Proposed Site Alternative B is situated south of R310 road, (opposite the Stellenbosch Landfill), and immediately north of an old WWTW maturation pond that is now disused ("Pond 1"). This municipal-owned site is seen as beneficial due to the ability to use the parcel of land for the extent of the development without encroaching on the larger portion of land to the West, which could be utilized for other development projects by the SLM. The proposed site is constrained by the R310 road in the North and Pond 1 to the South. It should however be noted that the Aquatic Ecosystems Report did not specifically exclude the pond 1 area from being developed, noting: "The construction

of the waste transfer facility on the footprint of settlement pond 1 would result in the definite loss of this wetland." and "Loss of this artificial, locally abundant habitat type is not considered of major ecological significance, with similar habitats being available throughout the surrounding agricultural areas. A preferable approach would however be its benign retention."

The site is accessed via an existing gravel road off the R310, which is earmarked for upgrade as part of the proposed development plans, to a suitable single-carriage asphalt surfaced road. There is a suitable water supply service running along the existing gravel road but, no suitable foul sewer connection within reasonable distance of the site.

The development footprint of Alternative B is approximately 1.2 Ha.

4.2 Site Alternative C

The position of the Proposed Site Alternative C, also shown in Figure 4.1, is to the west of Pond 1, straddling Ponds 2 and 3. This alternative is on the same Municipal owned parcel of land as Alternative B, but is located further west and hence will have a greater impact on the potential area available for other developments by the SLM in the future.

The site is accessed via an existing gravel road off the R310, which is earmarked for upgrade as part of the proposed development plans, to a suitable single-carriage asphalt surfaced road. There is a suitable water supply service running along the existing gravel road but, no suitable foul sewer connection within reasonable distance of the site.

The site development footprint of Alternative C is approximately 0.91 Ha.

4.3 Site Alternative D

Site Alterative D is north of the R310 and immediately west of the MRF facility (currently under construction). This portion of land is owned by the Municipality and is leased to the Asara Wine Estate and Hotel.

The site is accessed from the R310 and will use the same entrance as the MRF. In this Alternative the organic facility has been integrated with the MRF, with access via the central internal road that is currently under construction. The facilities will share civil and electrical services and will require one access control point and one weighbridge.

The site development footprint of Alternative C is approximately 1.7 Ha.

5 THE PURPOSE OF THE ORGANIC WASTE REFUSE TRANSFER STATION

The proposed RTS will form part of a larger integrated waste management system for the SLM. The purpose of the facility is to divert organic waste (note: excluding garden or green waste) from landfill and is split into two operational activities: **drop-off activities and diversion activities**. The following presents the most likely scenarios for future operations however given the uncertainty with scenario planning, the design provides the flexibility to change operational components to suit the future demands, markets and partner-relationships to maximum benefit for SLM.

5.1 Drop-off Activities

The following two activities do not constitute the only drop-off activities to the SLM but, represent the most favourable options being considered at this stage.

Organic-Rich Mixed Waste (ORMW) Collection: The primary waste stream into the facility will be the organic-rich mixed waste (ORMW) fraction left over after separation of recyclables through a S@S program. This ORMW is the residual "black bag" stream that will be collected by SLM via kerb-side pickup using rear-end loader trucks (RELs) operated by the SLM. At present, the RELs dispose this waste stream directly to the Stellenbosch Landfill without beneficiation. The new proposal is for RELs from domestic household collections, where the waste is considered to be more-rich[2] in organic waste although contaminated with inorganic non-recyclables, to be diverted to dedicated drop-off bays at the proposed RTS facility. The ORMW will be transferred from the RELs into 30m^3 open-top roll-on roll-off (RORO) skips which then triggers the waste diversion activities (see Section 5.2).

Pure Organic Waste (POW) Collection: The current design also makes allowance for the transfer of pure-organic wastes (POWs) which will likely be the product of an organic-waste-focussed S@S, programme currently under investigation by the SLM. The program entails the roll-out of a third collection program that sees select residential households (likely a lower and higher income residential area tested simultaneously at pilot stage) receiving a compostable-plastic bag and organic waste receptacle. Participating households will be encouraged to use the new receptacle for the collection of organic food waste generated at the property. Residents will be requested, on a weekly basis, to transport these receptacles to a nearby drop-off area that is controlled and managed by an external waste management entity. The waste management entity will transfer these POWs to a suitable transfer area at the proposed RTS which then triggers the waste diversion activities (see Section 5.2).

[2] This is in comparison to mixed municipal (domestic) waste collected, where there is no separation at source active, thus this waste stream is theoretically will have more organic content in the bag, as a percentage of the content.

5.2 Diversion Activities

While the feedstocks described in Section 5.1 appear, at first glance, to compete for the same organic fraction[3], there is value in pursuing both avenues due to the low economies of scale and greater demand associated with the processing of POWs (See Section 5.2(ii) for further explanation). There is further advantage in pursing both activities due to the uncertainty surrounding which separation activity (organics or recyclables) might achieve better participation rates once trialled and rolled out at a larger scale. Pursuing both activities improves the chances of increasing the diversion of organic waste from the Stellenbosch LF.

(i) Organic-Rich Mixed Waste Diversion: The ORMW transferred to the open-top 30m³ RO-RO containers will be collected daily by an authorised off-taker[4]. The proposed RTS therefore makes no allowance for long-term storage (i.e. exceeding a period of 24 hours) which is an important aspect of the operations from a health and safety perspective. Off-takers in this activity are entities that beneficiate contaminated organic waste into valuable products such a methane, electricity, compost or refuse derived fuels. The residual waste (after organics beneficiation) will be disposed to the Devon Valley Landfill Site.

(ii) Pure Organic Waste Diversion: From the POW transfer area, the waste may be stockpiled (daily) in the receptacles used for transport from the collection drop-offs or alternatively transferred into larger receptacles for the transport leg prior to processing. The type of receptacle is dependent on the subsequent processing that takes place. Given the fact that the POW is typically uncontaminated (with domestic hazardous wastes, packaging, etc), it is anticipated that there will be more suitable off-takers who deem the waste of higher value than contaminated organic waste suitable for many other forms of waste processing and beneficiation. In addition, POW is well suited to more decentralised operations not requiring the economies of scale often required for contaminated organic waste processing activities. While POW may require more effort (at higher cost to waste managers) to collect, the benefit derived is the potential cost-benefit accruing with off-takers interested in this POW feedstock.

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[3] *If the organics are removed upfront by POW collection, there will be less ORMW available for beneficiation*

[4] *An off-taker is defined as a waste management entity that has entered into an agreement with the SLM as an authorised recipient of the waste for the purposes of beneficiation. The off-taker will be responsible for the collection and processing of wastes transferred through the proposed Stellenbosch RTS and any residual will be transported and disposed to the Stellenbosch LF by the off-taker.*

Given the putrescible nature of the readily biodegradable POW, a contingency plan would be put in place whereby uncollected waste (for example where there is no offtaker) would be taken to landfill before advanced degradation takes place.

6 WASTE QUANTITIES

In this report, *waste generation* means waste generated by households as well as institutional, commercial and industrial sectors after waste reuse and waste reduction at source (in terms of the waste hierarchy), before such waste is collected, recycled and finally disposed to landfill.

The primary waste stream to be handled at the proposed facility is the residual waste fraction collected from formal domestic households in the Stellenbosch Municipal area. Provision has been made to include the waste collected from the trial organics separation at source program.

The facility will not offer a public-drop-off facility and all wastes entering and leaving the RTS will be handled by the SLM or approved contractors and off-takers.

6.1 Residual Domestic Household Waste

The latest waste disposal figures from SLM indicate approximately **36%** of the formal households within the city collection areas (excluding agricultural/winelands and Franschoek areas) are participating in the separation at source program. This accounts for approximately **260 tons** (per data from SLM) of recyclables per month that are currently sent to the City of Cape Town's Kraaifontein Integrated Waste Management Facility. The National Waste Management Strategy (NWMS) sets the target for the diversion of recyclables at **25%** of all formal households by 2020 with Stellenbosch's IWMP aiming for a higher target of **70%** of formal households by 2020 to alleviate the pressure of the Stellenbosch LF. These targets are seen as the lower and upper envelopes for waste diversion for SLM and are shown in Figure 6.1. According to the SLM, the growth in waste generation has been relatively low; any development that would drive up waste generation in SLM is assumed to occur outside of the catchment of the proposed RTS and would need to be diverted/processed through other interventions[5].

[5] *This is not seen as a constraining factor. The critical design criteria for the size of the facility was found at conceptual design phase to be the minimum space for the required vehicular movements and not the volume of waste transferred through the facility daily. As such, it is envisaged that the facility will be able to transfer a larger volume of waste than what is currently predicted through scrutiny of the expected waste generation data*

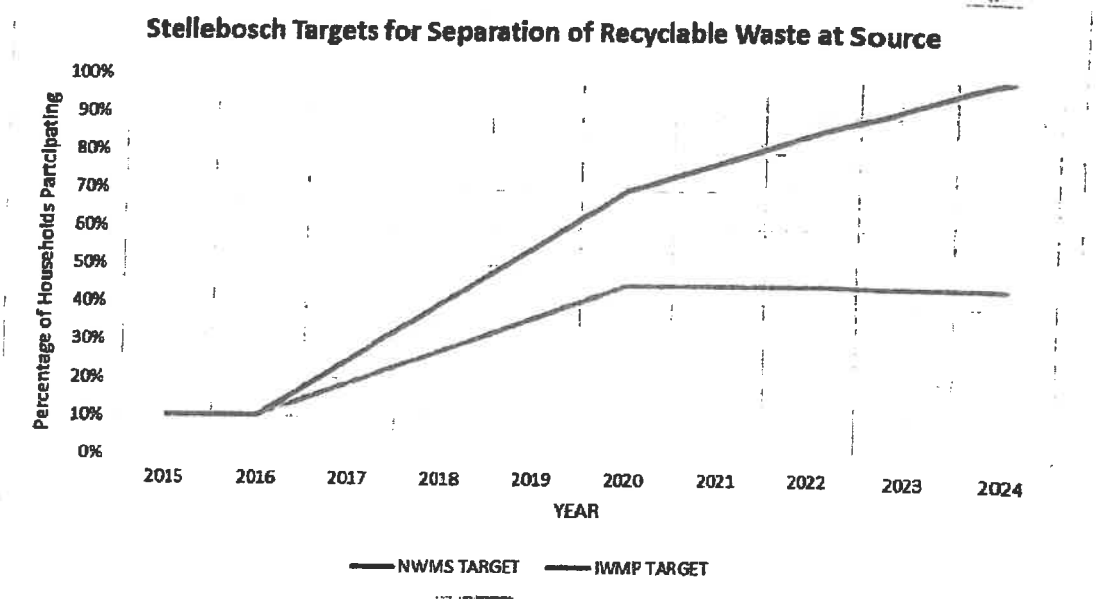


Figure 6.1 - Recyclable Separation at Source Targets for SLM

It is estimated that the organic waste fraction within the ORMW stream, after the removal of recyclables, should likely comprise a **minimum of 40%** of the total black bag mass, which is feasible for contaminated organics beneficiation.

SLM estimates that once the recyclable separation at source program reaches 100% of formal households the leftover ORMW residual collected by REL kerbside collection could be approximately **3000 – 3500 tons/month** with a daily quantity of **150 tons/day** being the likely maximum transfer capacity for the ORMW transfer facility. The equates to approximately 12 to 15 full 28m^3 container loads. While the generation figures require further scrutiny at subsequent stages in the project, the waste quantum is not the constraining factor for sizing the facility. The proposed RTS has been sized to accommodate the turning movements of the waste transport vehicles and the facility can accommodate a higher capacity than the envisaged 150 tons/day.

6.2 Pure Organic Wastes:

The operational elements of a possible organic waste separation at source program including a description of how the POW transfer and beneficiation might take place has been presented in Section 5. This potential organic waste is contained in the same domestic household waste stream described in Section 6.1. Any organic waste that is collected through a separation at source program will no longer be present in the ORMW collected by the RELs. In this instance it would be important for waste managers to report on both POWs and ORMWs diverted as a total organic fraction diverted from the Stellenbosch LF.

6.3 Commercial Wastes:

A flexible approach to the design of the facility will allow SLM to transfer other priority waste streams through the RTS. For example, food wastes from commercial restaurants. Discussions between the SLM and commercial actors are underway and will form part of the larger integrated waste management system.

7 THE STELLENBOSCH MUNICIPALITY ORGANIC WASTE REFUSE TRANSFER STATION

Conceptual layouts for the proposed RTS have been developed for Site Alternatives , B, C and D which are shown in Figures 7.1, 7.2 and 7.3 respectively. The building layout is similar for all three Alternatives, but the external layouts were determined based on the required vehicle movements for both drop-off and collection activities, together with the dimensions and shape of the proposed sites.

The design assumptions and key components will remain consistent irrespective of the preferred site and the layout could be readily adapted to any other potential site (provided there is sufficient space for vehicle movements).

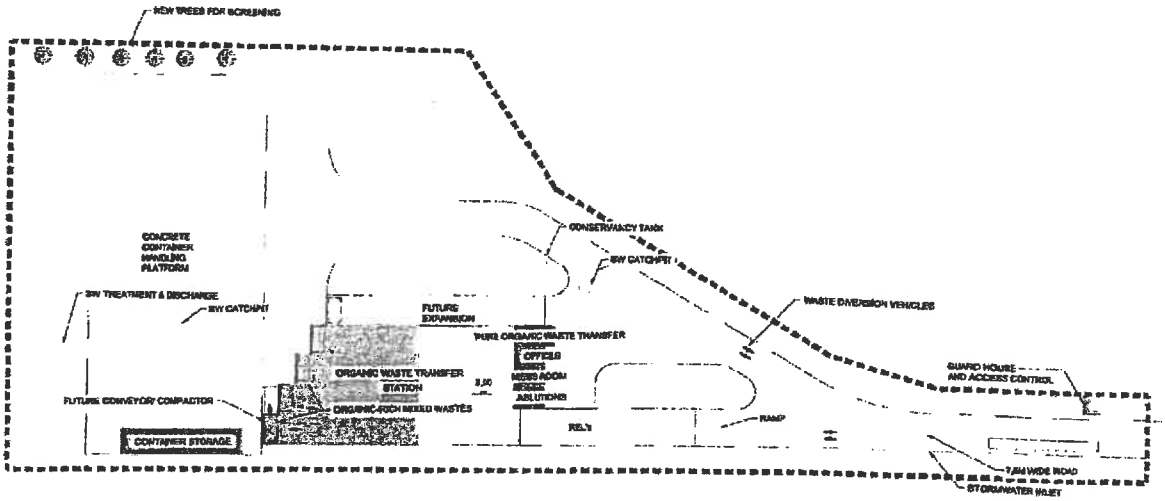


Figure 7.1 Stellenbosch Organic Waste RTS Conceptual Layout – Alternative B

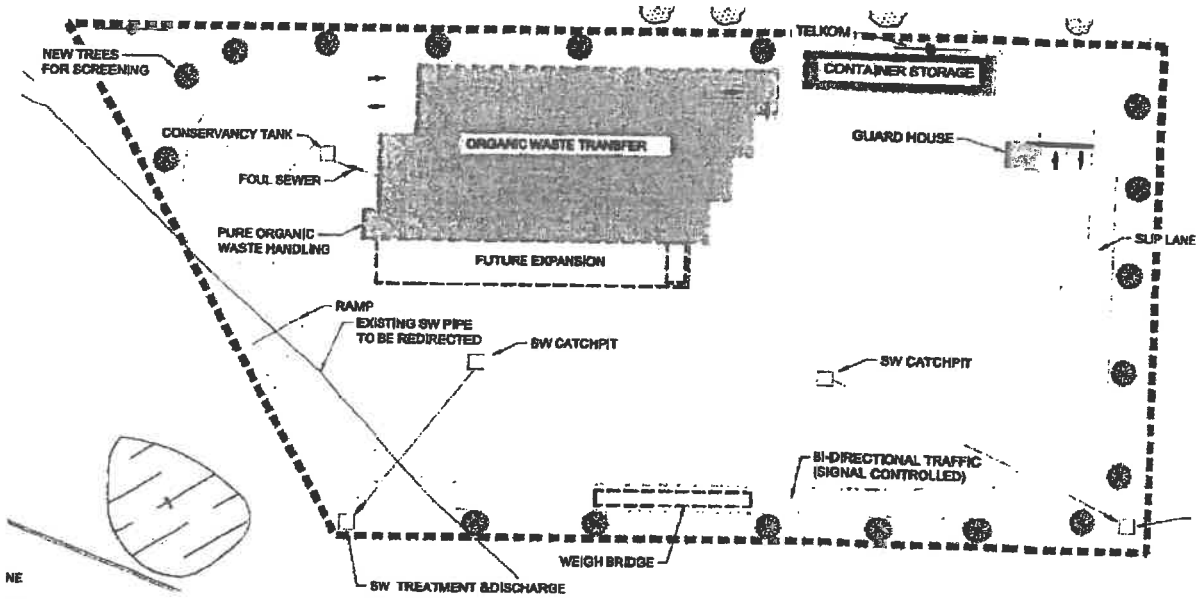


Figure 7.2 Stellenbosch Organic Waste RTS Conceptual Layout – Alternative C

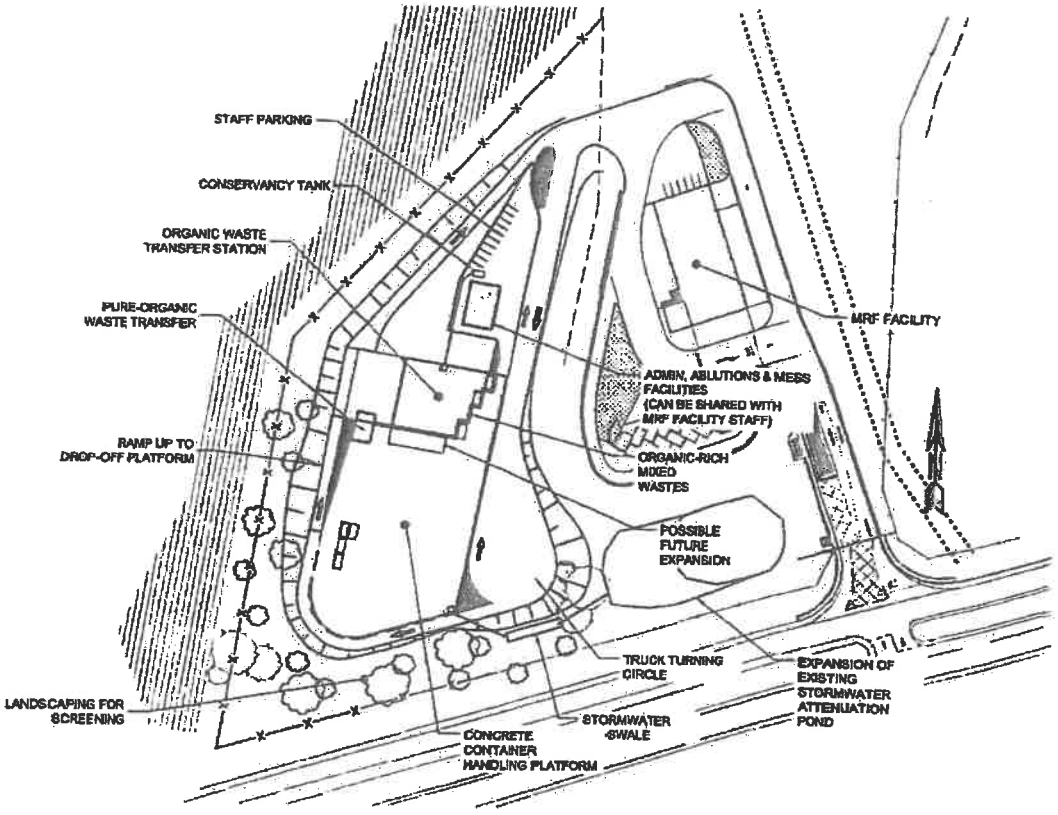


Figure 7.3 Stellenbosch Organic Waste RTS Conceptual Layout – Alternative D

7.1 Conceptual Layouts

7.1.1 Alternative B

Vehicles enter and exit the site through the access-controlled guardhouse. There is a single dual-direction weighbridge on the incoming lane, over which the drop-off vehicles will drive before proceeding up the access ramp to a raised platform approximately 3m above the container handling and skip storage area. The drop off area comprises covered waste transfer areas (for ORMWs and POWs) for inclement weather, litter management and safety with an uncovered area as shown in the drawing. Collection vehicles will make the necessary movements, with assistance from site staff, to offload their cargo to either the ORMW open top containers or the POW transfer area. The raised platform provides easy access to transfer containers with a platform overhang at the ORMW containers so that any spillage is easily swept into the relevant transfer containers. The empty drop-off vehicles exit the platform area via the ramp as shown, proceed over the weigh-bridge (if necessary) and exit the site.

All waste vehicles will be mandated to cross over a dual-direction weigh-bridge upon entry and exit. Integration of a vehicle tare mass database could be considered to obviate the need for drop-off vehicles to weigh out. Waste diversion vehicles (i.e. those transferring waste from the bins to the point of processing off site) will have to weigh in and out of the facility. Weigh-bridge operations will be controlled from the guardhouse through the use of an intercom and traffic control signals. The site manager will be housed in the site office and all personnel will have access to the ablutions and mess-room as shown.

Waste diversion vehicles enter the facility via the access control point and weigh-bridge and proceed into the container handling area. Trucks collecting the full ORMW containers will reverse and place their empty containers in the container storage area and then make the necessary movements to place empty containers in the drop-off bays and load the full containers. The trucks will then exit site via the weigh-bridge before leaving the site. The POW collection vehicles will proceed directly from the weigh-bridge to their respective collection area and collect the waste receptacles in a manner that suits the final arrangement for POW transfer. The POW collection vehicles will exit the site after proceeding through the weigh-bridge.

Provision is made in the design to allow for the construction of an additional transfer bay as shown in the drawing. The design also provides a suitable area for the installation of a future conveyer/compactor system which would allow on-site compaction of waste into a closed ROR container through a magazine-loading bay should the facility be required at a later stage in the operation of the facility. Both sets of infrastructure have been excluded from this proposed phase of construction to avoid unnecessary expenditure for needs that may only occur at a point in the future.

7.1.2 Alternative C

Vehicles enter and exit the site through the access-controlled guardhouse. Incoming vehicles proceed over the dual-directional weighbridge and up the access ramp to a raised platform approximately 3m above the container handling and skip storage area. Allowance has been made for a slip road for verification of site-visitors by security without impacting normal authorised operations. All waste vehicles will be mandated to cross over a dual-direction weigh-bridge upon entry and exit. Weigh-bridge operations will be controlled from the guardhouse through the use of an intercom and traffic control signals. The site manager will be housed in the site office and all personnel will have access to the ablutions and mess-room as shown.

Drop-off vehicles will drive over the weigh-bridge and up the access ramp to a raised platform approximately 3m above the container handling and skip storage area. The drop off area comprises covered waste transfer areas (for ORMWs and POWs) for inclement weather, litter management and safety with an uncovered area as shown in the drawing. Collection vehicles will make the necessary movements, with assistance from site staff, to offload their cargo to either the ORMW open top containers or the POW transfer area. The raised platform provides easy access to transfer containers with a platform overhang at the ORMW containers so that any spillage is easily swept into the relevant transfer containers. The empty drop-off vehicles exit the platform area via the ramp as shown, proceed over the weigh-bridge and exit the site.

Waste diversion vehicles enter the facility via the access control point and weigh-bridge and proceed into the container handling area. Trucks collecting the full ORMW containers will reverse and place their empty containers in the container storage area and then make the necessary movements to place empty containers in the drop-off bays and load the full containers. The trucks will then exit site via the weigh-bridge before leaving the site. The POW collection vehicles will proceed directly from the weigh-bridge to their respective collection area and collect the waste receptacles in a manner that suits the final arrangement for POW transfer. The POW collection vehicles will exit the site after proceeding through the weigh-bridge.

Provision is made in the design to allow for the construction of an additional transfer bay as shown in the drawing. The design also provides a suitable area for the installation of a future conveyer/compactor system which would allow on-site compaction of waste into a closed ROR container through a magazine-loading bay should the facility be required at a later stage in the operation of the facility. Both sets of infrastructure have been excluded from this proposed phase of construction to avoid unnecessary expenditure for needs that may only occur at a point in the future.

7.1.3 Alternative D

The site is entered via the entrance facilities of the future MRF site (at the time of reporting construction for the MRF facility had already commenced). The entrance is off the R310. Vehicles enter through the MRF access control gate and proceed over the weighbridge. The weighbridge will be located on the MRF site but shared between the two facilities. Weighbridge operations will be controlled from the weighbridge operation room. From the weighbridge, vehicles proceed on the MRF site's ring road straight to the back of the MRF site where the 'sub-entrance' to the RTS site is located.

All vehicles to the RTS site keep left on the multi-directional entrance road upon entering the site (the single lane road branching off to the right immediately following the sites sub-entrance from the MRF site is a one-way lane for returning drop-off vehicles only). Incoming **drop-off vehicles** keep left and proceed around the site's ring road to the ramp (one-way) up to the raised platform, the drop-off area (approximately 3m high). The drop off area includes covered waste transfer areas (for ORMWs and POW, litter management and safety with an uncovered area as shown in the drawing. Collection vehicles will make the necessary movements, with assistance from site staff, to offload their cargo to either the ORMW open top containers or the POW transfer area. The raised platform provides easy access to transfer containers with a platform overhang at the ORMW containers so that any spillage is easily swept into the relevant transfer containers. The empty drop-off vehicles exit the platform area via the one-way return lane as shown. Exiting vehicles process back through the MRF site and over the weighbridge to exit on the R310.

Waste diversion vehicles entering can perform a full range of turning movements on the open collection platform and on the turning circle provided for collection and handling of containers. Trucks collecting the full ORMW containers will place their empty containers in the container storage area and then make the necessary movements to place empty containers in the drop-off bays and load the full containers. The trucks will turn around on the turning circle before exiting the site as they came in. **POW collection vehicles** will proceed directly from the weighbridge to their respective collection area and collect the waste receptacles in a manner that suits the final arrangement for POW transfer. The POW collection vehicles will exit the site after proceeding through the weighbridge.

Provision is made in the design to allow for the construction of an additional transfer bay as shown in the drawing.

Provision is made for offices, ablutions and a mess room. There is also enough space available to expand the admin facilities to accommodate the future needs for MRF staff.

7.2 Architectural specifications[6]

The concept for the Organic Waste Transfer Station was to use an architecture that is reminiscent of historic Stellenbosch and industrial barn building typologies. Figures 7-1 and 7-2 present two proposed architectural concepts for the facility.

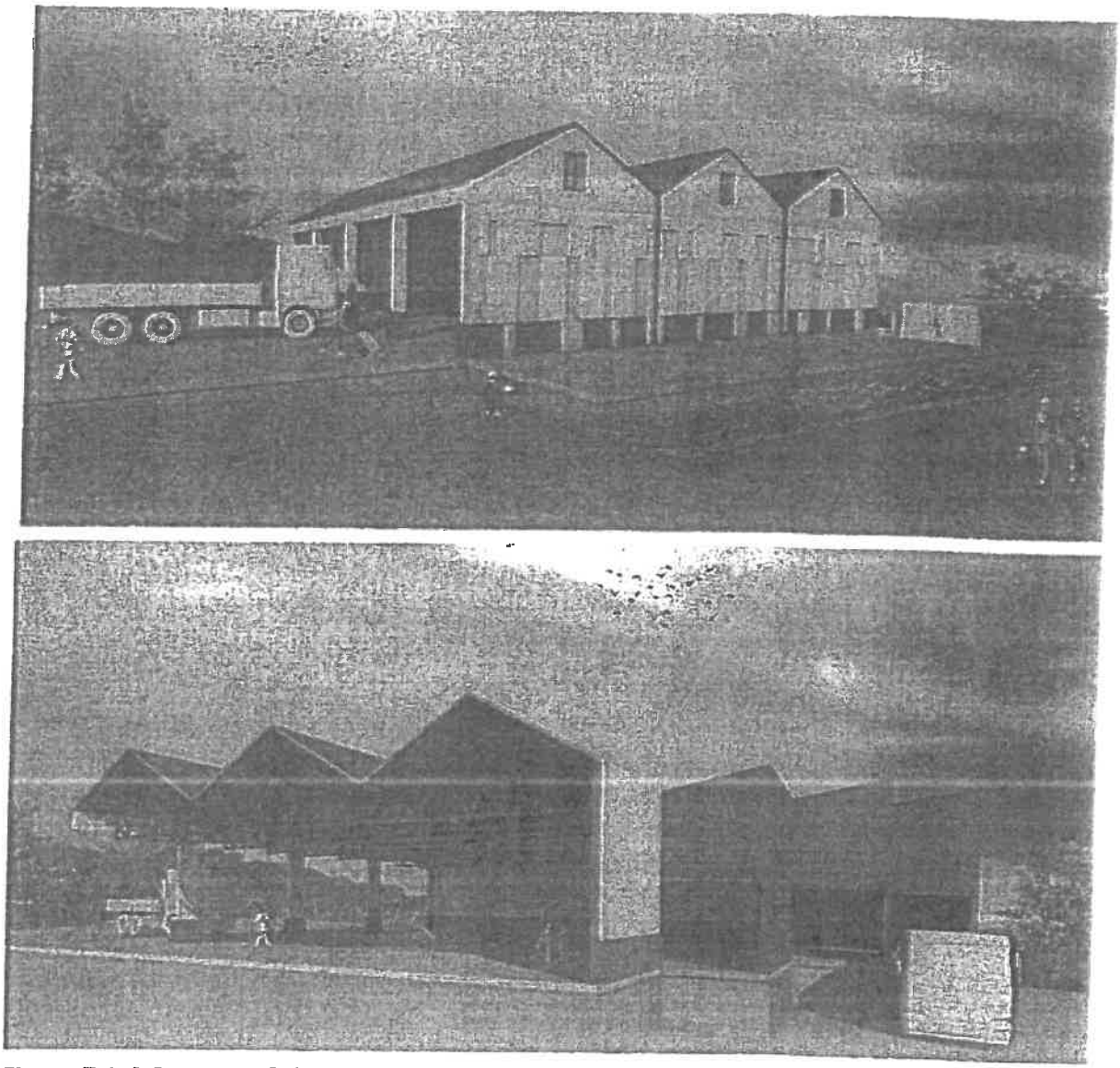


Figure 7-1 3-D views of the Organic RTS - architectural specification option A (modern pattern facade)

[6] From Architectural specification by Osmand Lange Architects and Planners

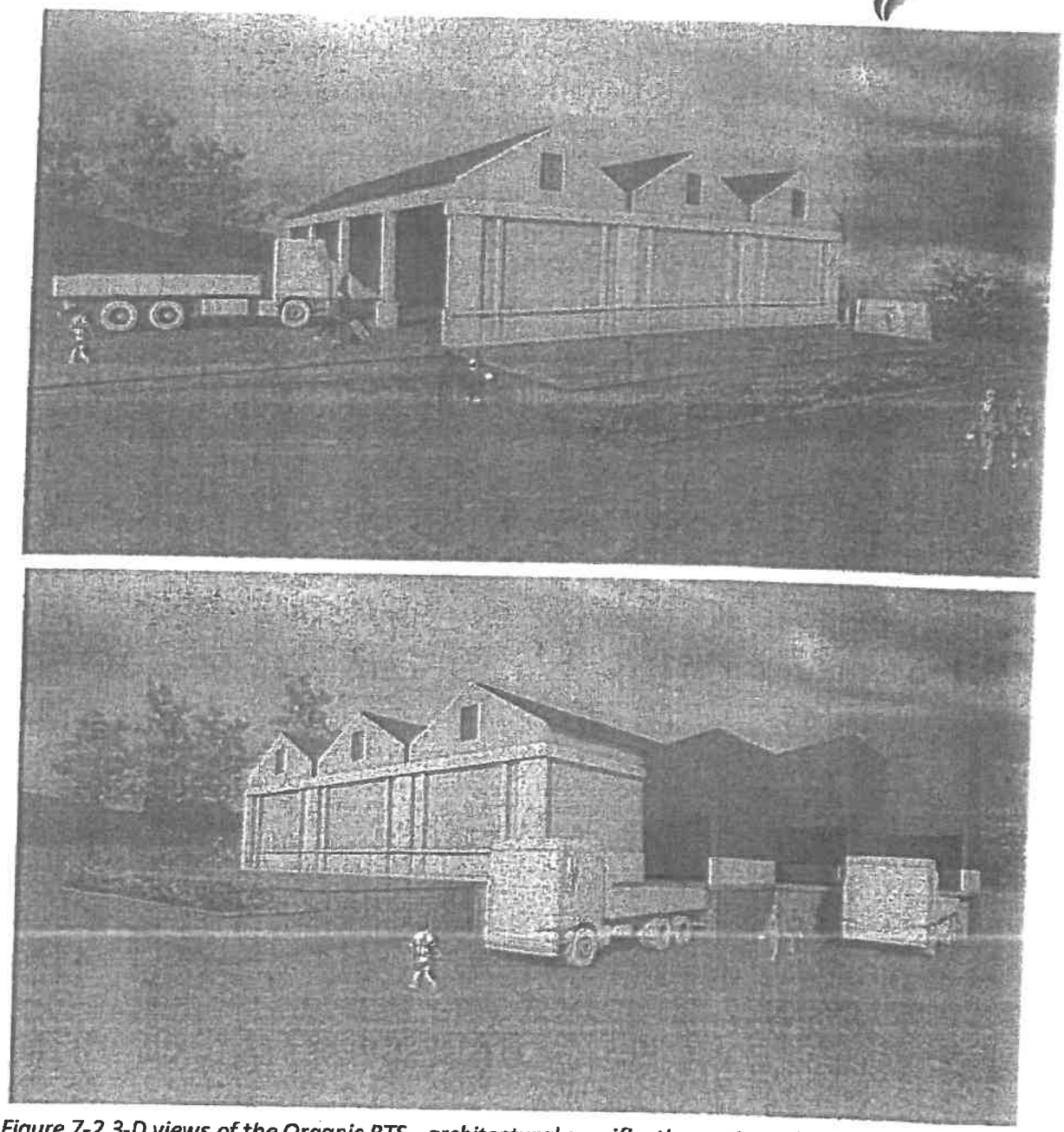


Figure 7-2 3-D views of the Organic RTS - architectural specification option B (traditional facade)

The building façade is broken down into the traditional base, middle facade and roof/ gable edge. A red brick base at the retaining structures lends a robust looking edge to the building and is also easy to clean from a maintenance point of view. This acts as a plinth to the building. A modern pattern façade using historic Stellenbosch building proportions was explored. It has a combination of smooth and rough textures. Smooth precast concrete panels offset with textured bagged brickwork speaks of a rustic wine farm style architecture found in the area.

This façade faces onto one of the main roads into Stellenbosch and will create visual interest. Shadows will fall off the pattern relief and create a perception of depth.

The roof is modulated into three portions to create a sense of manageable scale. A single massive roof structure would not relate to the Architectural language of the area.

Louvres and gables are treated simply but are reminiscent of the gables with punctured openings on some of the traditional buildings in the area.

The truck bay area is treated as a more industrial and contrasted portion of the building – and is the "working" portion of the façade. Dark grey roof sheeting material is proposed to be used to create the envelope.

A dark grey base portion of wall which is proposed to wrap around the perimeter of the structure (both externally and internally) This will hide the bio waste residue which could rub off against the walls. An easy to clean epoxy paint will need to be used on these portions of walls.

Colours are to be neutral so as to not draw too much attention the building. Simple off-white, dark greys which are off set with a red brick base will create the material pallet.

7.2.1 Landscaping plan[7]

The landscape concept is a planted berm along the facility edges facing the R310. This is along the northern and western boundaries of Alternatives B and C, and along the southern and western boundary of Alternative D.

An indigenous palette mix of Fynbos and Renosterveld to be used, with different growth heights to create a dense screen in conjunction with the berm. Figure 7-3 presents the berm concept and the plant pallete to be considered during implementation.

[7] From Landscape Concept Plan

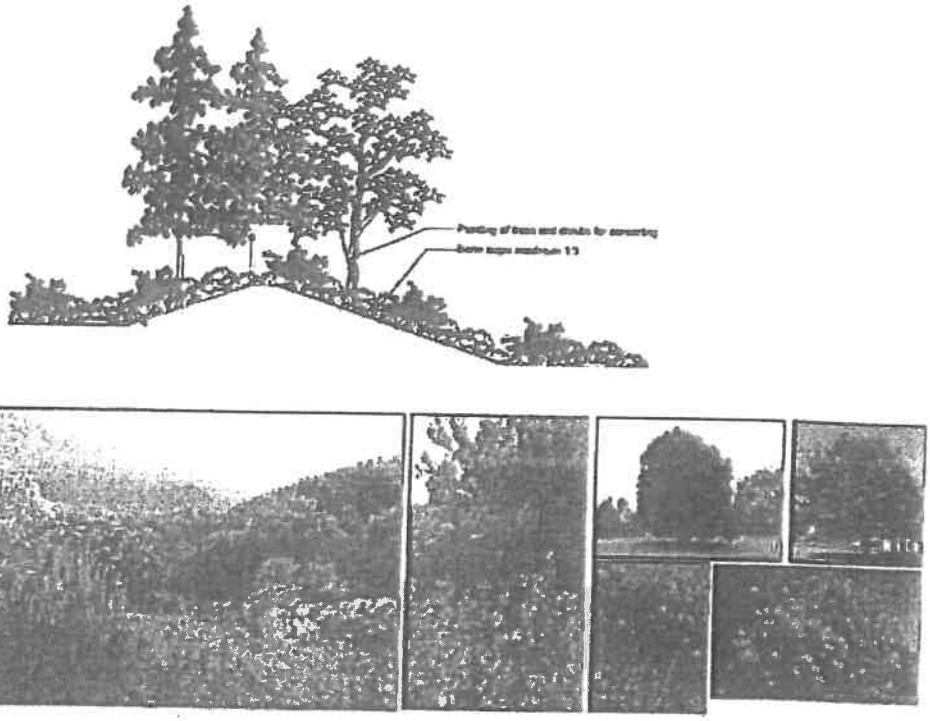


Figure 7-3 Planted berm concept (above) and Fynbos and Renosterveld planting species

7.3 Odour control and pest management

The planned frequent (daily) collection of both ORMW and POW will mitigate potential odour impacts. An odour control system, for example an atomising odour neutralising system, will however be considered in the detailed design phases together with advice on operational protocols (for example regular cleaning of the facility) to further mitigate odours emanating from the facility. A budgetary allowance for an odour control system has been made in the cost estimate.

The readily biodegradable POW will be stored in air-tight receptacles, which are frequently emptied and transported to the end-user.

Pests will be managed as specified in the facility's operation management and health and safety plan, typically via tamper proof pest control stations.

7.4 Vehicle Movements

The orientation of each of the Alternatives has been laid out based on the accommodation of the largest vehicles expected to enter any specific area on-site. The space required for each vehicle type was tested using a vehicle-movement software program.

The largest vehicle accommodated on the raised drop-off platform area are the RELs that form part of SLM standard operational fleet. The vehicle movements depicted in the container handling and

skip storage area are for a truck and trailer combination vehicle which has been selected as the largest vehicle to allow for the transfer of two 28m^3 RORO containers simultaneously improving haulage efficiencies between the RTS and the receiving waste processing facilities.

7.5 Site Services

7.5.1 Civil Services

Access to a water connection is proposed to be taken from an existing water pipeline that runs along the existing gravel road for Alternatives B and C. There are no suitable connections to a foul sewer network. Foul sewer services from the facilities on-site, as well as areas where waste is stored, will be directed to a conservancy tank (requiring regular maintenance) as shown in the drawings. This applies to both Alternative B and C.

Alternative D will connect to the existing services networks constructed during the MRF development.

In line with best management practice principles, all stormwater run-off from the external areas of the site (i.e. run-off from areas where waste is not stored) will be controlled on-site. Contaminated SW areas will be directed inwards towards catchpits (creating a bunded storage area). The catchpits will discharge the contaminated SW to treatment areas. The contaminated run-off will be treated to an acceptable standard (through biological means such as a bioswale) and then discharged to the existing stream to the south of the facilities (Alternatives B and C) and to a new stormwater channel that connects to the MRF stormwater system (Alternative D). SW generated on-site will be detained on-site to pre-development flows. This applies to all Alternatives.

7.5.2 Electrical and Telecommunications Services

There are no known electrical or telecommunication services on the Droe Dyke sites (Alternatives B and C). A new electrical connection would therefore be required for these sites to be developed. There is no fibre network in the area as yet[8]. These sites are situated within cellular network range.

The current MRF development adjacent to the proposed option D (Asara) site means that there will be an electrical grid connection at the MRF entrance, which will also serve the Organic RTS. It is assumed that the Organic RTS will also piggy-back on the MRF telecommunications infrastructure.

[8] Per search on https://www.findmyfibre.co.za/

7.6 Traffic impacts

A traffic impact statement (TIS) was initially prepared by JG Afrika[9] for the Droe Dyke site, focussing on the impacts of the facility on the surrounding road network. The TIS covered Option B and C as they share the same access off the R310 (Adam Tas Road). Various recommendations were made regarding:

- Access and internal circulation
- Parking
- Public transport and non-motorised transportation

These recommendations were taken into account during this preliminary design phase and will be further implemented as more detailed design phases proceed.

In terms of impacts to the external road network, the TIS states the following:

- The number of trips generated by the proposed development is deemed low. The total generated development trips are expected to be less than 50 veh/hr during peak hours.
- A maximum of 30 vehicles are expected during the morning and afternoon peak hours respectively.
- The impact from a socio-economic point of view is low risk.
- Due to the roads in the Stellenbosch area already being congested at times during the day, especially during peak periods, it is recommended to establish a delivery management plan, which schedules number and type of trips from and to the site.

The TIS was updated in May 2020, which took Option D into account. The aggregate impact of additional traffic to the potential future MRF/Organic RTS complex north of Adam Tas was considered, and was also assessed as having low significance rating of impact prior to mitigation. With the following proposed mitigation, the cumulative impact was post impact was assessed as being very low:

- Develop a delivery management plan to ensure that the arrival of delivery vehicles on site is distributed over the whole day.
- Schedule trips to RTS to occur outside peak hours

The TIS further states that the *"proposed development is supported from a traffic engineering point of view provided that the recommendations made are adhered to."*

[9] By the Transportation Division

7.7 Additional Development Considerations

In addition to the development criteria outlined above the following design considerations are noted:

Refuse Transfer Station (RTS) Building and associated infrastructure recommended includes, inter alia:

- Appropriately sized and designed enclosed and roofed building for one day's waste storage capacity with a tipping hall, future compaction/loading hall and vehicle access ramps.
- Provision for bulky wastes and residual waste, not suitable for organic beneficiation, to be collected and directly transferred to the Stellenbosch LF.
- Container handling system
- Adequate lighting and electrical services
- Air ventilation and odour control
- Fire - fighting systems
- Safety systems
- Floor washing, treatment and disposal of wash-water
- Staff facilities, offices, mess room, ablution facilities, store room
- Roof-water collection and disposal
- Staff parking
- A weigh-bridge (for Alternatives B and C)
- Access control building
- Designated container handling area
- Associated landscaping works
- Telecommunications
- Security fencing and gates, including a security officers' building with ablutions.
- Internal service roads and paved areas and accommodation of pedestrian traffic
- Parking facilities
- Traffic and information signage
- Landscaping
- Garden watering and fire hydrants infrastructure
- Stormwater infrastructure
- Environmental Mitigation Measures such as bio-swales, stormwater pollution control infrastructure, screening berms

8 COST ESTIMATES

This section presents the cost estimates based on the preliminary design layouts described in this report. Table 8-1 presents a summary of the estimated costs per Alternative (Alternative A excluded as it is not a feasible option). **It should be noted that the estimates are indicative** and will be further

refined as in-situ investigations produce more accurate design parameters, and when designs are developed to a more detailed extent.

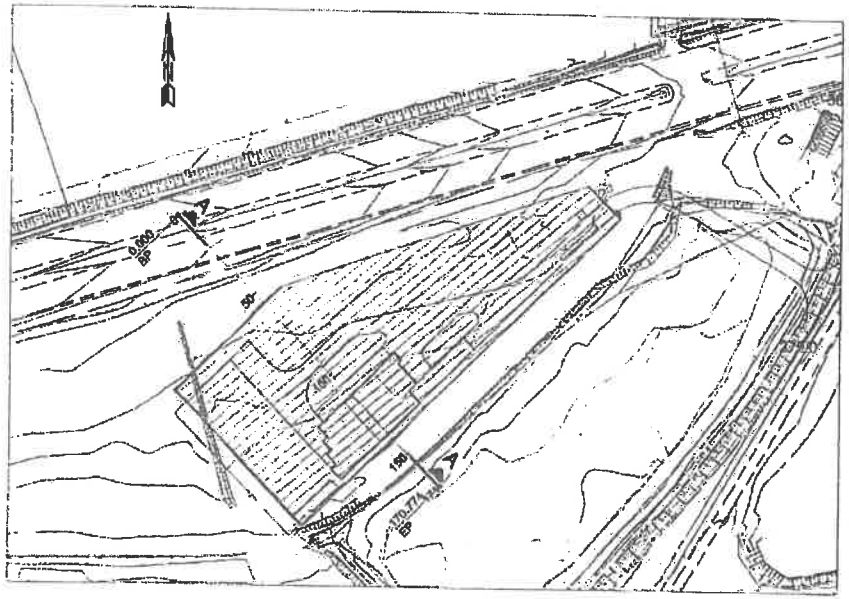
Table 8-1 Summary of estimated costs per Alternative (June 2020)

Item	Alternative B	Alternative C	Alternative D
1. WORKS WITHIN SITE BOUNDARY			
A. Bulk Earthworks and Drop-off Platform	R7 118 801	R7 271 865	R7 838 276
B. Onsite Road	R1 598 597	R1 901 836	R2 591 246
C. Services	R335 614	R333 211	R409 849
D. Ancillary works	R1 919 236	R1 632 718	R1 632 718
SUBTOTAL	R10 972 247	R11 139 630	R12 472 089
P&Gs	R1 975 005	R2 005 133	R2 244 976
Contingencies (10%)	R1 294 725	R1 314 476	R1 471 707
SUBTOTAL	R14 241 977	R14 459 240	R16 188 772
2. EXTERNAL ROADWORKS			
Access road	R615 877	R992 268	R167 335
P&Gs	R110 858	R178 608	R0
Contingencies (10%)	R72 673	R117 088	R0
SUBTOTAL	R799 408	R1 287 964	R167 335
3. TOTAL - CONSTRUCTION WORKS	**R15 041 385**	**R15 747 204**	**R16 356 107**
4. PROFESSIONAL SERVICES			
Design fees	R1 516 649	R1 580 173	R1 639 271
Part time supervision	R480 000	R480 000	R480 000
TOTAL PROFESSIONAL SERVICES	**R1 996 649**	**R2 060 173**	**R2 119 271**
5. TOTAL FOR PROPOSED DEVELOPMENT	R17 038 035	R17 807 377	R18 475 377
Add VAT 15%	R2 555 705	R2 671 107	R2 771 307
TOTAL	**R19 593 740**	**R20 478 484**	**R21 246 684**

ANNEXURE 1

DRAWINGS

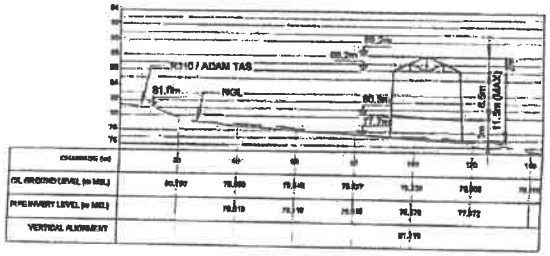
Drawing number	Title
4653-01-C002-P	Proposed site development – Layout and long section (Alternative B)
4653-01-C003-P	Site layout and services (Alternative B)
4653-01-C004-P	Proposed site development – Layout and long section (Alternative C)
4653-01-C005-P	Site layout and services (Alternative C)
4653-01-C008-P	Proposed site development : layout plan, long section and services (Alternative D)



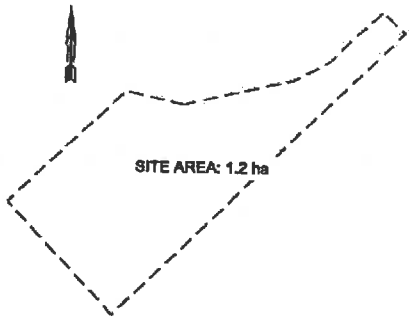
ALTERNATIVE SITE B
SCALE 1: 2000



ALTERNATIVE SITE B DEVELOPMENT PLAN
SCALE 1: 2000



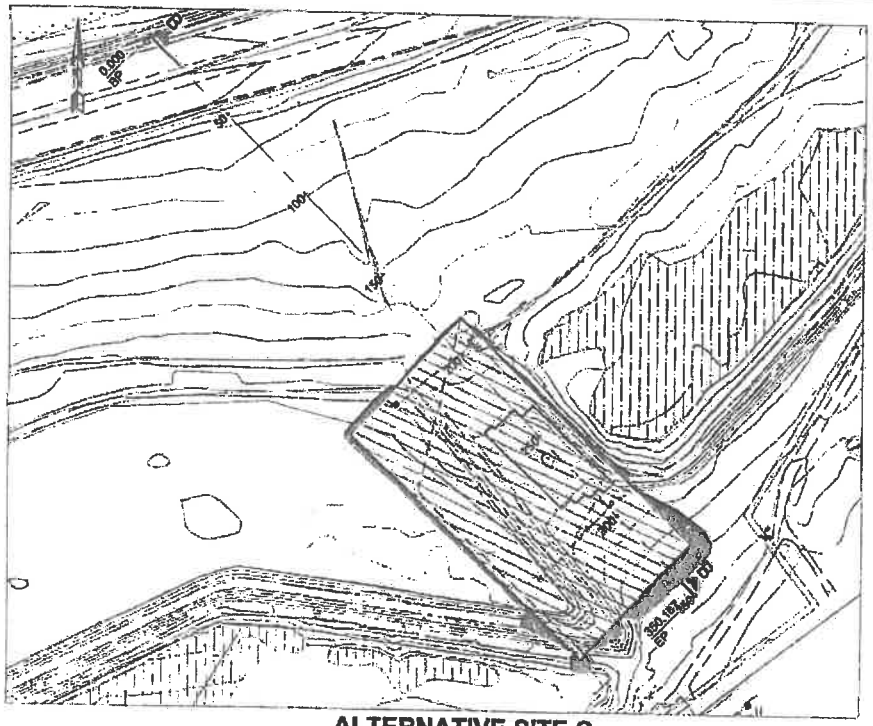
LONGSECTION A - A
ELEVATION SITE ALTERNATIVE B
SCALE 1:1500



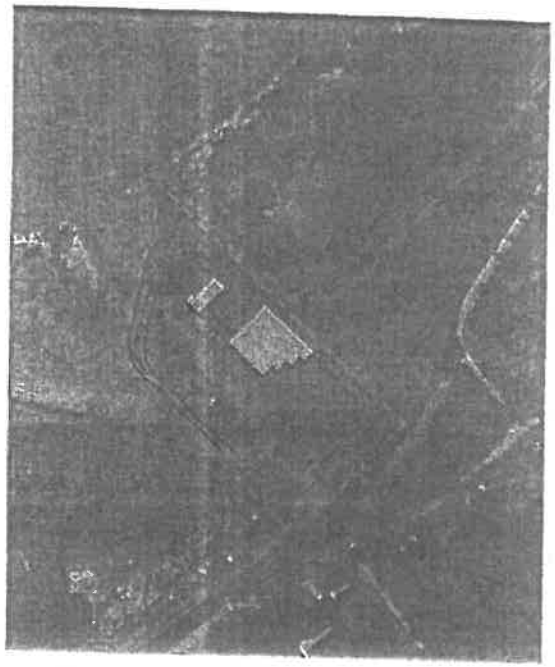
SITE B DEVELOPMENT PLAN FOOTPRINT
SCALE 1: 2500

PRELIMINARY

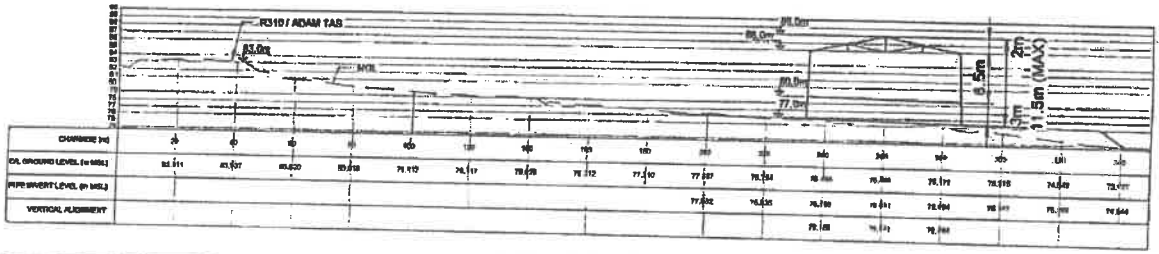
DESIGNED	M BOTHMA	CAPE TOWN JG AFRIKA ©COPYRIGHT RESERVED			STELLENBOSCH	STELLENBOSH ORGANIC REFUSE TRANSFER FACILITY	CONTRACT No. : TBC
CHECKED	L WALLACE						PROPOSED SITE DEVELOPMENT PLAN: LAYOUT PLAN & LONG SECTION
DRAWN	M BOTHMA						OCTOBER 2019 / AS SHOWN
CHECKED	JG CRYSTAL						0053-1-C002-P



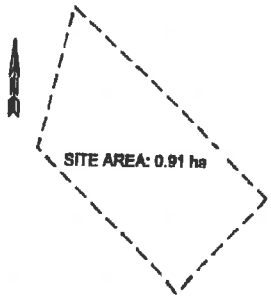
ALTERNATIVE SITE C
SCALE 1: 2000



ALTERNATIVE SITE C DEVELOPMENT PLAN
SCALE 1: 2000



LONGSECTION B - B
ELEVATION SITE ALTERNATIVE C
SCALE 1:1500



SITE C DEVELOPMENT PLAN FOOTPRINT
SCALE 1: 2500

PRELIMINARY

DESIGNED	M GOTTSCHE
CHECKED	A WALLACE
DRAWN	M GOTTSCHE
CHECKED	JH LOUW

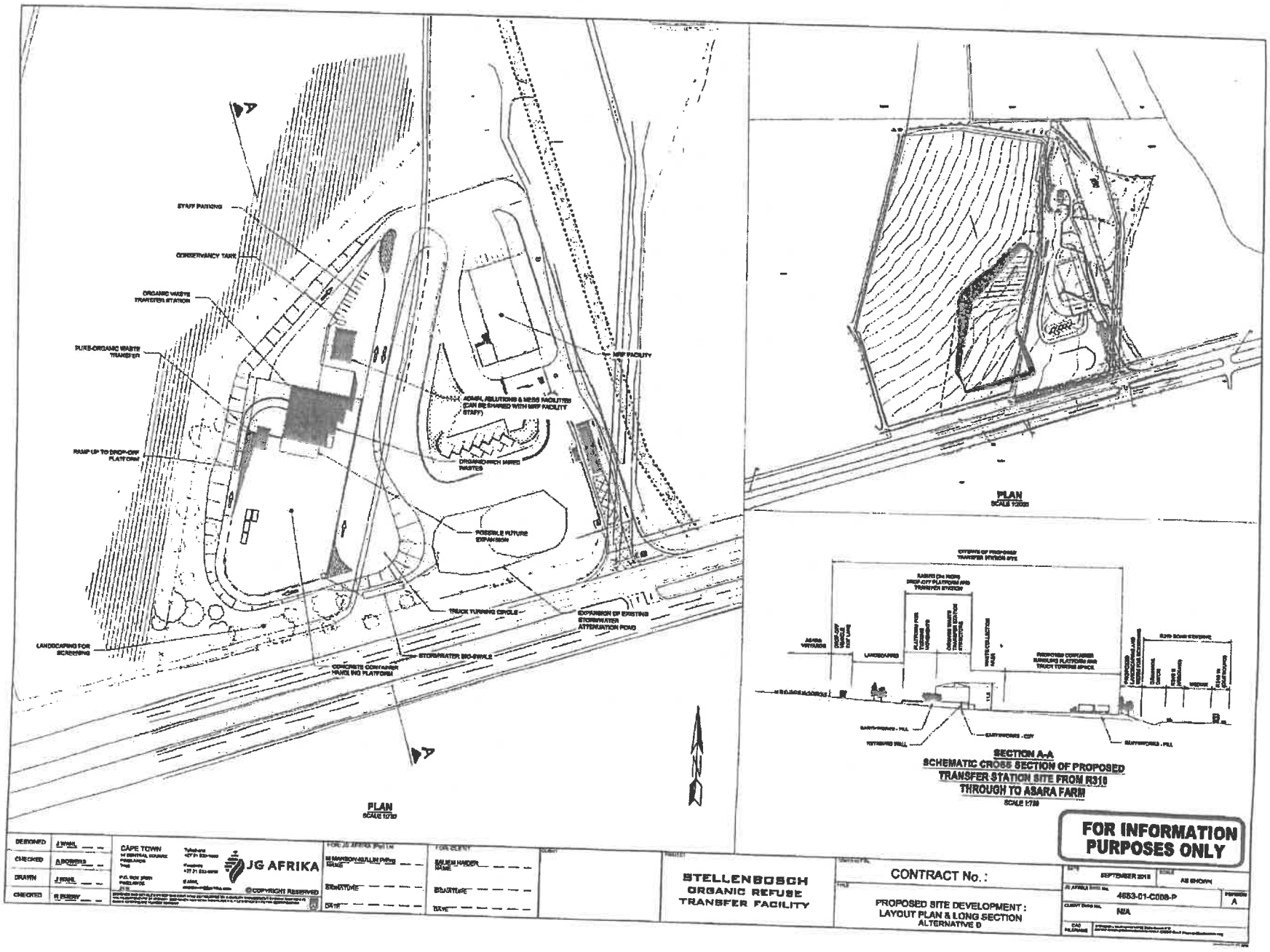
CAPE TOWN
JG AFRIKA
© COPYRIGHT PE SERVET

STELLENBOSCH
ORGANIC REFUSE TRANSFER FACILITY

CONTRACT No. : TBC

PROPOSED SITE DEVELOPMENT PLAN: LAYOUT PLAN & LONG SECTION

OCTOBER 2016


STAFF PARKING
CONSERVANCY TANK
ORGANIC WASTE TRANSFER STATION
PURE-ORGANIC WASTE TRANSFER
RAMP UP TO DROP-OFF PLATFORM
LANDSCAPING FOR SCREENING
ADMIN, ABLUTIONS & MESS FACILITIES (CAN BE SHARED WITH MRF FACILITY STAFF)
MRF FACILITY
ORGANIC/WHICH MIXED WASTES
POSSIBLE FUTURE EXPANSION
TRUCK TURNING CIRCLE
EXPANSION OF EXISTING STORMWATER ATTENUATION POND
STORMWATER BIO-SWALE
CONCRETE CONTAINER HOUSE BIO PLATFORM
N
PLAN
SCALE 1:250
PLAN
SCALE 1:2000
EXTENTS OF PROPOSED TRANSFER STATION SITE
RAMP ON ROAD DROP-OFF PLATFORM AND TRANSFER STATION
ASARA PRIVATE
DROP-OFF PLATFORM
LANDSCAPING
PLATFORM FOR CONTAINER HANDLING
CONTAINER WASTE COMPACTOR STRUCTURE
WATER COLLECTION TANK
PROPOSED CONTAINER HANDLING PLATFORM AND TRUCK TURNING SPACE
EARTHWORKS - FILL
RETAINING WALL
EARTHWORKS - CUT
EARTHWORKS - FILL
SECTION A-A
SCHEMATIC CROSS SECTION OF PROPOSED TRANSFER STATION SITE FROM R310 THROUGH TO ASARA FARM
SCALE 1:750
FOR INFORMATION PURPOSES ONLY
DESIGNED
CHECKED
DRAWN
CHECKED
CAPE TOWN
JG AFRIKA
© COPYRIGHT RESERVED
STELLENBOSCH
ORGANIC REFUSE
TRANSFER FACILITY
CONTRACT No. :
PROPOSED SITE DEVELOPMENT : LAYOUT PLAN & LONG SECTION ALTERNATIVE D
SEPTEMBER 2018
AS SHOWN
4653-01-C008-P
A
N/A

APPENDIX 6
Comments from external departments

Western Cape Government

Infrastructure
Vanessa Stoffels
Chief Directorate: Road Planning
Vanessa.Stoffels@westerncape.gov.za | Tel: 021 483 4669

Ref: DOI/CFS/RP/LUD/REZ/SUB-25/465 (Job 30414)

The Municipal Manager
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

Attention: Mr Ulrich von Molendorff

FARM 279, STELLENBOSCH: MAIN ROAD 177: APPLICATION FOR REZONING

1. The following refer:

1.1. The application (Application number: LU/15569 (TP332/2023)) dated 15 June 2023 as received from CK Rumboll and Partners;

1.2. The proposed Site Development Plan (SDP) as drawn by Zutari, drawing number 002_1, Revision A, dated 5 May 2023;

1.3. The motivation report as prepared by CK Rumboll and Partners;

1.4. The revised Traffic Impact Statement (TIS) by JG Afrika dated May 2020;

1.5 The proposed Techno Park Link Road (TPLR) between the existing roundabout located in Techno Avenue, which spans from near the existing Main Road 27 to the existing Main Road 177 (MR177; R310, Adam Tas Road) opposite the recently upgraded Material Waste Recovery Facility entrance at ±km 30.08LHS (Approval reference 13/3/5/2-25/9 (Job 18891) dated 17 February 2011); and

1.6 A site visit held on 15 August 2023.

2. It should be noted that this Branch has not yet approved the proposed access for the Techno Park Link Road (TPLR) where it links with MR177 opposite the existing Material Waste Recovery Facility entrance at ±km 30.08LHS.

3. The application entails the rezoning of the Northern Portion (±14.8ha in size) of Farm 279 from Agriculture and Rural Zone to Utility Services Zone to accommodate the existing Material Waste Recovery Facility, a proposed Organic Waste Transfer Station and the existing oxidation dam of the Waste Water Treatment Works (WWTW).

4. MR177 is affected by the proposed new Techno Park Link Road (TPLR) and the existing access to the Northern Portion of Farm 279 at ±km30.08LHS as well as the existing

access to the Southern Portion of Farm 279 at ±km30.21RHS providing access to Wineland Water Board.

5. Taking into account the classification and function of MR177, the existing access at ±km30.21RHS for the Southern Portion of Farm 279 does not conform to the minimum access spacing requirement of this Branch and needs to be closed and relocated to opposite the existing upgraded access for the Material Waste Recovery Facility (Northern Portion) at ±km30.08LHS (Approval reference 13/3/5/2-25/9 dated 17 February 2011) until the proposed Techno Park Link Road (TPLR) has been approved, finalised and constructed with a new access position for the Southern Portion off the TPLR.

6. This Branch has no objection to the application for Rezoning of a Portion of Farm 279 Stellenbosch, subject to the following conditions:

6.1. The existing access off MR177 to the Southern Portion of Farm 279 at ±km30.21R (also currently shared by Winelands Water Board) and the median crossing must be closed permanently and relocated to ±km30.08RHS opposite the existing upgraded access for the Material Waste Recovery Facility (Northern Portion);

6.2. The design of the new access to the Southern position must be approved by this Branch prior to construction; and

6.3. In future Stellenbosch Municipality must ensure access to the Southern Portion of Farm 279 off the proposed Techno Park Link Road (TPLR) when constructed if approved with an access off MR177 at ±km30.08RHS.

Yours Sincerely

SW CARSTENS
For DEPUTY DIRECTOR-GENERAL: TRANSPORT INFRASTRUCTURE
DATE: 16 August 2023

CAPE WINELANDS DISTRICT
MUNICIPALITY • MUNISIPALITEIT • UMASIPALA

MEMORANDUM TO/ AAN	:	**N. Momoti (Directorate Planning Economic & Development: Stellenbosch Municipality)**
Official / Beampte	:	**Mr F.C. van Wyk**
Your ref/ U vrww.	:	**ERF 279, Stellenbosch (LU/15569)**
Ref No / Verw. No	:	**15/2/6/1**
Date / Datum	:	**2023-06-22**

APPLICATION FOR REZONING: ERF 279, STELLENBOSCH

There are no objections from an Environmental Health point of view in terms of this application, subject to compliance with the following:

1. All sewage / wastewater must be disposed of in such a manner that it does not create a health nuisance. Must be connected to the existing municipal system.

2. The applicant should ensure that refuse will be managed effectively as to not create possible health nuisances.

3. In the event where food will be prepared or handled and or served to the public, the applicant must apply in writing to the Municipal Health Services Department of the Cape Winelands District Municipality for a Certificate of Acceptability in terms of Regulation 638 of 22 June 2018.

4. In the event where any noise generating activity will be conducted on the premises, the onus lies on the owner to ensure that the necessary noise evaluation is carried out and that the results are submitted to local authority (SANS 10103 of 2003)

5. An adequate water supply that complies with the national standards for drinking water (SANS 0241:2001) must be always provided.

6. Measures must be put in place to prevent the harborage of pests on the site.

Yours faithfully

F.C. VAN WYK
for MUNICIPAL MANAGER

APPENDIX 7

Comments from internal municipal departments

STELLENBOSCH MUNICIPALITY
STELLENBOSCH-PNIEL-FRANSCHHOEK

MEMORANDUM

DIREKTORAAT: INFRASTRUKTUURDIENSTE
DIRECTORATE: INFRASTRUCTURE SERVICES

CIVIL ENGINEERING SERVICES

To ▫ Aan:	**Director: Planning + Economic Development**
Att Aandag:	**Nolusindiso Momoti**
From ▫ Van:	**Manager: Development (Infrastructure Services)**
Author ▫ Skrywer:	**Tyrone King**
Date ▫ Datum:	**18 July 2023**
Our Ref ▫ Ons Verw:	**Civil LU 2524**
Town Planning Ref:	**LU/16569**
Re ▫ Insake:	**Farm 279, Stellenbosch: Application is made in terms of Section 15(2)(a) for the rezoning of ±14.8ha of Farm No. 279, Stellenbosch from Agriculture and Rural Zone to Utility Services Zone to allow the operations of a Material Waste recovery facility, an Organic Waste Transfer station and oxidation dam for a Wastewater Treatment Works (WWTW).**

The application is recommended for approval, subject to the following conditions:

1. **Water**

1.1 The proposed buildings must connect to the existing network constructed during the MRF development. Details of water connection point and the new reticulation network must be indicated on SDPs and building plans - all existing and proposed water pipes must be indicated.

2. Sewer

2.1 It is noted that the existing conservancy tank will be utilized. The consulting engineer must assess the capacity of the tanks and determine if any upgrade is required to accommodate the additional sewer discharge.

2.2 The proposed buildings must connect to the existing network constructed during the MRF development. Details must be indicated on SDPs and building plans - all existing and proposed water pipes must be indicated.

3. Roads

3.1 Access is from a provincial road (R310 – Stellenbosch Arterial) – please obtain approval from Provincial Roads Engineer (PRE).

3.2 All conditions as set by the PRE must be complied with before an occupation certificates are issued.

3.3 Further comments regarding internal road and NMT infrastructure will be provided when detail drawings are submitted for approval.

4. Stormwater

4.1 Contaminated stormwater areas must be directed inwards towards catch pits. These catchpits must discharge the contaminated stormwater to treatment areas, which must treat the it to an acceptable standard before it is discharged to the external SW system. Details hereof must be indicated on the SDPs and building plans.

4.2 Stormwater generated on site must be retained to pre-development flows.

Tyrone King Pr Tech Eng
Manager: Development (Infrastructure Services)

W:\2.0 DEVELOPMENT\01 Land Use applications\2524 (TK) Farm 279 Stellenbosch (LU-15569), Organic Waste Transfer Station !!!!!!!!!! TK\2524 () Farm 279 Stellenbosch (LU-15569).doc