Wildebosch Road Extension to Trumali Street at Stellenbosch, in the Western Cape

Draft Basic Assessment Report for Public Comment

DEA&DP Reference No.: 16/3/3/6/7/1/B4/45/1342/23

Stellenbosch Local Municipality

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Approval			
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Title	Junior Environmental Consultant	Title	Environmental Assessment Practitioner

List of terms and abbreviations

Term	Description
BA	Basic Assessment
BAR	Basic Assessment Report
CA	Competent Authority
CARA	Conservation of Agricultural Resources Act (Act No. 43 of 1983)
DAFF	Department of Agriculture, Forestry and Fisheries
DEA&DP	Department of Environmental Affairs and Development Planning
DBAR	Draft Basic Assessment Report
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
EIS	Ecological Importance and Sensitivity
ECO	Environmental Control Officer
EMPr	Environmental Management Programme
ESA	Ecological Support Areas
FEN	Freshwater Ecological Network Consulting (Pty) Ltd (Member of the SAS Environmental Group of Companies)
GA	General Authorisation
GN	Government Notice
HWC	Heritage Western Cape
MAP	Mean Annual Precipitation
MSL	Mean Sea Level
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NEMA	National Environmental Management Act (No. 107 of 1998)
NEM:BA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEMPAA	The National Environmental Management: Protected Areas Act, 2003 (Act. No. 57 of 2003)
NFA	National Forest Act (Act No.84 of 1998)
NWA	The National Water Act (Act No.36 of 1998)
OHSA	Occupational Health and Safety Act (Act No. 85 of 1998)

PES	Present Ecological State
PPP	Public Participation Plan
SARAH	South African Resources Agency
SE	Site Engineer
SPLUMA	Spatial Planning and Land Use Management Act (Act No. 16 of 2013)
WCG	Western Cape Government
WULA	Water Use Licence Application
WUL	Water Use Licence

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Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

As indicated in the Municipality's 2018 Roads Master Plan (draft 2019) (RMP), the Eastern Link Road (previously incorrectly referred to as the eastern bypass) has been contemplated for a long time but has never been formally adopted due to public and environmental concerns. However, the scale, nature and potential benefits of this project make it an ideal candidate for inclusion in the RMP.

This route follows the the Western Cape Government (WCG) Proclaimed Main Road 169 (MR0169) alignment and involves the extension of Wildebosch Road from the R44 to Van Reede Road and a connection with Pastorie Road at the Theological Faculty with a new proposed bridge crossing over the Eerste River as a Class 4 Collector Road. Other alignment alternatives would include the widening of the Coetzenburg bridge near the CBD.

The scope of the Wildebosch extension project forms part of the Provincial MR0169 alignment, however is of a much smaller magnitude. The extension of Wildebosch commences at Paradyskloof Road where a small portion of road reserve exists (Erf RE/16527) and traverses the farmland (RE/369) in a north-easterly direction to meet the existing Trumali Street, currently a surfaced access road to the Paradyskloof Water Treatment Works.

The primary objective of the project is to provide an alternative road alignment to the recently constructed Schuilplaats Road as a result of the WCG R44 Access Management strategy where closure of several intersections onto the R44 have been and will be implemented; specifically, where Paradyskloof Road onto the R44 was upgraded and turning restrictions were implemented. Thus, the phased implementation of the Paradyskloof-Trumali Street portion of MR0169 will have immediate benefits in providing access to Paradyskloof and proposed residential developments in the Paradyskloof area as a result of these access restrictions on the R44.

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	~~**GEORGE REGIONAL OFFICE:**~~ ~~**DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)**~~ ~~(Central Karoo District & Garden Route District)~~
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	~~The completed Form must be sent via electronic mail to:~~ ~~DEADPEIAAdmin.George@westerncape.gov.za~~ ~~Queries should be directed to the Directorate: Development Management (Region 3) at:~~ ~~E-mail: DEADPEIAAdmin.George@westerncape.gov.za~~ ~~Tel: (044) 814-2006~~ ~~Western Cape Government~~ ~~Department of Environmental Affairs and Development Planning~~ ~~Attention: Directorate: Development Management (Region 3)~~ ~~Private Bag X 6509~~ ~~George,~~ ~~6530~~

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Department of Infrastructure is required, a map illustrating the properties (owned by the Western Cape Government: Department of Infrastructure) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.*, 1:100 year, 1:50 year and 1:10 year where applicable);

	○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ **(**tick) or a **x** (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	**x**
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	✓
Appendix B:	**Appendix B1:**	**Site development plan(s)**	✓
	Appendix B2	**A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;**	
Appendix C:	**Photographs**		✓
Appendix D:	**Biodiversity overlay map**		
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	✓
	Appendix E2:	**Copy of comment from Cape Nature**	**x**
	Appendix E3:	**Final Comment from the DWS**	**x**
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	**x**
	Appendix E5:	**Comment from the DAFF**	**x**
	Appendix E6:	**Comment from WCG: Department of Infrastructure**	**x**
	Appendix E7:	**Comment from WCG: DoA**	**x**
	Appendix E8:	**Comment from WCG: DHS**	**x**
	Appendix E9:	**Comment from WCG: DoH**	**x**

	Appendix E10:	**Comment from DEA&DP: Pollution Management**	**x**
	Appendix E11:	**Comment from DEA&DP: Waste Management**	**x**
	Appendix E12:	**Comment from DEA&DP: Biodiversity**	**x**
	Appendix E13:	**Comment from DEA&DP: Air Quality**	**x**
	Appendix E14:	**Comment from DEA&DP: Coastal Management**	**x**
	Appendix E15:	**Comment from the local authority**	**x**
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management)**	**x**
	Appendix E17:	**Comment from the District Municipality**	**x**
	Appendix E18:	**Copy of an exemption notice**	**x**
	Appendix E19	**Pre-approval for the reclamation of land**	**x**
	Appendix E20:	**Proof of agreement/TOR of the specialist studies conducted.**	**x**
	Appendix E21:	**Proof of land use rights**	**x**
	Appendix E22:	**Proof of public participation agreement for linear activities**	**x**
Appendix F:	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		**N/A**
Appendix G:	**Specialist Report(s)**		✓
Appendix H:	**EMPr**		✓
Appendix I:	**Screening tool report**		✓
Appendix J:	**The impact and risk assessment for each alternative**		✓
Appendix K:	**Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline**		✓
Appendix…..	**Any other attachments must be included as subsequent appendices**		✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	**CAPE TOWN OFFICE: REGION 1**		~~GEORGE OFFICE: BEGION 3~~
	~~(City of Cape Town, West Coast District~~	**(Cape Winelands District & Overberg District**)	~~(Central Karoo District & Garden Route District)~~
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Stellenbosch Local Municipality (herein referred to as Stellenbosch Municipality)		
Name of contact person for Applicant/Proponent (if other):	Shane Vinod Kumar Chandaka		
Company/ Trading name/State Department/Organ of State:	Stellenbosch Municipality		
Company Registration Number:	N/A		
Postal address:	PO. Box 17		
	Stellenbosch	Postal code: 7599	
Telephone:	(021) 808 8213/22	Cell: 082 589 7302	
E-mail:	Shane.Chandaka@stellenbosch.gov.za	Fax: N/A	
Company of EAP:	Zutari (Pty) Ltd		
EAP name:	Xanté Eberhardt		
Postal address:	PO Box 494		
	Cape Town	Postal code: Cape Town	
Telephone:	(021) 526 9400	Cell: 083 2923766	
E-mail:	Xante.Eberhardt@zutari.com	Fax: N/A	
Qualifications:	BSc (Hons) Environmental Sciences and Management. BSc Environmental and Biological Sciences.		
EAP registration no:	2021/3103		
Duplicate this section where there is more than one landowner Name of landowner:	Stellenbosch Municipality. Landownership: • Erf RE/16527 Stellenbosch RD • Remaining Extent of the Farm 369 Stellenbosch RD		
Name of contact person for landowner (if other):	Same as applicant. Refer to the Deeds Office Property Reports included as Appendix L.		
Postal address:			
		~~Postal code:~~	
Telephone:	~~( )~~	~~Cell:~~	
E-mail:		~~Fax: ( )~~	
Name of Person in control of the land:	Brandwacht Land Development (Pty) Ltd. Landownership: • Remaining Extent of Portion 0 of The Farm Brandwacht 1049 Stellenbosch RD		
Name of contact person for person in control of the land:			
Postal address:			
		~~Postal code:~~	
Telephone:	~~( )~~	~~Cell:~~	
E-mail:		~~Fax: ( )~~	

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Not applicable	
Contact person:		
Postal address:		
		Postal code:
Telephone	( )	Cell:
E-mail:		Fax: ( )

Note from Zutari: This application will be for a linear activity. A small section of the proposed road extension work falls within the road reserve on Erf RE/16527 Stellenbosch RD (Erf RE/16527). The remainder of the work is situated on the Remaining Extent of the Farm 369 Stellenbosch RD (RE/369) and Remaining Extent of the Farm Brandwacht 1049 Stellenbosch RD (RE/1049).

A large portion of land harbouring the project footprint including road reserves are owned by the Stellenbosch Municipality. A wayleave application and /or a land use consent may be required to authorise work within private-owned land.

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INLCUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	✓ (Wildebosch)	Expansion	✓ (Trumali)
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				

- A large portion of the project would be located within an agricultural area, which appears to be cropland/vineyard.
- A small section of the road extension over Erf RE/16527 appears to be undeveloped and vacant.
- The larger Stellenbosch ecological environment has already been impacted, degraded and transformed by the existing land uses, predominately agriculture and gated residential area.
- In summary, sections of the Wildebosch road extension project would be situated on a brownfield site.

Refer to the Locality Map found in Appendix A1.

3.	**For Linear activities or developments**
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:

The project footprint would be situated on the following properties:

- Erf RE/16527 has been zoned as public road where provision has been made for a road reserve width of approximately 25m (Owner by Stellenbosch Municipality).
- As RE/369 is currently used for agricultural farming purposes, there is no existing road reserve forming part of the Wildebosch extension (Owner by Stellenbosch Municipality).
- Trumali Street to the east of Ben du Toit Road that provides thoroughfare to the Paradyskloof Water Treatment Works over RE/369 (Owner by Stellenbosch Municipality).
- RE/1049 is privately owned by a developer who would like to develop the land as it is currently unutilized.

Refer to the Deeds Office Property Reports found in Appendix L.

3.2.	Development footprint of the proposed development for all alternatives.	31267 m²

The total project footprint is approximately 31 267 m².

Note from Zutari: There are no alternative sites for this proposed development as the project has been designed to follow the WCG Proclaimed MR0169 route alignment. However, there are only four layout options being evaluated for the project.

3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.

Introduction

Stellenbosch Local Municipality under the Department of Roads and Stormwater proposes to develop a road alignment between the suburbs of Paradyskloof and Brandwacht. The project would include an extension of Wildebosch Road and upgrading Trumali Street at Stellenbosch South, within the jurisdiction of Stellenbosch Local Municipality, part of the larger Cape Winelands District in the Western Cape. The Wildebosch extension forms part of the Provincial Proclaimed Main Road 169.

As shown in figure 1 below and site development plans attached as Appendix B, the extension of Wildebosch commences at Paradyskloof Road where a small portion of road reserve exists (Erf RE/16527) and traverses the farmland (Erf RE/369) in a north-easterly direction to meet the existing Trumali Street, currently a surfaced narrow access road for the Paradyskloof Water Treatment Works.

The primary objective of the development is to provide alternative road alignment to the recently developed Schuilplaats Road which aligns to the WCG R44 Access Management where closure of several intersections onto the R44 have been and will be implemented. A further benefit of the construction of the Wildebosch extension is that it creates more access opportunities to the R44 for the Paradyskloof area.

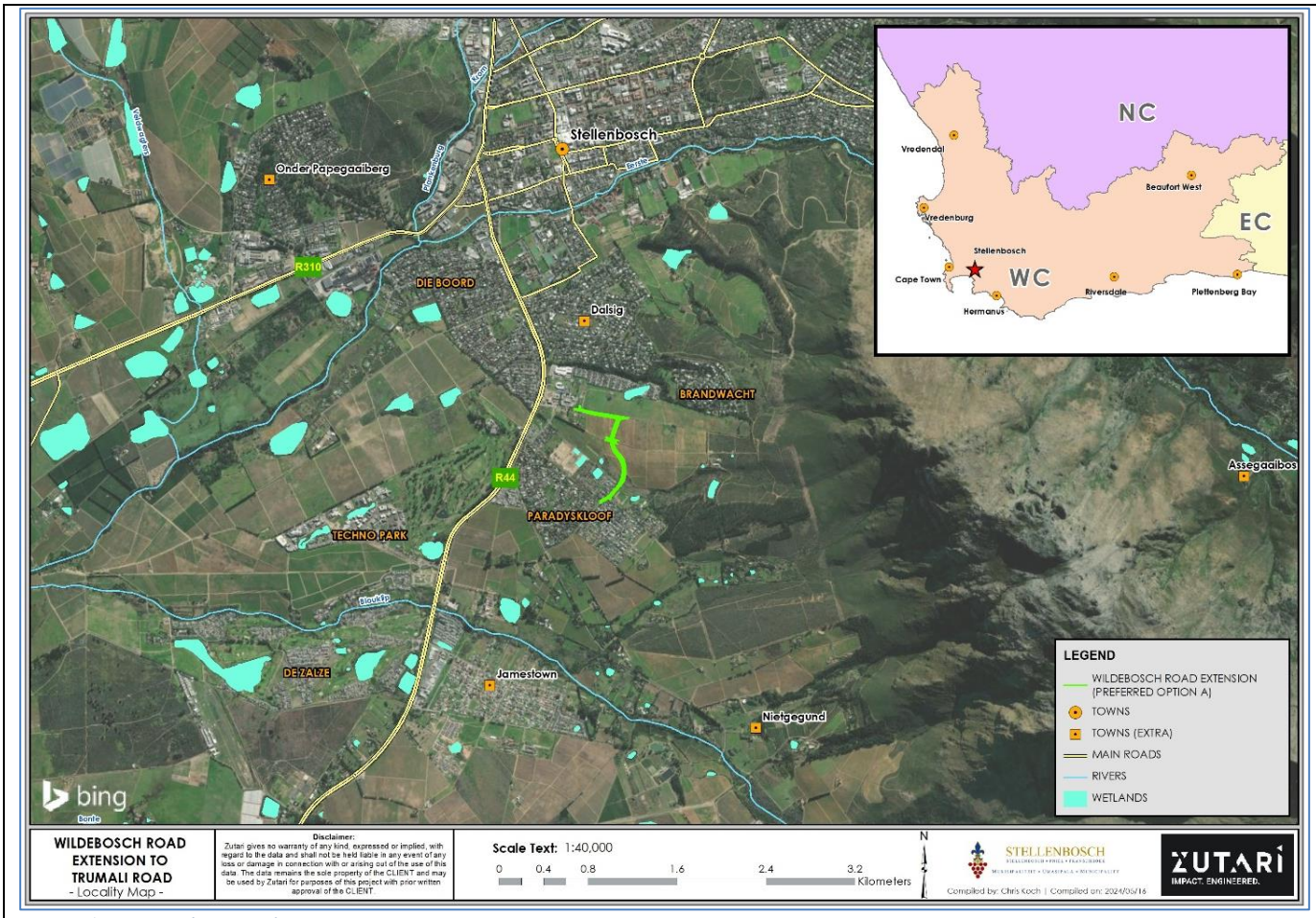

Figure 1:Proposed project location

Wildebosch Road

- The proposed horizontal alignment consists of curve radii ranging from 180m to 220m starting at the intersection with Paradyskloof Road and proceeding northward towards Trumali Street.
- According to the Stellenbosch Roads Master Plan, the proposed Wildebosch extension should contain a surfaced 4.0m wide in each direction between kerbs with a separated 3.0m wide non-motorised transport (NMT) facility.
- Side slopes and drainage elements should be implemented as best suited for the terrain.

Figure 2 below illustrates the proposed road cross section:

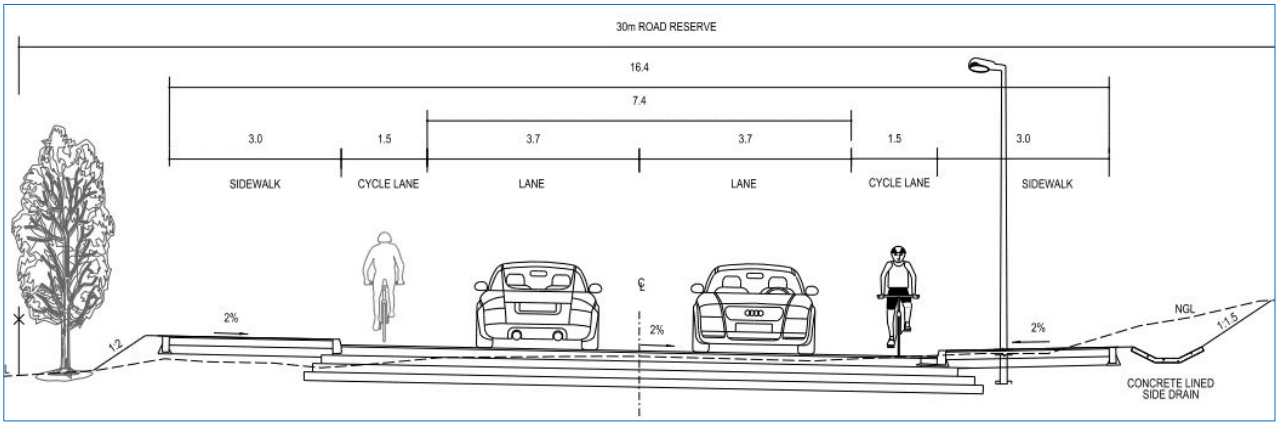

Figure 2:Proposed Wildebosch cross-section

Trumali Street

- The Trumali Street design will be an upgrade of the current road to tie-in with the Wildebosch extension. The road will be designed considering all constraints as it must tie-in in with Wildebosch design and the existing Ben du Toit intersection, which will be upgraded as well.
- The proposed horizontal alignment consists of one curve radius starting at the intersection with Ben du Toit Road and proceeding eastward towards Wildebosch Road extension.
- The existing vertical grade of Trumali Street from Ben du Toit Road to the proposed intersection with the Wildebosch extension is in the order of 10.0%. As the design philosophy is to minimise impact on the natural environment there are limited options to be

explored to bring this grade to a lower grade, geometrically. As such it proposed that the upgrade of Trumali Street will closely match the existing horizontal and vertical alignment.

The figures below illustrate the proposed road cross section options:

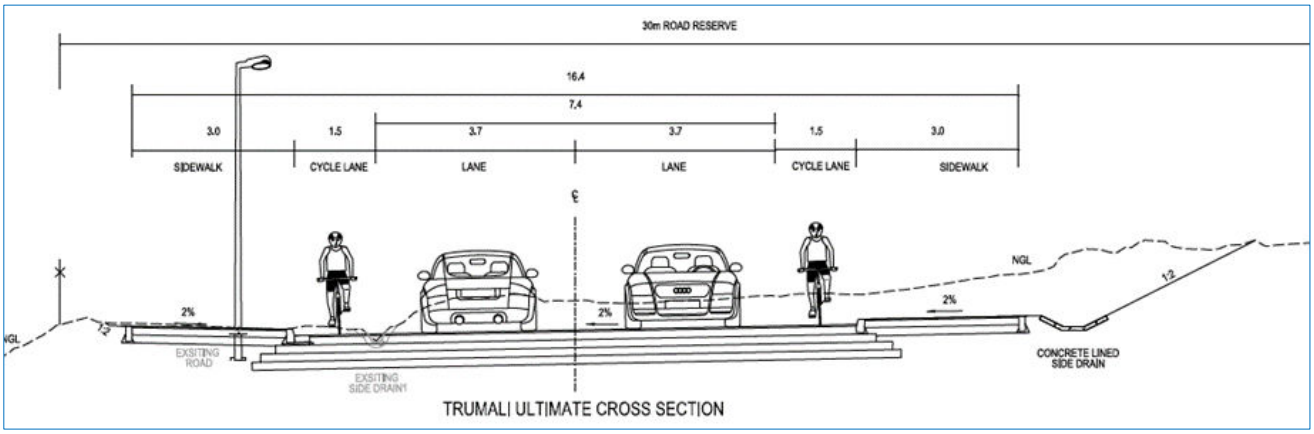

Figure 3:Proposed Trumali ultimate cross section option

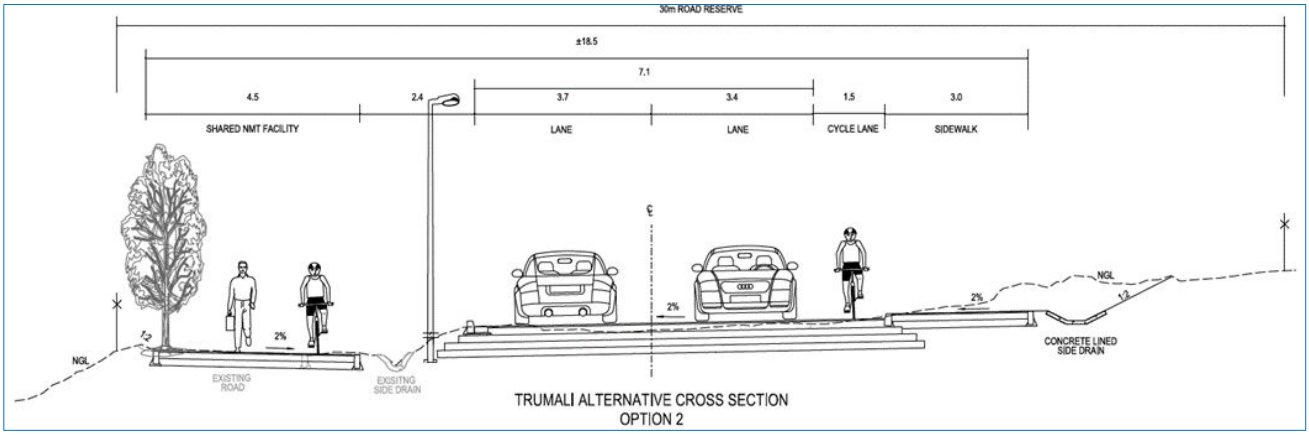

Figure 4:Proposed Trumali alternative cross section

The upgrade of Trumali Street only allows for the road to be upgraded, with the cross section expanding towards Grondves Farm, alleviating acquisition and impact on the Brandwacht Farm. To the north.

Property Ownership

The road upgrades currently affect the following properties:

- Erf RE/16527 has been zoned as public road where provision has been made for a road reserve width of approximately 25m.
- As Erf RE/369 is currently used for agricultural farming purposes, there is no existing road reserve forming part of the Wildebosch extension and is owned by Stellenbosch Municipality.
- Trumali Street to the east of Ben du Toit Road that provides thoroughfare to the Paradyskloof Water Treatment Works over Erf RE/369 (also under the ownership of Stellenbosch Municipality).
- RE Farm Brandwacht 1049 is privately owned, however there are currently plans circulating Stellenbosch Municipality's administration requesting the relocating of the urban edge to allow for this land to be developed as it is currently unutilized.

A servitude has been identified over the Brandwacht Farm to serve the Brandwacht aan Rivier development in the vicinity of the existing Trumali Street and Ben de Wet Intersection, where the proposed Trumali Road tie-in will exist.

Road Network Context

The Wildebosch extension forms part of the Western Cape Government's Provincial Proclaimed Main Road 169 (MR00169) to provide alternative access into the Stellenbosch CBD.

The proposed Wildebosch Road to Trumali Street extension, in terms of regional access will enable the following:

- The major function of the R44 is to serve as a north/south (regional mobility) route connecting Strand, Somerset West, Helderberg regions with areas to the north such as Paarl, Wellington and Malmesbury. Additionally, it will connect areas in the south with Stellenbosch.
- The dual function results in the R44 being one of the most congested roads in the Stellenbosch area.
- The full Wildebosch Road to Trumali Street extension will provide a new link into Stellenbosch midtown as a supplement road to the R44 which in turn will reduce congestion of the R44 and create a new link road for users travelling in the Stellenbosch area.

While in terms of local access, the proposed Wildebosch Road to Trumali Street extension will support the following existing road network interventions:

- R44 and Trumali Road Intersection is a signalised intersection.

- The intersection of Paradyskloof Road approach of the R44 and Paradyskloof Road Intersection was recently converted to a left-in left-out access, with a right-turn for the R44 northbound approach.
- The Schuilplaats Road was extended to connect Paradyskloof Road to Trumali Road, to allow the community to easily access the full intersection.

Additionally, no permanent road closures are to occur during construction phase.

From a broader context, the phased implementation of the Paradyskloof-Trumali Street portion would also have immediate benefits due to access restrictions on the R44 and proposed residential developments in the area

3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.

Access will be obtained through the existing Trumali Street on the north and Wildebosch Raad at Paradyskloof on the south.

Note from Zutari: There are no alternative sites for this proposed development as the project has been designed to follow the proclaimed alignment (i.e. Provincial Proclaimed Main Road 169). However, there are only four layout options that were evaluated for the project.

3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives	Erf 16527	C	0	6	7	0	0	2	2	0	0	0	0	1	6	5	2	7	0	0	0	0
		RE/369	C	0	6	7	0	0	0	0	0	0	0	0	0	0	3	6	9	0	0	0	0
		RE/1049	C	0	6	7	0	0	0	0	0	0	0	0	0	1	0	4	9	0	0	0	0

3.6.	**Starting point co-ordinates for all alternatives**			
	Latitude (S)	33°	57‘	53.44“
	Longitude (E)	18°	51‘	38.98“
	Middle point co-ordinates for all alternatives			
	Latitude (S)	33°	57‘	37.31“
	Longitude (E)	18°	51‘	42.09“
	End point co-ordinates for all alternatives			
	Latitude (S)	33°	57‘	27.32“
	Longitude (E)	18°	51‘	30.12“

Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.

Refer to the Linear Activity Map/Site Development Plan, attached as Appendix B

~~4.~~	~~**Other developments**~~ **Not Applicable**	
~~4.1.~~	~~Property size(s) of all proposed site(s):~~	~~m²~~
~~4.2.~~	~~Developed footprint of the existing facility and associated infrastructure (if applicable):~~	~~m²~~
~~4.3.~~	~~Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:~~	~~m²~~
~~4.4.~~	~~Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).~~	
~~4.5.~~	~~Indicate how access to the proposed site(s) will be obtained for all alternatives.~~	
~~4.6.~~	~~SG Digit code(s) of the proposed site(s) for all alternatives:~~	

~~4.7.~~	~~Coordinates of the proposed site(s) for all alternatives:~~			
	~~Latitude (S)~~	~~°~~	~~‘~~	~~“~~
	~~Longitude (E)~~	~~°~~	~~‘~~	~~“~~

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	YES	NO

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	~~YES~~	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	~~YES~~	NO
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	YES	~~NO~~
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	YES	NO
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	YES	NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	YES	~~NO~~
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	~~YES~~	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	~~YES~~	NO

Note from Zutari: This type of development will not result in any greenhouse emissions (i.e., emissions through a stack or vent) during construction and operation. For this reason, there is no listed activity that is triggered in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004 (NEM:AQA), and therefore, an Atmospheric Emissions Licence is not required. There only expected emission would be the generation of dust during construction phase. It is anticipated that dust would emanate from the construction activities, such as the movement of excavators, dump trucks, track or loader backhoe and other heavy vehicles. Based on the NEM:AQA (National Dust Control Regulations) the contractor responsible for construction must take reasonable measures to control dust on site. These measures may include water sprays, dust screens, soil stabiliser or hardening agents. The dust control measures are included in the EMPr, i.e., is attached as Appendix H of this BAR.

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
Refer to table 1 below.

Table 1:Relevant legislation and the applicability thereof

Legislation considered	Relevant Organ of State / authority	Aspect of Project
The Republic of South Africa Constitution Act (Act No. 108 of 1996) ("the Constitution")	Parliament	The environmental right contained in Section 24 of the Constitution provides that everyone is entitled to an environment that is not harmful to his or her well-being.
National Environmental Management Act (Act No. 107 of 1998) (NEMA)	Competent Authority (CA) (DEA&DP)	NEMA establishes the principles for decision-making on matters affecting the environment. Section 2 of the Act sets out the National Environmental Management principles which apply to the actions of organs of state that may significantly affect the environment. Furthermore, Section 28(1) states that *"every person who causes or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring".* If such pollution or degradation cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution or degradation. The applicant has the responsibility to ensure that the proposed activity and EIA process conform to the principles of NEMA. In developing the EIA process, Zutari has taken cognisance of this need, and accordingly the EIA process has been undertaken in terms of NEMA and the EIA Regulations[1]. Several listed activities in these regulations are triggered, as indicated in the application for Environmental Authorisation (EA). Application EA forms are

[1]GN No. R 982, 983, 984, and 985 in Government Gazette No.38282 of 4 December 2014.

Legislation considered	Relevant Organ of State / authority	Aspect of Project
		submitted with this BAR and accompanying appendices.
National Water Act (Act No. 36 of 1998) (NWA)	Department of Water and Sanitation (DWS)	The NWA provides for the sustainable and equitable use and protection of water resources. It is founded on the principle that the National Government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest, and that a person can only be entitled to use water if the use is permissible under the NWA. Section 21 of the NWA specifies the water uses which require authorisation from The DWS in terms of the NWA before they may commence. It is expected that the proposed road extension would be situated within the 500m regulated area of a wetland, and road construction activities would trigger Section 21 (c & i) water uses. Therefore, these water uses would require authorisation in terms of the NWA before they may commence on site. The abstraction of water from a water resource is not anticipated nor the storage of water on site.
National Heritage Resources Act (Act No. 25 of 1999) (NHRA)	South African Heritage Resources Agency (SAHRA)	In terms of the NHRA, any person who intends to undertake "any development which will change the character of a site exceeding 5,000 m^2 in extent, or involving three or more existing erven or subdivisions thereof", "the construction of a road powerline, pipeline exceeding 300 m in length" or "the rezoning of site larger than 10,000 m^2 in extent" must at the very earliest stages of initiating the development notify the responsible heritage resources authority, namely SAHRA or the relevant provincial heritage agency. These agencies will thereafter review the findings of a Phase 1 Heritage Impact Assessment (HIA) that would be undertaken by the specialist. Section 38(8) of the NHRA specifically excludes the need for a separate HIA where the evaluation of the impact of a development on heritage resources is required in terms of an EIA process. Heritage Western Cape concluded that there is no reason to believe that the proposed extension of Wildebosch Road from Paradyskloof Road to Trumali Road, as well as upgrading Trumali Road on Remainder of Erf 16527 and Remainder of Farm 369, Trumali and Paradyskloof Road, Stellenbosch, will impact on heritage resources. No further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required
Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA)	Department of Agriculture	The CARA provides for the conservation of agricultural resources through limiting the sub-division of agricultural land, maintaining the production potential of land, combating and preventing erosion, preventing the weakening or destruction of water sources, protecting vegetation, and combating weeds and invader plants. As such, as part of the EIA process, recommendations should be made to ensure that measures are implemented to maintain the agricultural production of land (if possible).
National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEM: BA)	Department of Forestry, Fisheries and the Environment (DFFE) and DEA&DP	The NEM:BA aims to conserve and manage the country's biodiversity through the protection of species and ecosystems, specifically those which are threatened or considered to be critically endangered. It also serves to regulate the management of alien vegetation. In terms of NEM:BA a list of endangered, critically endangered, vulnerable, and protected species has been promulgated (Section 6, Table 3 of the Act), which calls for an EIA process, should any of the listed species be identified on the site and need to be removed. A botanical assessment has been undertaken to determine if any listed species are located on the proposed site.
Spatial Planning and Land Use Management Act, 2013 (SPLUMA)	Stellenbosch Local Municipality	The land parcels on which the proposed Wildebosch road extension will be constructed, will need to be verified to confirm if the current land use according to the municipality's town planning scheme, is appropriate for the planned road construction.
National Forest Act (Act No. 84 of 1998) (NFA)	DFFE	The National Forests Act provides protection for forests, woodlands and several specified species of trees, which are protected across South Africa. The latest list of protected trees, dating from 2014, contains a total of 47 species, specimens of which may not be cut or damaged without a permit. Where protected species are encountered within the project footprint, permits from the relevant authority must be obtained for their removal and/or destruction prior to construction activities commencing.
The National Environmental Management: Protected Areas Act, 2003 (Act. No. 57 of 2003) (NEMPAA);	DFFE	The objective of this act is to provide for the protection and conservation of ecologically viable areas representative of South Africa's biological biodiversity and its natural landscapes and seascapes; for the establishment of a national register of all national, provincial and local protected areas; for the management of those areas in accordance with national norms and standards; for intergovernmental co-operation and public consultation in matters concerning protected areas.

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.	
Legislation, Policies, Plans, Guidelines, Spatial Tools, Municipal Development Planning Frameworks, And Instruments	***Describe how the proposed development complies with and responds:***
Land Use Planning Ordinance (Act 15 of 1985)	Not applicable
National Waste Management Strategy	All waste from construction to decommissioning must be dealt with in terms of this strategy.
National Development Plan 2023	The development aligns with the National Development Plan (NDP, 2030 vision), which aims to eliminate poverty and reduce inequality by 2030. More specifically, the plan has a target of developing people's capabilities to improve their lives through education and skills development, health care, better access to public transport, jobs, social protection, rising income, housing and basic services, and safety. One of the proposed critical actions is public infrastructure investment at 10% of gross domestic product (GDP), financed through tariffs, public-private partnerships, taxes and loans and would particularly focus on transport, energy and water.
Integrated Urban Development Framework 2016	Further, the Integrated Urban Development Framework (IUDF) 2016, aims to drive urban growth towards a sustainable model of compact, connected and coordinated towns. This framework provides a roadmap to implement the NDP's for spatial transformation, creating liveable, inclusive and resilient towns.
Provincial Sustainable Transport Programme	Moreover, as part of the Provincial Sustainable Transport Programme (PSTP) the Western Cape Government: Department of Infrastructure identified Stellenbosch as a priority municipality for the development of a sustainable transport system. The emphasis will be on the development of a public transport system and the development of infrastructure to improve non-motorised transport.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.	
Stellenbosch Municipality's 2018 Roads Master Plan (RMP) Draft 2029, the Eastern Link Road	Based on the Stellenbosch Municipality's 2018 Roads Master Plan (RMP) Draft 2029, the Eastern Link Road (previously incorrectly referred to as the eastern bypass) has been contemplated for a long time but has never been formally adopted due to public and environmental concerns. However, the scale, nature and potential benefits of this project make it an ideal candidate for inclusion in the RMP. The phased implementation of the Paradyskloof-Trumali Street portion would also have immediate benefits due to access restrictions on the R44 and proposed residential developments in the area.
Guideline for Environmental Management Plans (2005)	An EMPr has been included with this Basic Assessment to provide practical and implementable actions to ensure that the development maintains sustainability and minimise impacts through all its phases. The document is drafted as per the Guidelines and requirements of NEMA.
Guideline for Public Participation (2013)	The PPP for this process is based on this Guideline and also includes any updated regulations.
Guideline on Alternatives (2013)	Feasible and reasonable alternatives must be considered alongside the development proposal in order to ensure the Best Practicable Environmental Option (BPEO). These Guidelines have been used in their consideration.
Guideline on Need & Desirability (2013)	Need & Desirability refers to the temporal and spatial need of an area for a specific development. This Guideline was used to define the requirements and implications of Need & Desirability.

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form
The following protocols apply: • Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity • Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial plant species. • Protocol for the specialist assessment and minimum report content requirements for environmental impacts on aquatic biodiversity Refer to Appendix N for the site sensitivity verification report.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	**The development of—** (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or **(ii) infrastructure or structures with a physical footprint of 100 square metres or more;** **where such development occurs—** **(a) within a watercourse**; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.	It is proposed that a small section of the Wildebosch road extension will traverse an unchanneled valley bottom wetland (UVBW). The development footprint of the culvert crossing (including foundation of the road and installation of the pipe culverts) will be more than 100 square metres .
19	**The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;** but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;	A small section of the Wildebosch road extension will traverse an unchanneled valley bottom wetland (UVBW). It is likely that proposed works relating to the development of the culvert crossing (including foundation of the road and installation of the pipe culverts) will result in more than 5 m^3 of material being excavated and backfilled within the UVBW.

	(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.	
24	**The development of a road—** (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or **(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;** but excluding a road— (a) which is identified and included in activity 27 in Listing Notice 2 of 2014; (b) where the entire road falls within an urban area; or (c) which is 1 kilometre or shorter	Erf RE/16527 is zoned as public road with a road reserve width of approximately 25 m. While RE/369 is currently used for agriculture and there is no existing road reserve forming part of the Wildebosch extension.
56	**The widening of a road by more than 6 metres**, or the lengthening of a road by more than 1 kilometre— (i) where the existing reserve is wider than 13,5 meters; or (ii) where no reserve exists, where the existing road is wider than 8 metres; excluding where widening or lengthening occur inside urban areas	The length of the Wildebosch road extension commencing at the intersection with Paradyskloof Road and proceeding northward towards Trumali Street will be less than 1km. It is anticipated that the widening of Trumali Street may exceed 6 m during the upgrades. The road reserve over Erf RE/16527 has a width of approximately 25 m, while over RE/369 a road reserve not been determined. A new road reserves of 30 m over the RE/369 will be applied for.
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	**The clearance of an area of 300 square meters or more of indigenous vegetation** except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. i. **Western Cape** i. **Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list**, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans; iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.	The site falls within the Critically Endangered" (Swartland Shale Renosterveld) ecosystem, as well as within an "Endangered" (Swartland Granite Renosterveld) ecosystem, and these ecosystems require protection under the NEMBA. Another small part of the Wildebosch Road extension on Erf RE/16527 is located within an Ecological Support Area (ESA). ESAs are areas intended to support the functionality of both Protected Areas and Critical Biodiversity Areas (CBAs). Very small areas along Trumali Street have been mapped as CBA 1. Areas designated CBA1 are areas deemed likely to be in natural condition. It is unlikely that these CBAs are still intact and in pristine conditions as they may be impacted by the development of Trumali Street in the past. More than 300 m^2 of indigenous vegetation (i.e., Swartland Granite Renosterveld) will be removed on the most southern part of the site. During Trumali Street upgrades indigenous vegetation in excess of 300 m^2 will be removed within a CBA 1 or Swartland Shale Renosterveld. Therefore, a total of more than 300 m^2 of indigenous vegetation will be removed for the project.
14	**The development of—** (i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or **(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs—**	The small footprint of the wetland crossing (including foundation of the road and installation of the pipe culverts) falls within a "Critically Endangered" (i.e. remnant of the Swartland Granite Renosterveld) ecosystem type. This ecosystem requires protection in terms of the GN No. 2747 of 2022 under the NEMBA. This

	(a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. i**. Western Cape** i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas listed in terms of an international convention; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (gg) Core areas in biosphere reserves; or (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.	area also corresponds to the location of a population of Wachendorfia brachyandra, a species of conservation concern.
18	**The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre**. i. **Western Cape** i. Areas zoned for use as public open space or equivalent zoning; ii. All areas outside urban areas: (aa) Areas containing indigenous vegetation; (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or **iii. Inside urban areas:** (aa) Areas zoned for conservation use; or (bb) **Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority**.	The proposed Trumali Street upgrades fall within the Swartland Shale Renosterveld ecosystem containing indigenous vegetation. It is anticipated that the widening of Trumali Street may exceed 4 m during the upgrades where indigenous vegetation is present.
Note: • The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted. • Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.		

List the applicable waste management listed activities in terms of the NEM:WA **NOT APPLICABLE**

~~Activity No(s):~~	~~Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**~~	~~Describe the portion of the proposed development to which the applicable listed activity relates.~~

List the applicable listed activities in terms of the NEM:AQA **NOT APPLICABLE**

~~Activity No(s):~~	~~Provide the relevant **Listed Activity(ies)**~~	~~Describe the portion of the proposed development to which the applicable listed activity relates.~~

Note from Zutari: Waste management is regulated by the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEMWA).

No activities requiring authorisation in terms of NEMWA have been identified at this stage of the project. The construction, operation, and maintenance of the road extension would be authorised through this Environmental Authorisation Application in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and Environmental Impact Assessment (EIA) Regulations. As the road development will occur within the 500m regulated area of a wetland and would traverse a delineated wetland, the project triggers several water uses and these must be authorised by means of a Water Use Licence Application (WULA) in accordance with the National Water Act, 1998 (Act No. 36 of 1998))(NWA).

It is anticipated that waste will be generated during construction and operation. Waste storage will be temporary and would be stored in low volumes during construction. Therefore, waste generation, waste type, temporary storage is not expected to require licensing. Waste generated during construction will be disposed to a licensed landfill.

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

The project would include an extension of Wildebosch Road and upgrading Trumali Street. As can be seen above, the extension of Wildebosch commences at Paradyskloof Road where a small portion of road reserve exists (Erf RE/16527) and traverses the farmland (Erf RE/369) in a north-easterly direction to meet the existing Trumali Street, currently a surfaced narrow access road for the Paradyskloof Water Treatment Works.

The proposed Wildebosch road extension length is approximately 900 m, with an approximate total width not exceeding 30 m including the road reserve.

The proposed Trumali Street upgrade length is approximately 420 m, with an approximate total width not exceeding 30 m including the road reserve.

Note from Zutari: It was decided that the ultimate alignment for proclaimed MR0169 must be considered in the planning as a courtesy to not introduce unnecessary abortive costs in future should the Western Cape Government WCG want to take up the road alignment.

For the requirements of Stellenbosch Municipality for this project, only portion from Paradyskloof Road to Trumali Street has been considered.

Refer to Appendix A and Appendix B to see the locality map and site development plans/alignment options.

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

The works related to the upgrading of Trumali Street will require a road reserve over a small portion of Brandwacht Farm to accommodate a tie-in at the Trumali and Ben du Toit intersection.

The Wildebosch extension over Erf RE/16527 falls within an existing road reserve and therefore in line with the existing rights. Whereas a large portion of the Wildebosch Road extension falls within an existing agricultural land, and this section of the development will require a new road reserve of 30 m to be registered.

The NOI can be found in Appendix E.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

Regarding Trumali Street, there is no conflict with existing approvals as the road has been in existence for a long time. The Wildebosch extension forms part of the proclaimed alignment (i.e. Provincial Proclaimed Main Road 169). Therefore, as far as Zutari is concerned there are no conflicts with regards to the proposed road works.

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

Based on the Provincial Spatial Development Framework the project aligns with the Provincial Land Transport Framework (PLTF) 2014, which sets out the transport policy agenda at the provincial level and the policy agenda for local integrated transport planning. This policy document emphases the improvement of road investment and related decision support. Importantly, the policy seeks to coordinate and integrate transport planning at the provincial level. In line with spatial transformation planning outcomes, the focus of the municipality would be to establish special demand for social infrastructure and strategic infrastructure such as energy and roads.

4.2	The Integrated Development Plan of the local municipality.

As part of the 5th Generation Integrated Development Plan (IDP) 2022 – 2027, Stellenbosch Municipality intends to focus on critical road infrastructure upgrades from a safety and development perspective. Considering the lagging economic growth in the country, spending on economic infrastructure, specifically towards transport and public works is vital for stimulating economic activity. The road infrastructure plays an important role in unlocking the region's economic potential. Apart from the district municipality expenditure, Stellenbosch Local Municipality would assist with their own contribution of 61.5 million (accounting for 13% of total municipally infrastructure spending) towards road transport. Moreover, the municipality continues to roll out its infrastructure enhancement initiatives such as the Main Road Intersection Improvement Programme, the Traffic Signal Optimisation Programme and implementation of Public Transport Facility Upgrades. According to the

Comprehensive Integrated Transport Plan (CITP), the municipality wishes to maintain and further develop road infrastructure to improve travel by all road users.

4.3.	The Spatial Development Framework of the local municipality.

In terms of the Stellenbosch Spatial Development Plan (2020), 2.5% of the roads in the region are in poor or very poor condition. The current road network, particularly provincial roads fail to cope with the long-term growth needs and some roads especially in the historic town area, may in future operate at capacity during peak periods (unless modal shift changes). The transport planning focus and expenditure remain focused on roads and accommodating private vehicle transport. In addition, government fund allocation to Stellenbosch Municipality in the 2017//2018 financial year was largely focused on road infrastructure maintenance, rehabilitation, expansion and upgrades (R90 million).

Minor focus is given to improving the efficiency of use of existing road space through shifting modes and altering road travel patterns. The proposed development aims to align and extend an existing road (i.e., Wildebosch Road Extension), provide access to the area, ease congestion and change travel patterns, as well as safely accommodate NMT in the form of pedestrians and bicycles.

4.4.	The Environmental Management Framework applicable to the area.

There is no Environmental Management Framework (EMF)applicable to the project area.

5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.

Comments from the relevant authorities will be incorporated into the Final BAR.

6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.

The southern portion of the Wildebosch Road extension is situated in Swartland Granite Renosterveld ecosystem and remaining northern part is situated within the Swartland Shale Renosterveld ecosystem.

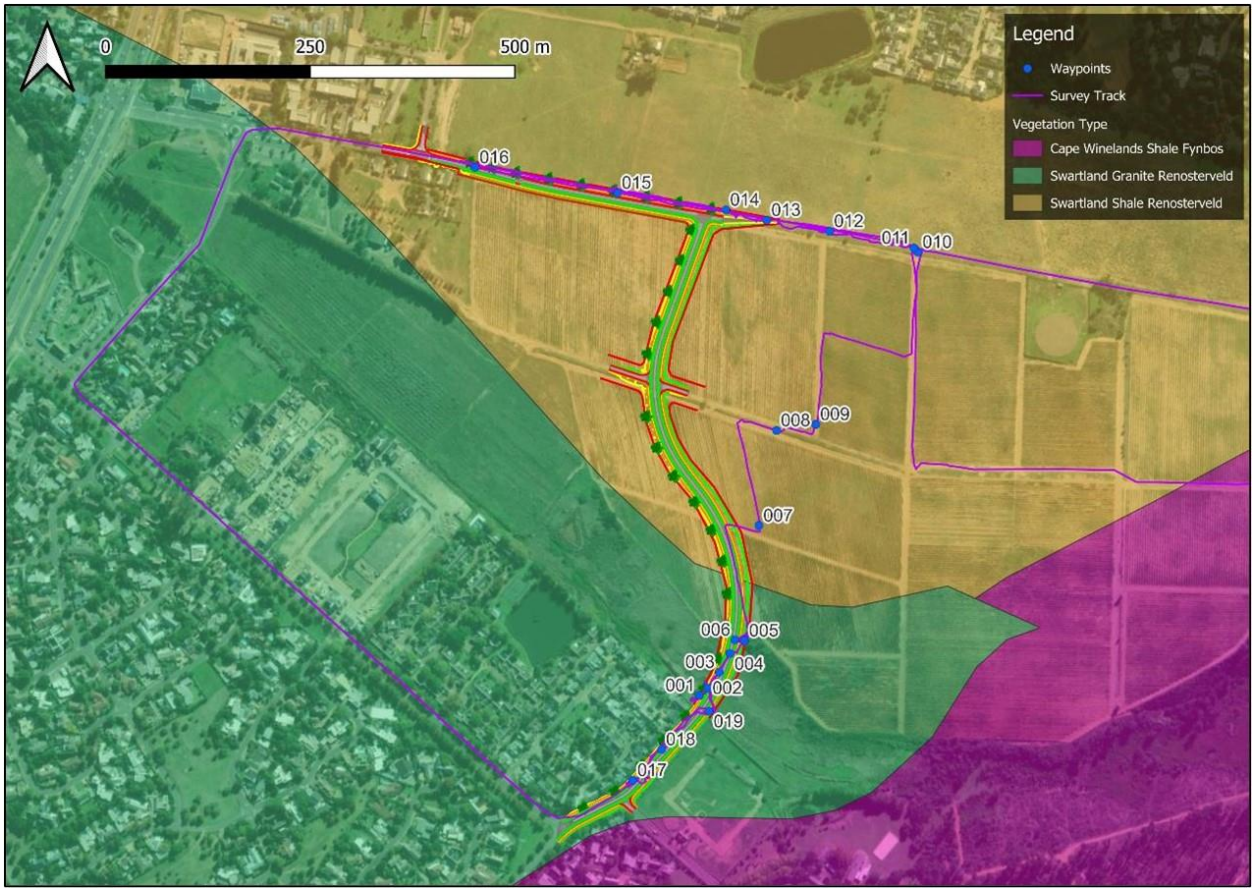

Figure 5: Portion of the Vegetation map of South Africa, Lesotho, and Swaziland (Mucina, Rutherford & Powrie 2006; SANBI, 2018) superimposed on a Google Earth ™ satellite image, showing the dominant vegetation types at the study area: Swartland Shale Renosterveld and Swartland Granite Renosterveld (Source: Bergwind Botanical Surveys & Tours, 2023)

Swartland Shale Renosterveld is characterized by low to moderately high shrubland, dominated by srenosterbos (Dicerothamnus rhinocerotis) and other shrub species such as Searsia angustifolia and Olea europaea subsp. cuspidata. Heuweltjies are a common feature of the landscape and are often associated with patches of thicket.

Swartland Granite Renosterveld is characterized by a mosaic of herbaceous grassland and moderately dense shrublands dominated by Dicerothamnus rhinocerotis. As with Swartland Shale Renosterveld, thicket communities are often associated with heuweltjies.

The botanical specialist used the Cape Nature Western Cape Biodiversity Spatial Plan (WCBSP) 2017 to determine the desktop sensitivities associated with the site (see figures below).

Figure 6: The Critical Biodiversity Map (Cape Nature WCBSP, 2017) for the area of the proposed small roads project, overlaid on an ESRI ™ satellite image (Source: Bergwind Botanical Surveys & Tours, 2023)

In terms of the National Environmental Management Biodiversity Act (NEM:BA) a bioregional plan consists of a map showing Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) for a specific administrative area such as a province or municipality.

Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) from the Cape Nature Western Cape Biodiversity Spatial Plan (2017) were overlaid on a satellite image of the site (Figure 4). Areas designated CBA1 are areas deemed likely to be in natural condition, whereas CBA2 areas are potentially degraded or represent secondary vegetation. Very small areas along Trumali Street have been mapped as CBA 1.

ESAs are areas intended to support the functionality of both Protected Areas and Critical Biodiversity areas. An area designated ESA1 is an area that is likely still functional (near natural or moderately degraded) whereas ESA2 denotes severely degraded areas. According to the Western Cape Biodiversity Spatial Plan, there are several parts of the study area that have been mapped as ESA 2, along the watercourse in the vicinity of Wildebosch Road.

The study area is located within the Cape Winelands Biosphere reserve.

The Red List of Ecosystems (2021) describes the extent of each of the 458 ecosystem types first identified in the National List of Threatened Terrestrial Ecosystems (2011), which was revised in 2021 (SANBI, 2021). A small area of the proposed project site is designated as an Endangered ecosystem type, a remnant of Swartland Granite Renosterveld, located in the southern portion of the site. Note that this area also corresponds to the location of a population of Wachendorfia brachyandra, a species of conservation concern.

Figure 7: The Red List of Ecosystems (2021) map overlaid on an ESRI ™ Satellite image of the proposed maintenance sites. Orange areas indicate habitat classified as Endangered (Source: Bergwind Botanical Surveys & Tours, 2023)

One plant species of conservation concern, Wachendorfia brachyandra, was recorded in a vlei at waypoints STLN 002 and STLN 003 (Figure 11) W. brachyandra is listed as Vulnerable due to habitat loss as a result of urban expansion; at least 40% of known locations have gone extinct since 1940.

Figure 8:Location of Wachendorfia brachyandra population (Purple), overlaid on an ESRI ™ satellite image (Source: Bergwind Botanical Surveys & Tours, 2023)

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
Not Applicable.	
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
The initial screening report that was submitted with the NOI is attached as Appendix I.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
The extension of Wildebosch commences at Paradyskloof road where a small portion of road reserve exists (erf RE/16527), and this portion of the site appears to be vacant and falls within the urban edge.	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
• Accommodation of existing utility services has been incorporated into the design as far as possible. • The existing 450 mm dia. bulk water main running parallel to the existing Trumali Street will require updating to Class 16 HDPE pipe material and protection. • Existing informal drainage systems will be incorporated into the design as far as possible.	
11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
Stellenbosch Municipality has confirmed that there is available space to dispose of construction waste in the municipal landfill. Water: The development will use water from existing boreholes or nearby farm dams and the contractor would have to make agreements with landowners. Municipal water could also be sourced, and this will be determined by the contractor.	
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.
The Need and Desirability Report can be found in Appendix K.	

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

The PPP followed for the project is as per the NEMA regulations and the approved PPP included in Annexure F.

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

The PPP was undertaken as per the Application form and as per the approved PP Plan (Annexure F). This Draft Basic Assessment Report (DBAR) is released for public participation. Interested & Affected Parties will be notified of the release of the report as well as the Basic Assessment process and will be given the opportunity to comment on the DBAR. Comments received from the DBAR will be addressed and included into the Final BAR. The Comments and Response Report (CRR) would be attached under Appendix E of the Final BAR.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

• Stellenbosch Municipality: Directorate: Infrastructure Services: engineering.services@stellenbosch.gov.za • Western Cape Government, Department of Environmental Affairs and Development Planning: DEADPEIAadmin@westerncape.gov.za (Case Officer to be Added) • Western Cape Government: Department of Infrastructure: Directorate Road Planning, Roads Branch: Schalk.Carstens@westerncape.gov.za • Stellenbosch Municipal Councillor: Mynard Slabbert – Ward 21 – Cellphone: 063 666 6772 • Cape Nature: Ismat Adams: iadams@capenature.co.za • Heritage Western Cape (HWC): hwc.hwc@westerncape.gov.za • National Department of Water and Sanitation • Western Cape Government, Department of Infrastructure • Western Cape Government, Department of Agriculture

- Western Cape Government, Department of Health
- Cape Winelands District Municipality
- Breede-Gouritz Catchment Management Agency

Refer to Appendix F2 for the I&APs Register.

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

Not applicable

5. if any of the State Departments and Organs of State did not respond, indicate which.

Not applicable

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

This Draft Basic Assessment Report (DBAR) is released for public participation. Interested & Affected Parties will be notified of the release of the report as well as the Basic Assessment process and will be given the opportunity to comment on the DBAR. Comments received from the DBAR will be addressed and included into the Final BAR. The Comments and Response Report (CRR) would be attached under Appendix E of the Final BAR.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	YES	**NO**
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			

1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.
N/A	
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.
N/A	

2. Surface water

2.1.	Was a specialist study conducted?	**YES**	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
The Freshwater Aquatic Assessment was conducted by Cole Grainger from Freshwater Ecological Network (FEN) Consulting (Pty) Ltd, a member of the SAS Environmental Group of Companies.			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

Based on the Freshwater Ecological Assessment, an unchanneled valley bottom wetland (UCVBW) was identified during the site visit in October 2023. The new road extension will traverse this UCVBW.

It is proposed that the Wildebosch extension will cross the wetland (as reflected in figure 10) and this wetland encroachment cannot be avoided since there are no alternative sites for the development. The road designs (including the installation of a culvert) have considered this wetland crossing. The Freshwater Aquatic Specialist recommended that construction must take place during the summer dry season, preserving the flow between the upstream and downstream areas during construction, and designing the road culverts in such a manner that the hydrology of this wetland is not altered during the operation phase.

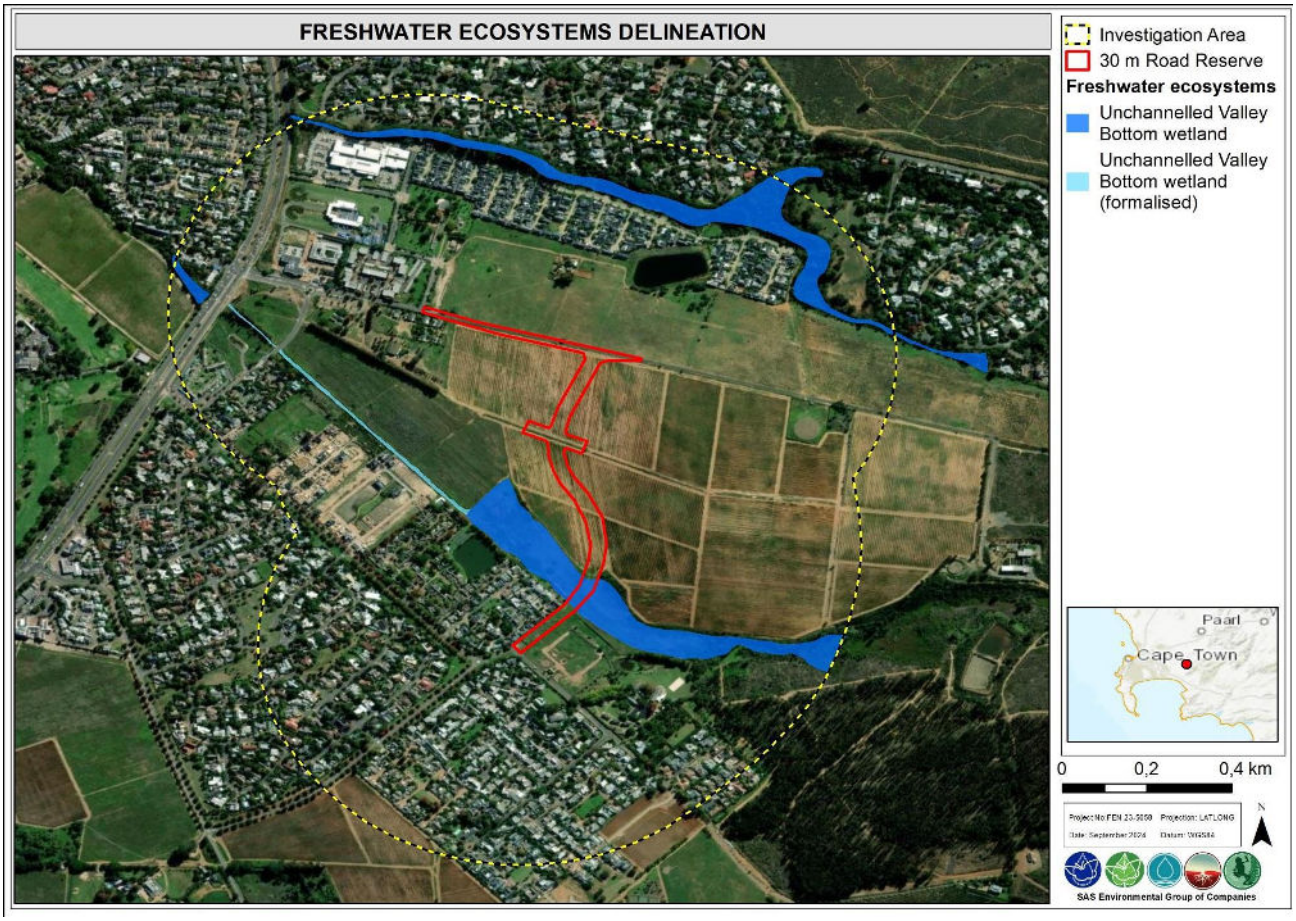

Figure 9: Freshwater ecosystem delineation in relation to the proposed road extension area, investigation area and surrounds (Source: FEN Consulting, 2023)

The zones of regulation (ZoR) shown in Figure 11 apply to the identified freshwater ecosystems that are associated with the proposed development within the investigation area:

- A 32 m ZoR in accordance with NEMA was applied all UCVBWs falling within the investigation areas; and
- A 500 m ZoR in accordance with the NWA in terms of GN 509 was applied to these UCVBWs

The above ZoR are illustrated below in Figure 10 below.

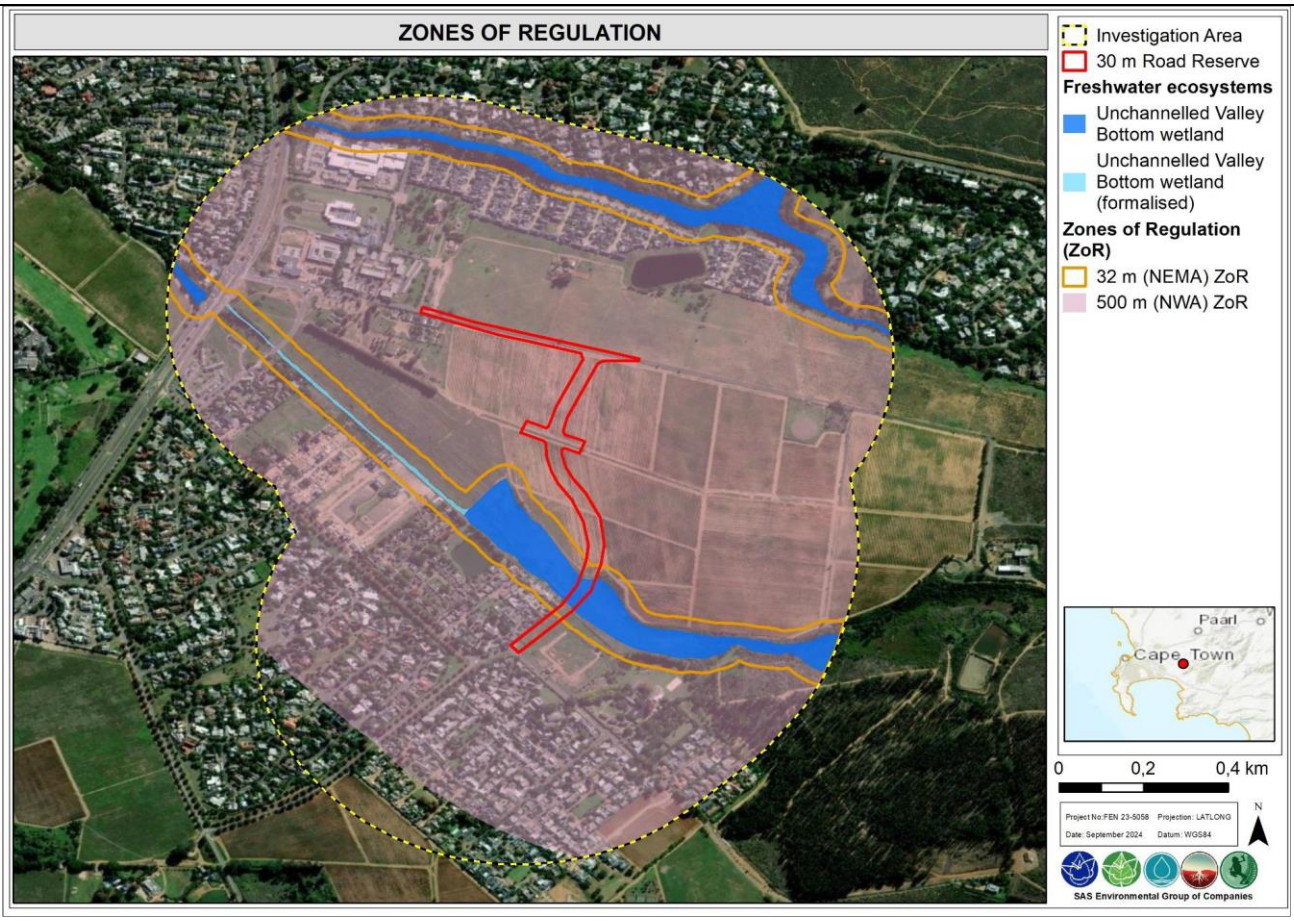

Figure 10: Freshwater ecosystem delineation associated with the proposed road extension and investigation area and applicable zones of regulation in terms of NEMA and GN509 as it relates to the NWA (Source: FEN Consulting, 2023)

According to the freshwater ecological risk assessment results, the DWS Risk Assessment Matrix determined several moderate risks that are associated with the proposed road extension, most of which were assigned to activities during the construction phase. The moderate risks stem from direct impacts within the wetland for which the maximum severity score (5) must be assigned, as per GN509. These activities include dewatering of a portion of the wetland in the vicinity of the proposed road extension area, the construction of the foundation of the road and installation of the pipe culverts.

The determined moderate risk scores are above the threshold value (80), and therefore could not be manually down adjusted to realise a low-risk significance score (55), considering that GN509 allows for a maximum down adjustment of 25 points. Therefore, as per GN509, the proponent must follow the Water Use Licence Application protocol.

Development within the 32 m buffer of a wetland must be authorised in terms of NEMA EIA Regulations, 2014.

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	**NO**
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
N/A			
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
N/A			
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
N/A			

4. Biodiversity

4.1.	Were specialist studies conducted?	YES	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
David J. McDonald & Adam Labuschagne from Bergwind Botanical Surveys & Tours CC conducted the Botanical Assessment for the project in October 2023.			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		
The following systemic conservation planning and biodiversity tools were utilised: • SANBI Vegetation Maps 2018; • Terrestrial ecosystem threat status assessment 2018; • Terrestrial Ecosystem Threat Status 2011; • National Freshwater Ecosystem Priority Areas (NFEPA); and • Western Cape Biodiversity Spatial Plan (WCBSP, 2017.			
4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.		

The WCBSP's specific objectives are to:

- *Serve as the primary source of biodiversity information for all land use planning and decision-making in the Western Cape, to be used in conjunction with information from other sectors.*
  The WCBSP was used by the EAP and the specialists in considering the biodiversity information applicable to the project footprint.

- *Ensure that the Western Cape's ecological infrastructure is maintained, ecosystem fragmentation and loss is avoided, and the resilience of ecosystems and human communities to the impacts of climate change is strengthened.*
  The preferred alternative has been identified as the best option since Wildebosch extension alignment must follow the proclaimed alignment as best fit to alleviate additional future intersection and tie-in costs.

- *Provide a spatial framework for environmentally sustainable development and resource use.*
  The WCBSP was used to consider the development within the geographic area.

- *Inform municipalities and other land use planners and regulators about spatial biodiversity priorities in order to promote the wise management of biodiversity, and to streamline and monitor land use decision-making.*
  The municipality has incorporated the WCBSP spatial data into their SDF.

- *Focus on-the-ground conservation and restoration action in biodiversity priority areas, thus supporting CapeNature in implementing its biodiversity mandate, including working with landowners to consolidate and expand the provincial protected area network.*
  The co-operation with landowners is critical, and the applicant is committed to ensuring that the properties retain its importance in conservation.

- *Mainstream biodiversity conservation into the daily activities of a range of development and production sectors whose primary business is not biodiversity conservation, thus promoting greater synergy between biodiversity conservation and development through implementation of the WCBSP.*

Refer to the summary below.

The most recent treatment of the ecosystem status for the Western Cape Province was published by Pence (2017) and Pool-Stanvliet et al. (2017) as the Western Cape Biodiversity Spatial Plan. The Biodiversity Spatial Plans guide planning and development in given areas to ensure that the natural biodiversity has its rightful place in sustainable development.

In terms of the National Environmental Management Biodiversity Act (NEM:BA) a bioregional plan consists of a map showing Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) for a specific administrative area such as a province or municipality.

Figure 11:The Critical Biodiversity Map (Cape Nature WCBSP, 2017) for the area of the proposed small roads project, overlaid on an ESRI ™ satellite image (Source: Bergwind Botanical Surveys & Tours, 2023)

Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) from the Cape Nature Western Cape Biodiversity Spatial Plan (2017) were overlaid on a satellite image of the site. Areas designated CBA1 are areas deemed likely to be in natural condition, whereas CBA2 areas are potentially degraded or represent secondary vegetation. Very small areas along Trumali Street have been mapped as CBA 1. ESAs are areas intended to support the functionality of both Protected Areas and Critical Biodiversity areas. An area designated ESA1 is an area that is likely still functional (near natural or moderately degraded) whereas ESA2 denotes severely degraded areas. According to the Western Cape Biodiversity Spatial Plan, there are several parts of the study area that have been mapped as ESA 2, along the watercourse (i.e. UCVBW) in the vicinity of Wildebosch Road.	
4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.
Very small areas along Trumali Street have been mapped as CBA 1, and there are several parts of the study area that have been mapped as ESA 2, along the watercourse (i.e. UCVBW) in the vicinity of Wildebosch Road. The vegetation across most of the proposed site is classified as Swartland Shale Renosterveld on the north, with Swartland Granite Renosterveld in the southern portion of the site. The outcome of the assessment has determined that large portions of the sites investigated have undergone significant transformation and disturbance, preserving little to no original vegetation. One species of conservation concern, Wachendorfia brachyandra, was documented in a wetland habitat. If the recommended mitigation measures are implemented, it is estimated that the proposed project should result in a Low Negative impact and the implementation of the upgrade of Trumali Street and extension of Wildebosch Road on condition that the recommended mitigation measures are applied.	
4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.
Not applicable.	
4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.
The majority of the project site (specifically the Wildebosch Road extension) is situated within a transformed area which is currently used for agricultural activities (vineyard land). The initial Trumali Street construction and surrounding urban developments have progressively transformed and disturbed the area. It is unlikely that the presence of fauna species or pristine habitat will be noted on site since the area is already transformed.	

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
A large portion of the site falls within a high potential vineyard land, and the agricultural assessment for the project concluded that this piece of land will be impacted by the Wildebosch road extension. However, the road extension will be localised and only limited to the development footprint. It is recommend that the construction footprint must be kept as small as possible.

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	NO
6.2.	Provide the name and/or company who conducted the specialist study.		
Not applicable			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
Not applicable			

Note from Zutari: The Notice of Intent to Develop (NID) was submitted to the Heritage Western Cape on 08 August 2023. The Heritage Officers discussed the matter during the meeting held on 12 February 2024. Heritage Western Cape concluded that there is no reason to believe that the proposed extension of Wildebosch Road from Paradyskloof Road to Trumali Road, as well as upgrading Trumali Road on Remainder of Erf 16527 and Remainder of Farm 369, Trumali and Paradyskloof Road, Stellenbosch, will impact on heritage resources. No further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.

However, 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.

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
Not applicable

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.

Based on the Wildebosch Road Extension Socio-Economic Site Sensitivity undertaken by Urban-Econ Development Economists during November 2023, the project is located within the Primary Study Area – Brandwacht and Paradyskloof (PSA) which has a population of approximately 2,265 residents and 813 households, with each study area experiencing a respective population growth of 1.7% Primary Study Area (PSA), 1.7% Secondary Study Area (SSA), and 1.9% Tertiary Study Area (TSA). The respective growth rates indicate that the study areas experience year-on-year growth which in turn results in an increase in road users resulting in traffic pressures. The proposed extension will accommodate a growing population by providing a supplement road to the R44 thus improving local and regional access.

The potentially economically active population is 68.9 percent which is slightly lower than the SSA (72.2 percent) and higher than the TSA - Cape Winelands District Municipality (69.5 percent). This portion of the population consists of people between the ages of 15 and 64 years. The potentially economically active population indicates that an above-average labour force exists which could indicate a large demand for jobs. The remainder of the population within the PSA, SSA, and the TSA, comprises children (19.7 percent, 21.7 percent, and 24.2 percent, respectively) and people older than 65 (11.4 percent, 6.1 percent, and 6.3 percent, respectively); thus, there is thus a larger dependency ratio.

In terms of the level of education the PSA has a population with a predominantly higher level of education (71.7 percent) which is followed by grade 12 (20.9 percent). Within the SSA and the TSA the majority of the population have some high school (26.8 percent and 27.7 percent, respectively) which is followed grade 12 (20.9 percent and 19.5 percent, respectively).

It is estimated that the majority of the population within PSA are high-income earners (49.5 percent) which is followed by middle-income earners (36.4percent) and low-income earners (14.2 percent). When compared to the broader area, the SSA is predominantly low-income earners (53.1 percent) followed by medium-income earners (35.6 percent); the TSA is predominantly low-income earners (51.9 percent) which is followed by middle income earners (39.4 percent).

Economically, the average GVA growth for SSA and the TSA between 2012 and 2022 was 1.1 percent and 1.7 percent respectively. The historical trends indicate a positive economic growth between 2011 and 2016. However, a sharp decline in economic growth between 2017 and 2019 was experienced with factors that may have contributed to the decline in economic performance being attributed to load shedding and the drought within the Western Cape. In 2019, the overall economy experienced a shrink as a result of the COVID-19 pandemic which negatively impacted economic activity. In 2021, the economy continued to recover much to the ease of the COVID-19 lockdown and restrictions.

8.2.	Explain the socio-economic value/contribution of the proposed development.

The Wildebosch Road to Trumali Street extension would assist in providing improved and eased accessibility to the growing area (i.e., proposed, and planned developments) as well as assist in job creation, skills development, higher levels of mobility, and improved road infrastructure in terms of traffic alleviation and route optimization.

The proposed extension will create employment opportunities (although not in significant numbers))during the construction and operation. While the level of unemployment is low in the PSA, the construction of the proposed extension will result in job creation that could benefit either the PSA or the broader municipal area (SSA). During the construction phase, this would occur through direct job creation opportunities related to the construction of the roads and indirectly through expenditure on sectors supplying goods and services. While during the operational phase this would result due to operational expenditure on the ongoing maintenance work post-construction.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.

The development itself aims to improve one of the economic infrastructures in the Stellenbosch South area, being the extension of Wildebosch Road and upgrading Trumali Street. This will unlock accessibility and allow economic activities to impact a wider area, including PSA, SSA and TSA.

8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.

Based on the socio-economic site sensitivity report, the extension of the proposed Wildebosch Road to Trumali may be considered beneficial to the area in terms of an increase in accessibility and transport mechanisms, job creation, and household income.

The local as well as broader provincial municipality will likely experience a positive injection resulting from the Gross Domestic Product (GDP) and production generated due to the capital and operational spend. However, taking into account the proximity of the proposed Wildebosch Road extension to form land and residential area, consideration must be given on whether these areas will be negatively impacted in terms of sense of place and property values.

Furthermore, the proposed Wildebosch Road to Trumali Street extension will traverse Erf RE/369 which is utilised for agricultural purposes; thus, it must be understood how the loss of agricultural land would impact the landowner.

Regarding socio-economic implications, the screening assessment indicates no major concerns, except for potential negative influences that may result, i.e., sense of place, property values, and agricultural/ land uses, which would require further investigation.

Noise during construction – this will be mitigated by managing construction work hours and health and safety on the construction area.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred property and site alternative.

The Wildebosch Road extension forms part of the Provincial Proclaimed Main Road 169. The extension of Wildebosch Road commences at Paradyskloof Road where a small portion of road reserve exists (Erf RE/16527) and traverses the farmland (RE Farm 369) in a north-easterly direction to meet the existing Trumali Street, currently a surfaced narrow access road for the Paradyskloof Water Treatment Works.

The project intents to provide an alternative road alignment to the recently constructed Schuilplaats Road which aligns to the Western Cape Government (WCG) R44 Access Management contract where closure of several intersections onto the R44 have been and will be implemented. A further benefit of the construction of the Wildebosch extension is that it creates more access opportunities to the R44 for the Paradyskloof area.

The road upgrades currently affect the following properties:

- Erf RE/16527 has been zoned as public road where provision has been made for a road reserve width of approximately 25m.
- As RE Farm 369 is currently used for agricultural farming purposes, there is no existing road reserve forming part of the Wildebosch extension.
- Trumali Street to the east of Ben du Toit Road that provides thoroughfare to the Paradyskloof Water Treatment Works over RE Farm 369
- RE of Farm Brandwacht 1049 is owned by a developer who would like to develop the land as it is currently unutilized.

Due to the nature of the project some impacts are unavoidable due to the Wildebosch Road and Trumali Street being in existence and considering the proposed wetland crossing on RE Farm 369. Positive impacts are therefore best maximised through proper implementation of the Environmental Management Programme (EMPr) and specialist recommendations and potential negative impacts will also be minimised and mitigated though implementation of the EMPr.

Provide a description of any other property and site alternatives investigated.

No alternative route, property or site alternatives are proposed as the project relates to the already existing Proclaimed Alignment for MR0169. The project is design to follow this alignment.

However, several alignment and tie-in options were investigated with the intersections and accesses in an attempt to explore the impacts on land and the contained infrastructure as well as intersection control and form.

Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.

No alternative route, property or site alternatives are proposed as the project relates to the already existing Proclaimed Alignment for MR0169.

The Western Cape Government proclamation of MR0169, dated in 1968, provides an indicative horizontal alignment of the route from the R44 in the south in a north-easterly direction to the DF Malan Amphitheatre for approximately 4.8km (3.0 miles as specified in the proclamation)

To investigate options, evaluate and design an appropriate road alignments, cross sections and access management strategies, including intersection forms and control, for the road proposals the following was considered:

- Facilities will cater for projected traffic volumes for all transport modes (including NMT) and continue to meet their functional requirements in their design year;
- Selected alignments are feasible in terms of financial, environmental and technical constraints and that the appropriate geometric, access and safety standards are adopted; and
- Preferred options consider regional and local planning/ land-use objectives and to ensure a high degree of mutually compatibility between transportation and land-use objectives;

The results of the evaluation process included the following:

- Wildebosch extension alignment has been designed to follow the proclaimed alignment as best fit to alleviate additional future intersection and tie-in costs.
- To limit the construction costs, the road cross section and implementation strategy is such that only a single sidewalk is implemented as part of this project.
- The Trumali Street design will be an upgrade of the current road to tie-in with the Wildebosch extension. The road will be designed considering all constraints as it must tie-in in with Wildebosch interim design and the existing Ben du Toit intersection, which will be upgraded as well.
- The upgrade of Trumali Street only allows for the road to be upgraded, with the cross section expanding towards Grondves Farm, alleviating acquisition on Brandwacht Farm.
- As the design philosophy is to minimise impact on the natural environment there are limited options to be explored to bring this grade to a lower grade, geometrically. As such it proposed that the upgrade of Trumali Street will closely match the existing horizontal and vertical alignment.

- As the existing soil conditions are a resemblance of the land use for the area (agricultural use), the pavement structure has been designed to withstand clay-like conditions so that the road can reach its lifespan.

The construction cost estimate is in the order of R30.2m to R31.6m (excluding VAT, contingencies and any land acquisition costs) for asphalt and brick paved sidewalk, respectively.

Provide a full description of the process followed to reach the preferred alternative within the site.

See above.

Provide a detailed motivation if no property and site alternatives were considered.

No alternative route, property or site alternatives are proposed as the project relates to the already existing Proclaimed Alignment for MR0169.

The Western Cape Government proclamation of MR0169, dated in 1968, provides an indicative horizontal alignment of the route from the R44 in the south in a north-easterly direction to the DF Malan Amphitheatre for approximately 4.8 km (3.0 miles as specified in the proclamation).

Wildebosch extension alignment has been designed to follow the proclaimed alignment as best fit to alleviate additional future intersection and tie-in costs.

List the positive and negative impacts that the property and site alternatives will have on the environment.

Not applicable

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

Wildebosch Road extension:

The proposed horizontal alignment consists of curve radii ranging from 180 m to 220 m starting at the intersection with Paradyskloof Road and proceeding northward towards Trumali Street.

According to the Roads Master Plan, the proposed Wildebosch extension should contain a surfaced 4.0 m wide in each direction between kerbs with a separated 3.0 m wide NMT facility.

Side slopes and drainage elements should be implemented as best suited for the terrain.

Trumali Street:

The Trumali Street design will be an upgrade of the current road to tie-in with the Wildebosch extension. The road will be designed considering all constraints as it must tie-in in with Wildebosch interim design and the existing Ben du Toit intersection, which will be upgraded as well.

The proposed horizontal alignment consists of one curve radius starting at the intersection with Ben du Toit Road and proceeding eastward towards Wildebosch Road extension.

The existing vertical grade of Trumali Street from Ben du Toit Road to the proposed intersection with the Wildebosch extension is in the order of 10.0%. As the design philosophy is to minimise impact on the natural environment there are limited options to be explored to bring this grade to a lower grade, geometrically. As such it proposed that the upgrade of Trumali Street will closely match the existing horizontal and vertical alignment.

Utility Services:

Numerous utility services existing in the project area, and confirmation with property owners was established to ensure that the protection and/or relocation of existing utilities is in line with future planning.

Accommodation of existing utility services has been incorporated into the design as far as possible.

The existing 450 mm dia. bulk water main running parallel to the existing Trumali Street will require upgrading to Class 16 HDPE pipe material and protection.

Streetlighting is proposed along the length of both roads.

Drainage:

The drainage philosophy will be to contain the water within a closed stormwater system, while intercepting overland run-off by means of a concrete lined side drain.

Existing informal drainage systems will be incorporated into the design as far as possible.

Provide a description of any other activity alternatives investigated.

Wildebosch Road extension:

The proposed horizontal alignment consists of curve radii ranging from 180 m to 220 m starting at the intersection with Paradyskloof Road and proceeding northward towards Trumali Street.

According to the Roads Master Plan, the proposed Wildebosch extension should contain a surfaced 4.0 m wide in each direction between kerbs with a separated 3.0 m wide NMT facility.

Side slopes and drainage elements should be implemented as best suited for the terrain.

Trumali Street:

The Trumali Street design will be an upgrade of the current road to tie-in with the Wildebosch extension. The road will be designed considering all constraints as it must tie-in in with Wildebosch interim design and the existing Ben du Toit intersection, which will be upgraded as well.

The proposed horizontal alignment consists of one curve radius starting at the intersection with Ben du Toit Road and proceeding eastward towards Wildebosch Road extension.

The existing vertical grade of Trumali Street from Ben du Toit Road to the proposed intersection with the Wildebosch extension is in the order of 10.0%. As the design philosophy is to minimise impact on the natural environment there are limited options to be explored to bring this grade to a lower grade, geometrically. As such it proposed that the upgrade of Trumali Street will closely match the existing horizontal and vertical alignment.

Utility Services:

Numerous utility services existing in the project area, and confirmation with property owners was established to ensure that the protection and/or relocation of existing utilities is in line with future planning.

Accommodation of existing utility services has been incorporated into the design as far as possible.

The existing 450 mm dia. bulk water main running parallel to the existing Trumali Street will require upgrading to Class 16 HDPE pipe material and protection.

Streetlighting is proposed along the length of both roads.

Drainage:

The drainage philosophy will be to contain the water within a closed stormwater system, while intercepting overland run-off by means of a concrete lined side drain.

Existing informal drainage systems will be incorporated into the design as far as possible.

Provide a motivation for the preferred activity alternative.

No other activity alternatives were investigated.

Provide a detailed motivation if no activity alternatives exist.

With recent upgrades done to Schuilplaats Road, the Municipality has decided to implement Wildebosch Road extension between Paradyskloof Road and Trumali Street, and upgrade Trumali Street to assist with network distribution within the Paradyskloof area to the R44.

The Wildebosch Road extension is designed in relation to the proclaimed alignment and the Trumali upgrade ties into the extension.

List the positive and negative impacts that the activity alternatives will have on the environment.

No other activity alternatives were investigated.

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Provide a description of the preferred design or layout alternative.

Wildebosch Road Extension preferred cross-section:

The proposed horizontal alignment consists of curve radii ranging from 180 m to 220 m starting at the intersection with Paradyskloof Road and proceeding northward towards Trumali Street.

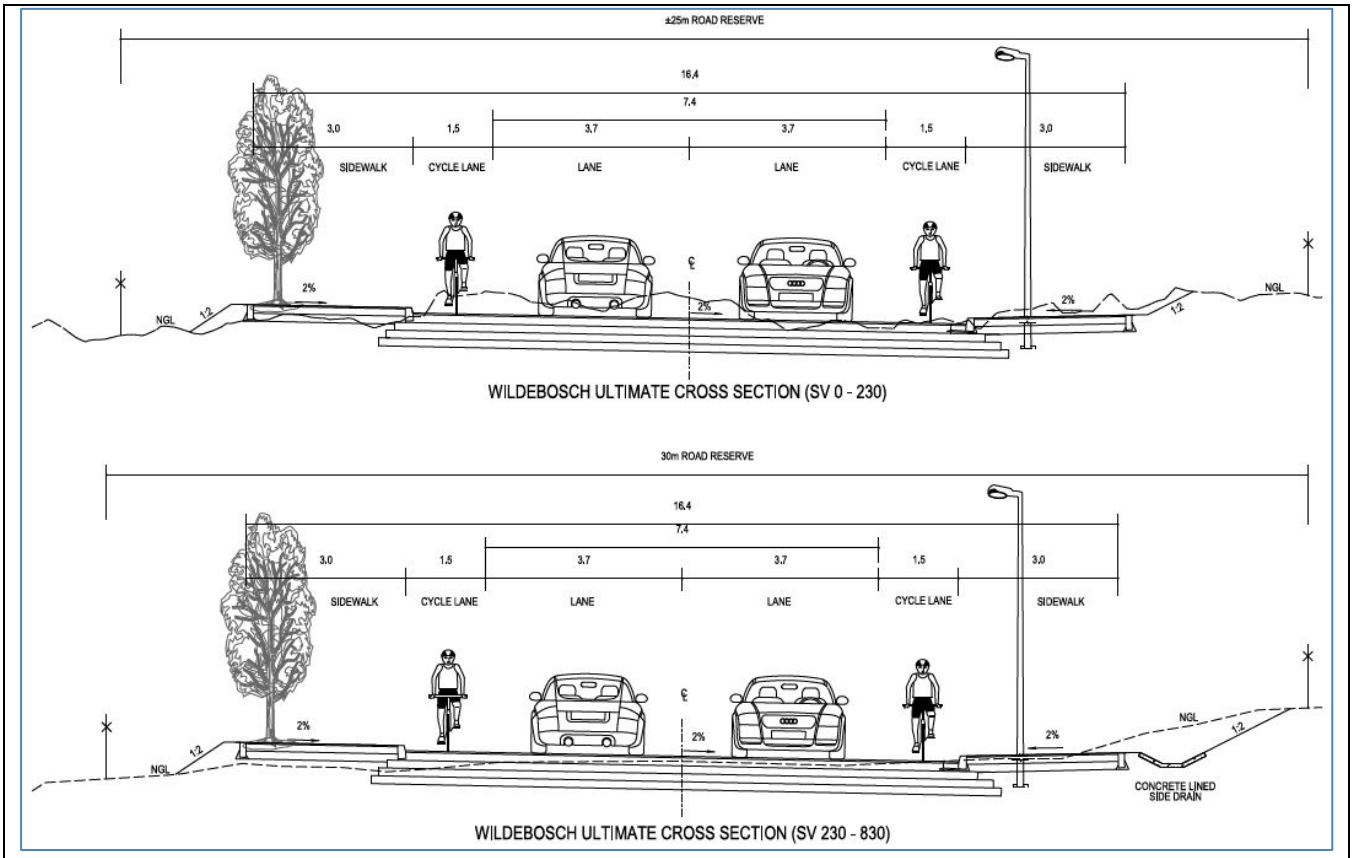

Figure 12: Ultimate Cross Section: SV 0 – 230

Wildebosch extension should contain a surfaced 4.0 m wide in each direction between kerbs with a separated 3.0 m wide NMT facility.

Trumali Street: preferred option

The existing vertical grade of Trumali Street from Ben du Toit Road to the proposed intersection with the Wildebosch extension is in the order of 10.0 %. As the design philosophy is to minimise impact on the natural environment there are limited options to be explored to bring this grade to a lower grade, geometrically. As such it proposed that the upgrade of Trumali Street will closely match the existing horizontal and vertical alignment.

The figure below illustrates the proposed Trumali Street ultimate road cross section option.

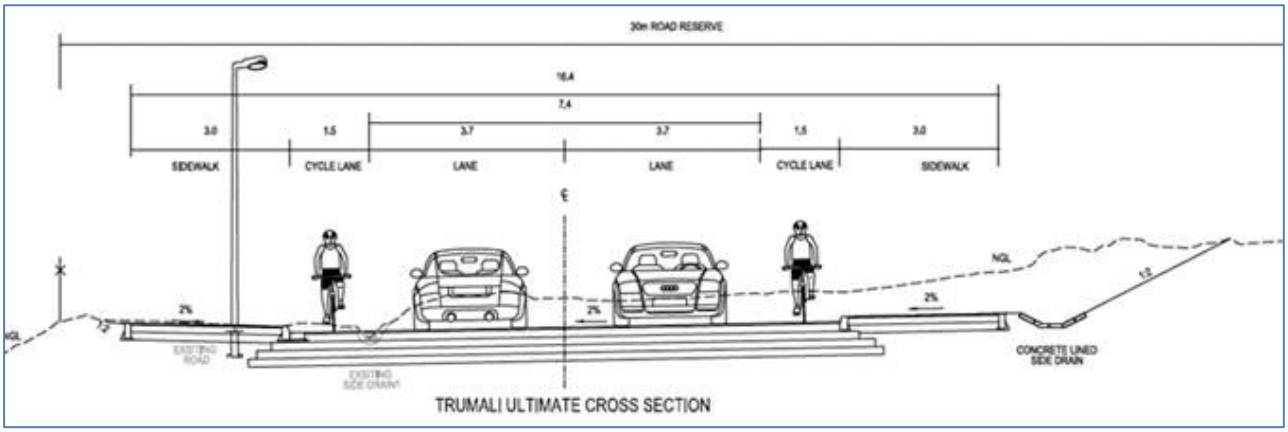

Figure 13: Trumali ultimate cross section

Provide a description of any other design or layout alternatives investigated.

Trumali Street: alternative cross section option 1:

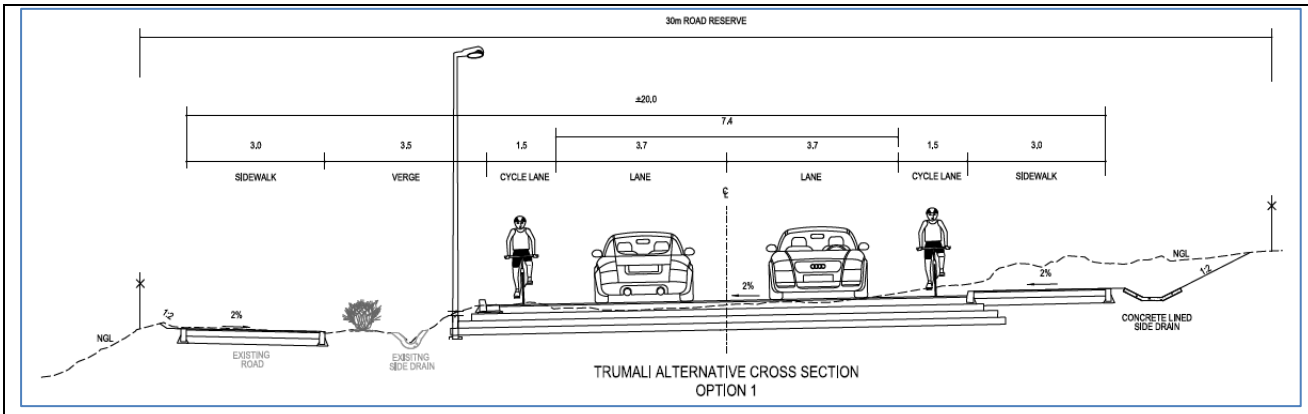

Figure 14: Trumali Alternative Cross Section – Option 1

Trumali Street: alternative cross section option 2:

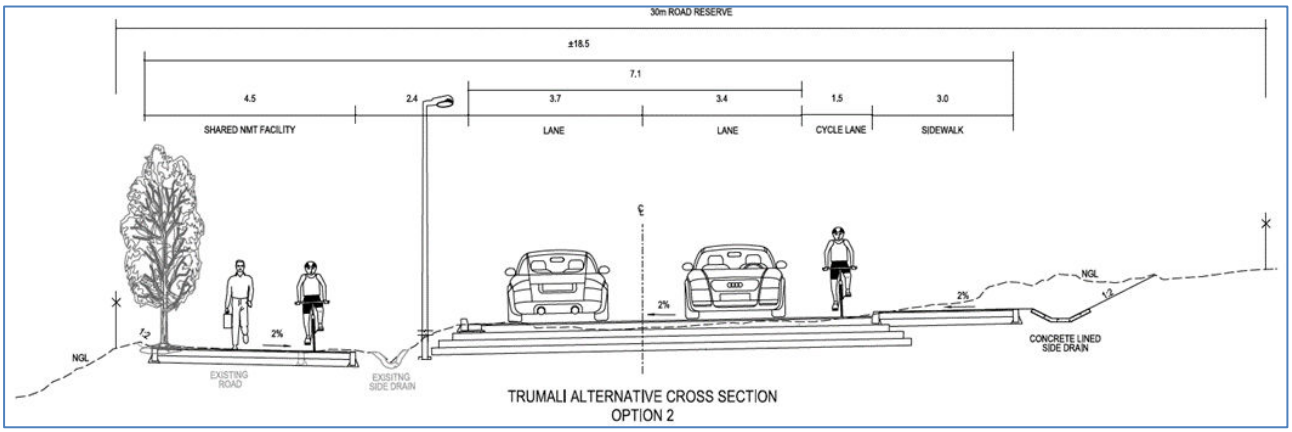

Figure 15: Trumali Alternative Cross Section – Option 2

The upgrade of Trumali Street only allows for the road to be upgraded, with the cross section expanding towards Grondves Farm, alleviating acquisition on Brandwacht Farm.

Provide a motivation for the preferred design or layout alternative.
The construction cost estimate is in the order of R30.2m to R31.6m (excluding VAT, contingencies and any land acquisition costs) for asphalt and brick paved sidewalk, respectively. Given the minor difference in costs between an interim cross section where only a single sidewalk would be constructed, and ultimate road cross section where sidewalks on both sides of the road will be constructed, it is proposed that the ultimate road cross sections are implemented with a fine asphalt sidewalk. Option 2 for Trumali Road cross section is the preferred option as it creates a buffer between existing private farms and also introduces a 10.0 m wide green space between the neighbouring boundary and road to be used for tree planting, stormwater and NMT.
Provide a detailed motivation if no design or layout alternatives exist.
Not Applicable
List the positive and negative impacts that the design alternatives will have on the environment.
Preferred alternative Positive: • The surrounding communities are farms. • Upgrade of the Trumali Street will affect all the road users in a positive way; • The alignment is optimised to have the least effect on the existing constraints along the road; • Safer travel. • Reduction of traffic from existing build up neighbourhood of Paradyskloof. • Reduced travel times with improved transport efficiency. • More consistent and reliable travel. • Improved amenity for local communities and NMT network. • Considered beneficial to the area in terms of, job creation (especially during construction, however, job creation will not be significant in numbers), and household income. • The extension serves a long-term vision of not only providing access for the property owners in its immediate vicinity, but also areas further away which will eventually be linked to the road. • Has an incremental (i.e., not significant) improvement on the traffic performance in the area.

- The proposed road link does not have any negative impact on the traffic conditions in the area.

Negative:

- Disruption of traffic during construction phase, however considered to be a very low impact.
- Botanical impacts which will be mitigated.
- Freshwater impacts which will be mitigated.
- Loss of agricultural land (extension of the Wildeboch Road).
- Impacts in terms of sense of place and property values (extension of the Wildeboch Road).
- Noise during construction which will be mitigated.

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

Due to the nature of the project, a preferred technology was not investigated. The project itself does not utilise technology.

There is little new technology that can be employed for this project.

Provide a description of any other technology alternatives investigated.

No technology alternatives were investigated.

Provide a motivation for the preferred technology alternative.

Due to the nature of the project, a preferred technology was not investigated. The project itself does not utilise technology.

Provide a detailed motivation if no alternatives exist.

Due to the nature of the project, a preferred technology was not investigated. The project itself does not utilise technology.

List the positive and negative impacts that the technology alternatives will have on the environment.

Not applicable

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

No operational alternatives are being considered as there are no road closures anticipated during construction.

Provide a description of any other operational alternatives investigated.

Not applicable

Provide a motivation for the preferred operational alternative.

Not applicable

Provide a detailed motivation if no alternatives exist.

Not applicable

List the positive and negative impacts that the operational alternatives will have on the environment.

Not applicable

1.6.	The option of not implementing the activity (the 'No-Go' Option).

Provide an explanation as to why the 'No-Go' Option is not preferred.

Should the NO-GO alternative be pursued, there will be no alternative road alignment to the recently constructed Schuilplaats Road and provide access to the area. The closure of several intersections onto the R44 have been and will be implemented whether the proposed Wildebosch road extension is authorised or not.

As the Wildebosch extension forms part of the Provincial Proclaimed Main Road 169, if the no-go option is chosen this part of the alignment will not be constructed, therefore, the proclaimed alignment will not be fully executed.

In addition, the opportunity to utilise and upgrade Trumali Street and the extended Wildebosch Road will be lost. The benefits associated with the alternative alignment will not materialise. Stellenbosch residents and commercial users, and the larger Stellenbosch region will not benefit from the alternative route that would ease traffic congestion and provide an alternative travel pattern. The benefits of further creating indirect and direct development opportunities to the neighbouring land parcels will be lost.

The opportunity for the proposed road extension to play an important role as a non-motorised transport (NMT) and public transport route and provide suburbs such as Paradyskloof and Brandwacht with easy access to the CBD will be lost.

From a plant and terrestrial biodiversity perspective, the NO-GO alternative would mean the construction of the of the road will not be undertaken on site, and the current vegetation would persist. Whereas there is a high degree of transformation and disturbance across the site, the persistence of Wachendorfia brachyandra (classified as Vulnerable) at the site means that the 'No Go' alternative could result in a Low positive impact.

Overall, the environmental impacts associated with the proposed development are considered to have a "moderate to low" risk significance, with mitigations, of an acceptable level the risk significance can be reduced and adequately managed with the implementation of effective mitigation methods. The mitigation measures are presented in the EMPr and the specialists reports. It is strongly recommended that throughout the project the positive impacts must be optimised where practical.

The EMPr can be found in Appendix F, and specialists reports in Appendix D.

1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.

In the case of the "No Go" alternative where there would be no change to the *status quo – the* Wildebosch Road would not be extended, and Trumali Street would not be upgraded. These roads would remain unchanged for the foreseeable future. This would result in positive impacts being lost as discussed in the NO-GO option above.

As discussed above, no alternative route, property or site alternatives are proposed as the project relates to the already existing Proclaimed Alignment for MR0169.

The Western Cape Government proclamation of MR0169, dated in 1968, provides an indicative horizontal alignment of the route from the R44 in the south in a north-easterly direction to the DF Malan Amphitheatre for approximately 4.8km (3.0 miles as specified in the proclamation).

1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.

As indicacted above, the Wildebosch extension has been designed to follow the proclaimed alignment.

As such, the following properties will be affected by the extension:

- Erf RE/16527 has been zoned as public road where provision has been made for a road reserve width of approximately 25 m.
- As Erf RE/369 is currently used for agricultural farming purposes, there is no existing road reserve forming part of the Wildebosch extension.
- Trumali Street to the east of Ben du Toit Road that provides thoroughfare to the Paradyskloof Water Treatment Works over Erf RE/369.
- RE/1049 is privately owned by a developer who would like to develop the land as it is currently unutilized.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).
The outer boundary of the wetland must be demarcated using a weather resistant material by an independent Environmental Control Officer (ECO) and marked as a 'No-Go' area where no construction activities are planned, and all construction footprint areas must remain as small as possible.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.
The Impact Assessment Report can be found in Appendix J.

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

Impact Assessments for Alternative 1 (Preferred Alternative)

Please note the following:

- **Botanical and Freshwater Impact Studies were completed for this development**
- **The impact tables below summarise the impacts for both alternatives**
- **An Agricultural, and Socio-economic site sensitivity verification were undertaken by specialist as per the requirements of the Screening Tool (Refer Appendix G)**

AGRICULTURAL SITE SENSITIVITY VERIFICATION

The site falls outside of an area that is classified as a Protected Agricultural Area (PAA). A PAA is a demarcated area in which the climate, terrain, and soil are generally conducive for agricultural production and which, historically, has made important contributions to the production of the various crops that are grown across South Africa. Within PAAs, the protection, particularly of arable land, is considered a priority for the protection of food security in South Africa, but the protection of land outside of these areas is generally not considered a food security priority.

This assessment of the agricultural production potential of the site is based on an integration of the different parameters in Table 2 below:

Table 0-5 | **Parameters that control and/or describe the agricultural production potential of the site. Note that climate and terrain parameters are excluded because neither limits the agricultural potential and their suitability for a range of different crops is indisputable. The climate and terrain details are therefore irrelevant.**

	Parameter	Value
Soils	Geology (DAFF, 2002)	Greywacke, phyllite and quartzitic sandstone of the Malmesbury Group and granite of the Kuils River-Helderberg Pluton, Cape Granite Suite
	Land type (DAFF, 2002)	Ac17
	Description of the soils	Predominantly moderately deep to deep, medium textured, red and yellow-brown, reasonably drained soils on underlying weathered rock.
	Dominant soil forms	Hutton, Glenrosa, Clovelly
	Soil capability classification (out of 9) (DAFF, 2017)	2 (low-very low) to 7 (high)
	Soil limitations	Limited soil depth in places
Land use & General	Agricultural land use in the surrounding area	Vineyards and non-agricultural land use
	Agricultural land use on the site	Vineyards
	Land capability classification (out of 15) (DAFF, 2017))	6 (low-moderate) to 10 (moderate-high)
	Within Protected Agricultural Area (DALRRD, 2020)	No

All the land along the road route is high potential vineyard land. A detailed soil map and the identification of whether soils are Pinedene or Tukulu or Kroonstad is of little relevance to this assessment. What matters is that the impacted land is high potential vineyard.

FRESHWATER ASSESSMENT

The freshwater aquatic assessment uses a different risk assessment method when compared to the matrix reflected in Table 1 - 4, the DWS Risk Assessment Protocol (as promulgated in GN509 of 2016)) was applied for the project.

Following the assessment of the UCVB wetland, the DWS specified Risk Assessment Matrix (as promulgated in GN509 of 2016) was applied to ascertain the significance of risk associated with the proposed development on the key drivers and receptors of the wetland.

The DWS Risk Assessment Matrix determined several moderate risks that are associated with the proposed road extension, most of which were assigned to activities during the construction phase. The moderate risks stem from direct impacts within the wetland for which the maximum severity score (5) must be assigned, as per GN509. These activities include dewatering of a portion of the wetland in the vicinity of the proposed road extension area, the construction of the foundation of the road and installation of the pipe culverts. The determined moderate risk scores are above the threshold value (80), and therefore could not be manually down adjusted to realise a low risk significance score (55), considering that GN509 allows for a maximum down adjustment of 25 points.

The results of the risk assessment are summarised in the table below, including key mitigation measures for each activity that must be implemented to reduce the impacts of the proposed development activities:

No.	Activity	Aspect	Impact	Severity	Consequence	Likelihood	Significance	Risk Rating	Control Measures
CONSTRUCTION PHASE									
1	**SITE PREPARATION FOR CIVIL WORKS**	• Stockpiling of construction equipment, materials, vehicles and machinery; Removal of vegetation and associated disturbances to soil; Possible indiscriminate vehicle movement; and • Diversion of water away from the construction area.	• Desiccation of wetland soil as a result of vegetation cover loss; • Potential proliferation of alien and invasive vegetation species due to disturbance • Soil contamination from oils and hydrocarbons; Temporary disruption of the hydrology of the wetland and desiccation of portions of the downstream areas by diverting flows away from the road construction area; • Loss of freshwater habitat and ecological structure resulting in impacts on biota; and • Temporary diminishing of ecoservice provision of the freshwater ecosystems as a result of habitat and biota loss.	5	8	15	120	M	• It is imperative that construction occurs during the drier summer months (January -April) using as much manual labour (not machinery) as possible to minimise the wetland disturbance footprint in terms of soil disturbance and vegetation trampling, and further to minimise hydrocarbon and oil spillages; • Only authorised maintenance personnel may be permitted to enter the wetland as part of the clearing activities to prevent unnecessary disturbance to this wetland; • Contractor laydown areas (if applicable) are to be established at least 32m outside of the delineated extent of this wetland; • The outer boundary of the wetland must be demarcated using a weather resistant material by an ECO and marked as a 'no-go' area where no construction activities are planned and all construction footprint areas must remain as small as possible; • Vegetation clearing must be limited to what is essential within the proposed road extension area; • Indigenous vegetation must be retained as far as possible and used during the rehabilitation phase of this wetland; • Alien vegetation must be managed throughout the construction phase; • All alien and invasive vegetation species, debris and litter removed from the crossing must be removed from site (no stockpiling allowed); and • Vehicle servicing and re-fuelling must occur off-site.

2	**CONSTRUCTION OF THE WILDEBOSCH ROAD THROUGH THE WETLAND**	• Undercutting roadbed prism and placement of pioneering layer consisting of rock and/or sand fill; Construction of road fill; • Trenching for the installation of pipe culverts; • Creation of soil stockpiles • Backfilling to the level of the pipe culverts; • Construction of road pavement layers; • Construction of the culvert headwalls using concrete, • Installation of the inlet and outlet erosion protection structures; • Application of asphalt, paint and sealants; and; • Operation of machinery.	• Altered runoff patterns, leading to preferential flow paths and increased erosion and sedimentation of the downstream reach of the wetland, and associated decreases in the ecosystem provisioning of this freshwater ecosystem; • Potential disturbance of the wetland slopes, further leading to sedimentation of this system; • Temporary disruption of the hydrology of the wetland and desiccation of portions of the downstream areas by diverting flows away from the road construction area; • Possible spills / leaks from construction vehicles and machinery and from paints and sealants during pavement construction; • Alien invasive plant encroachment on stockpiles, creating opportunities for the spread of alien vegetation throughout the wetland; • Ground disturbances and dust pollution during construction which may impact on wetland water quality; • Potential pollution of the wetland by spillage of road material in the wetland, thereby polluting the downstream reach and causing hydro-morphological alterations to the wetland; • Potential contamination of soils and surface water as a result of concrete works, leading to further reduced ability to support biodiversity; and • Compaction of soils, disrupting the growth					M	• Stockpiles as a result of the removal of wetland soil may not exceed 2 m in height and must be placed outside of the delineated extent of the wetland; • Stockpiles must not be contaminated with hydrocarbons and oils; • The top organic layer of the soil stockpile must be separated from the lower layers and protected from moisture loss and alien vegetation encroachment, using a geotextile such as hessian sheeting, for use during the rehabilitation phase of this project; • Similarly, the imported road construction material must also be protected from alien vegetation encroachment using hessian sheeting, thereby also preventing deposition into the wetland by wind action; • Water must be allowed to flow to the downstream reach at all times and rip-rap or a similar erosion protection structure must be placed at the outlet to the diversion pipe to prevent erosion of the wetland floor; • Suitable sediment traps such as geotextile wrapped hay bales or geotextile nets must be installed downstream of the proposed road extension to prevent potential sedimentation of the downstream reach of this wetland during unforeseen rainfall events due to bare ground; • Soil surrounding the repair works must be suitably loosened on completion of construction activities and revegetated to prevent erosion; • Avoid unnecessary trampling of vegetation irrespective of the vegetation being associated with the wetland or the surrounding terrestrial area; and • The duration of impacts within the wetland must be minimised as far as possible by ensuring that the duration of time in which flow alteration will take place is minimised. The construction period must be kept as short as possible. **Control measures specific to concrete and asphalt works:** • Asphalt, concrete and cement-related mortars can be toxic to aquatic life. Proper handling and disposal must minimise or eliminate discharges into the freshwater ecosystems. High alkalinity associated with cement can dramatically affect and contaminate both soil and ground water. The following measures must be adhered to: • Fresh asphalt, concrete and cement mortar must not be mixed near the freshwater ecosystems. Mixing of cement may be done within the construction camp, however it may not be mixed on bare soil, and must be within a lined, bound or bunded portable mixer. Consideration must be taken to use ready mix concrete;

No.	Activity	Aspect	Impact	Severity	Consequence	Likelihood	Significance	Risk Rating	Control Measures
CONSTRUCTION PHASE									
			medium of the wetland vegetation						• No mixed concrete or asphalt shall be deposited directly onto the ground or within the freshwater features. All concrete and/or asphalt must be brought in via a cement mixing truck which must remain within the road reserve, and cement/asphalt must be piped down to the proposed bridge footprint. Any areas that require manual application of cement/asphalt require that the mixed road surfacing materials be placed on a batter board or other suitable platform/mixing tray until it is deposited; • A washout area must be designated outside of the freshwater features, and wash water must be treated on-site or discharged to a suitable sanitation system; • At no point may batter boards/mixing trays or cement trucks be rinsed off on site and run-off water be allowed into the freshwater features; • Cement bags (if any) must be disposed of in the demarcated hazardous waste receptacles and the used bags must be disposed of through the hazardous substance waste stream; and • Spilled or excess concrete/asphalt must be disposed of at a suitable landfill site. Chain of custody documentation must be provided.
3	**REHABILITATION OF THE UCVBW**	• Resloping, reprofiling and revegetation of the wetland banks to prevent future erosion; and • Alien and invasive plant removal and revegetation using indigenous wetland plant species	• Exposure of soil, leading to increased runoff and erosion which can lead to increased sedimentation of the wetland; • Exposed soils can be subjected to moisture loss as a result of increased soil temperatures; and • Soil compaction as a result of trampling by staff.	5	7	12	84	M	• Rehabilitation works must be undertaken just before the wet season (preferably within April/May) to ensure survival of new vegetation species and prevent proliferation of alien and invasive plants; • The stormwater channel that runs along the southern boundary of the UCVBW must be infilled upstream to promote the diffuse spread of water (albeit interflow) through the wetland; • All areas to be cleared of vegetation must be done so in a phased approach, to reduce the risk of proliferation of alien vegetation to retain a level of protection to the freshwater ecosystem during construction; • All cleared vegetation must be disposed of at a licensed refuse facility and may not be mulched or burned on site; • Bare soil must ideally be restocked with indigenous vegetation immediately after the removal of alien invasive vegetation, and in cases where the soil will remain unplanted for a few days it must be covered with a hessian net to retain moisture and prevent soil desiccation.

No.	Activity	Aspect	Impact	Severity	Consequence	Likelihood	Significance	Risk Rating	Control Measures
CONSTRUCTION PHASE									
OPERATION PHASE									
4	**OPERATION OF THE CULVERT CROSSING**	• Inadequate flow and loss of freshwater connectivity to the downstream areas; and • Erosion around the culvert crossing and sedimentation of the downstream reach.	• Concentrated flow path creation downstream of the pipe culverts and loss of diffuse flows, leading to erosion, and desiccation and subsequent loss of wetland habitat, and ultimately decreases in ecoservice provision.	1.5	3.5	15	52.5	L	• The pipe culverts must be designed in a manner to preserve the natural hydrology of this UCVBW, flows must not be concentrated downstream of the pipe culvert; • Any loss in wetland longitudinal connectivity due to a failed culvert design must be remedied as soon as possible to reduce the duration of impact.
5	**OPERATION OF THE ROAD SIDE DRAINS**	• Additional stormwater input into the wetland	• Increased litter, sediment and toxicant input into the wetland; and • Potential erosion at the discharge point into the wetland	1.5	3.5	14	49	L	• An erosion protection structure must be installed at the discharge point of the side drains into the wetland and all stormwater must collect into an attenuation facility that is operated according to Sustainable Urban Drainage System principles in terms of the quantity and quality of stormwater discharging into the wetland.; and • The erosion protection structures must be monitored bi-annually to ensure that these structures are still intact and can continue to safeguard the wetland against erosion.
6	**MONITORING OF STRUCTURAL INTEGRITY OF THE ROAD CULVERT CROSSINGS IN THE KOMPANJIES RIVER.**	• Proactive monitoring to ensure structural integrity is maintained and to identify early signs of erosion around the culverts and ensure that any litter or debris which may accumulate on and around the culverts is cleared to maintain the flow of water.	• No direct impacts perceived.	1	3	4	12	L	• Hot spots for the build-up of debris and excess sediment must be identified and when necessary, debris/excess sediment must be removed by hand to prevent future flooding and potential damage to infrastructure. In this regard, special mention is made of periods following high rainfall and subsequent high instream water volumes. Removal of debris must be undertaken in line with the above listed construction mitigation measures; • Any erosion must be identified on an ongoing basis and re-profiled and revegetated accordingly; and • Existing access roads must be used for monitoring purposes to minimise the compaction of soils and loss of riparian and instream habitat.

No.	Activity	Aspect	Impact	Severity	Consequence	Likelihood	Significance	Risk Rating	Control Measures
CONSTRUCTION PHASE									
7	**FUTURE MAINTENANCE OF THE ROAD CULVERT CROSSINGS (INCLUDING THEIR HEADWALLS, WINGWALLS, BALUSTRADES AND EROSION PROTECTION (WHERE APPLICABLE).**	• Disturbances to or removal of vegetation while accessing culverts to carry out maintenance activities and • Disturbances to soils.	• Potential loss of indigenous vegetation and the further proliferation of alien floral species due to disturbances; • Decreases to water quality in terms of turbidity from increased sediment loads during soil disturbance.	5	7	11	77	M	• All mitigatory measures as stipulated in Activity 2 and 3 above must be implemented to ensure no negative impacts to the wetland.
8	**ONGOING ALIEN AND INVASIVE VEGETATION REMOVAL (IF REQUIRED).**	• Proactive monitoring to ensure structural integrity is maintained and to identify early signs of erosion, incision and alien vegetation encroachment	• Compaction of soil and loss of habitat as a result of ongoing disturbance from vehicles and equipment; • Impacts to water quality as a result of the application of herbicides; and • Disturbance of soil which could lead to erosion.	5	7	11	77	M	• The wetland must be monitored for alien and invasive vegetation encroachment and all alien vegetation/weeds must be removed according to a suitable alien vegetation control plan; and • Where applicable for the eradication of alien and invasive vegetation, care should be taken with the choice of herbicide to ensure that no additional impact and loss of indigenous plant species occurs due to the herbicide used and water contamination is avoided.

Botanical Assessment

When assessing the direct impacts, two scenarios have been considered. Scenario 1 covers the original construction plan, involving the extension of Wildebosch Road and the upgrade of Trumali Street. Owing to the presence of a population of Wachendorfia brachyandra directly in the proposed road extension of Wildebosch Road, the potential impacts and significance of these activities is estimated to be High Negative.

Scenario 2 involves altering the construction footprint of the Wildebosch Road expansion to avoid the wetland habitat in which W. brachyandra is located. Avoiding this habitat should yield a significant reduction in the estimated impact, with the significance estimated to be Low Negative.

Table 0-8 | Impact and Significance – Loss of natural vegetation and habitat as a result of extension of Wildebosch Road and upgrade of Trumali Street (Scenario 1).

CRITERIA	'NO GO' Alternative	Scenario 1 (Original)	
Nature of direct impact	**Loss of Remnant Swartland Shale Renosterveld and Swartland Granite Renosterveld**		
		WITHOUT MITIGATION	**WITH MITIGATION**
Extent	Local	Regional	Local
Duration	Long-term	Long-term	Long-term
Intensity	Medium	Medium	Low
Probability of occurrence	Probable	Probable	Probable
Confidence	High	High	High
Significance	Low Positive	High Negative	Medium Negative
Nature of Cumulative impact	**Loss of Remnant Swartland Shale Renosterveld and Swartland Granite Renosterveld**		
Cumulative impact prior to mitigation	Low Negative		
Degree to which impact can be reversed	Irreversible		
Degree to which impact may cause irreplaceable loss of resources	Medium		
Degree to which impact can be mitigated	Medium		
Proposed mitigation	• Minimize construction footprint • Where possible revegetate disturbed areas • Search and Rescue of *Wachendorfia brachyandra* to be placed in suitable habitat nearby. • Alien clearing to prevent colonisation of disturbed areas		
Cumulative impact post mitigation	Very Low negative		
Significance of cumulative impact (broad scale) after mitigation	Very Low negative		

Table 0-9 | Impact and Significance – Loss of natural vegetation and habitat as a result of extension of Wildebosch Road and upgrade of Trumali Street (Scenario 2).

CRITERIA	'NO GO' Alternative	Scenario 2 (preferred)	
Nature of direct impact	**Loss of Remnant Swartland Shale Renosterveld and Swartland Granite Renosterveld**		
		WITHOUT MITIGATION	**WITH MITIGATION**
Extent	Local	Regional	Local
Duration	Long-term	Long-term	Long-term
Intensity	Medium	Medium	Low
Probability of occurrence	Probable	Probable	Probable
Confidence	High	High	High
Significance	Low Positive	Low Negative	Very Low Negative
Nature of Cumulative impact	**Loss of Remnant Swartland Shale Renosterveld and Swartland Granite Renosterveld**		
Cumulative impact prior to mitigation	Low Negative		

Degree to which impact can be reversed	Irreversible
Degree to which impact may cause irreplaceable loss of resources	Low
Degree to which impact can be mitigated	Medium
Proposed mitigation	• Minimize construction footprint • Where possible revegetate disturbed areas • Search and Rescue of *Wachendorfia brachyandra* to be placed in suitable habitat nearby. • Alien clearing to prevent colonisation of disturbed areas
Cumulative impact post mitigation	Very Low negative
Significance of cumulative impact (broad scale) after mitigation	Very Low negative

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Visual impacts relate to the recording of existing views and the determination of potential impacts as perceived by those living, working, and visiting the area. Infrastructure within visually significant locations will detract from the existing cultural landscape and interfere with the viewsheds of receptors, including road users of main roads such and local residential settlements in close proximity of the proposed infrastructure.

The anticipated visual envelope for the proposed road will be smaller to the north, south and west than indicated in the viewshed analysis, mainly as a result of the screening effects of trees and built-up areas. Longer range views will be possible and sections of the proposed infrastructure will be visible from the R44 (where topography allow). The impact on visual exposure and visibility will be more intense during the construction phase due to vegetation clearance, signage, and movement (dust) of construction vehicles and machinery. Windblown dust (especially during construction) could obscure views of nearby landscape features and degrade general visibility for local residents, fugitive dust generated during construction will increase the visual exposure.

Table 0-10 | Visual Impact Rating Spreadsheet

Ref:	1			
Project phase	**Construction**			
Impact	**Change in landscape character and sense of place**			
Description of impact	**Change in landscape character and sense of place through the introduction of construction activities, vegetation clearing and the presence of heavy machinery**			
Mitigatability	Low	Mitigation does not exist; or mitigation will slightly reduce the significance of impacts		
Potential mitigation	**Refer to report**			
Assessment	**Without mitigation**		**With mitigation**	
Nature	Negative		Negative	
Duration	Short term	impact will last between 1 and 5 years	Short term	impact will last between 1 and 5 years
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	Moderate	Natural and/ or social functions and/ or processes are moderately altered	Low	Natural and/ or social functions and/ or processes are somewhat altered
Probability	Likely	The impact may occur	Likely	The impact may occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	High	The affected environmental will be able to recover from the impact	High	The affected environmental will be able to recover from the impact

Resource irreplaceability	Medium	The resource is damaged irreparably but is represented elsewhere	Medium	The resource is damaged irreparably but is represented elsewhere
Significance	**Minor - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	2
Project phase	**Operation**
Impact	**Change in landscape character and sense of place**
Description of impact	**The change in visual character from an 'open' rural type of unbuilt landscape to a built landscape**
Mitigatability	Medium — Mitigation exists and will notably reduce significance of impacts
Potential mitigation	**Refer to report**

Assessment	**Without mitigation**		**With mitigation**	
Nature	Negative		Negative	
Duration	Permanent	Impact may be permanent, or in excess of 20 years	Permanent	Impact may be permanent, or in excess of 20 years
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Likely	The impact may occur	Likely	The impact may occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	Low	The affected environment will not be able to recover from the impact - permanently modified	Low	The affected environment will not be able to recover from the impact - permanently modified
Resource irreplaceability	Medium	The resource is damaged irreparably but is represented elsewhere	Medium	The resource is damaged irreparably but is represented elsewhere
Significance	**Moderate - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	3
Project phase	**Operation**
Impact	**Change in landscape character and sense of place**
Description of impact	**Degradation of the cultural landscape and semi-rural character by the expansion of the town road network.**
Mitigatability	Low — Mitigation does not exist; or mitigation will slightly reduce the significance of impacts
Potential mitigation	**Refer to report**

Assessment	**Without mitigation**	**With mitigation**
Nature	Negative	Negative

Duration	Permanent	Impact may be permanent, or in excess of 20 years	Permanent	z
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	Moderate	Natural and/ or social functions and/ or processes are moderately altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Likely	The impact may occur	Likely	The impact may occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	Low	The affected environment will not be able to recover from the impact - permanently modified	Low	The affected environment will not be able to recover from the impact - permanently modified
Resource irreplaceability	Medium	The resource is damaged irreparably but is represented elsewhere	Medium	The resource is damaged irreparably but is represented elsewhere
Significance	**Minor - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	4			
Project phase	**Construction**			
Impact	**Visually intrusion and VAC**			
Description of impact	**Visually intrusive construction activities such as the clearing of vegetation, earthworks (cut and fill), trenching, waste generation, material laydown areas (stockpiling), construction vehicle use (dust emissions) and temporary site offices.**			
Mitigatability	Low	Mitigation does not exist; or mitigation will slightly reduce the significance of impacts		
Potential mitigation	**Refer to report**			
Assessment	**Without mitigation**		**With mitigation**	
Nature	Negative		Negative	
Duration	Short term	impact will last between 1 and 5 years	Short term	impact will last between 1 and 5 years
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Likely	The impact may occur	Likely	The impact may occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	High	The affected environmental will be able to recover from the impact	High	The affected environmental will be able to recover from the impact

Resource irreplaceability	Medium	The resource is damaged irreparably but is represented elsewhere	Medium	The resource is damaged irreparably but is represented elsewhere
Significance	**Minor - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	5
Project phase	**Operation**
Impact	**Visual intrusion and VAC**
Description of impact	**The visually intrusiveness of the completed road**
Mitigatability	Low — Mitigation does not exist; or mitigation will slightly reduce the significance of impacts
Potential mitigation	**Refer to report**

	Without mitigation		**With mitigation**	
Nature	Negative		Negative	
Duration	Permanent	Impact may be permanent, or in excess of 20 years	Permanent	Impact may be permanent, or in excess of 20 years
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	Low	Natural and/ or social functions and/ or processes are somewhat altered	Low	Natural and/ or social functions and/ or processes are somewhat altered
Probability	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	Low	The affected environment will not be able to recover from the impact - permanently modified	Low	The affected environment will not be able to recover from the impact - permanently modified
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	**Minor - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	6
Project phase	**Construction**
Impact	**Visibility and visual exposure**
Description of impact	**Visibility and visual exposure from the proposed infrastructure for receptors permanently residing next to the site**
Mitigatability	Low — Mitigation does not exist; or mitigation will slightly reduce the significance of impacts
Potential mitigation	**Refer to report**

	Without mitigation	**With mitigation**
Nature	Negative	Negative

Duration	Short term	impact will last between 1 and 5 years	Short term	impact will last between 1 and 5 years
Extent	Limited	Limited to the site and its immediate surroundings	Limited	Limited to the site and its immediate surroundings
Intensity	Very high	Natural and/ or social functions and/ or processes are majorly altered	High	Natural and/ or social functions and/ or processes are notably altered
Probability	Probable	The impact has occurred here or elsewhere and could therefore occur	Probable	The impact has occurred here or elsewhere and could therefore occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	High	The affected environmental will be able to recover from the impact	High	The affected environmental will be able to recover from the impact
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	**Minor - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	7

Project phase	**Operation**			
Impact	**Visibility and visual exposure**			
Description of impact	**Visibility and visual exposure from the proposed infrastructure for receptors permanently residing next to the site**			
Mitigatability	Low	Mitigation does not exist; or mitigation will slightly reduce the significance of impacts		
Potential mitigation	**Refer to report**			
Assessment	**Without mitigation**		**With mitigation**	
Nature	Negative		Negative	
Duration	Permanent	Impact may be permanent, or in excess of 20 years	Permanent	Impact may be permanent, or in excess of 20 years
Extent	Limited	Limited to the site and its immediate surroundings	Limited	Limited to the site and its immediate surroundings
Intensity	Negligible	Natural and/ or social functions and/ or processes are negligibly altered	Negligible	Natural and/ or social functions and/ or processes are negligibly altered
Probability	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur

Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	Low	The affected environment will not be able to recover from the impact - permanently modified	Low	The affected environment will not be able to recover from the impact - permanently modified
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	**Negligible - negative**		**Negligible - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	8

Project phase	**Construction**			
Impact	**Visibility and visual intrusion**			
Description of impact	**Visibility and visual exposure for receptors experiencing longer range views from the R44 and the Paradyskloof Nature Reserve**			
Mitigatability	Low	Mitigation does not exist; or mitigation will slightly reduce the significance of impacts		
Potential mitigation	**Refer to report**			
Assessment	**Without mitigation**		**With mitigation**	
Nature	Negative		Negative	
Duration	Short term	impact will last between 1 and 5 years	Short term	impact will last between 1 and 5 years
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Probable	The impact has occurred here or elsewhere and could therefore occur	Probable	The impact has occurred here or elsewhere and could therefore occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	High	The affected environmental will be able to recover from the impact	High	The affected environmental will be able to recover from the impact
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	**Minor - negative**		**Minor - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Ref:	9

Project phase	**Operation**
Impact	**Visibility and visual intrusion**
Description of impact	**Visibility and visual exposure for receptors experiencing longer range views from the R44 and the Paradyskloof Nature Reserve**

Mitigatability	Low	Mitigation does not exist; or mitigation will slightly reduce the significance of impacts		
Potential mitigation	**Refer to report**			
Assessment	**Without mitigation**		**With mitigation**	
Nature	Negative		Negative	
Duration	Permanent	Impact may be permanent, or in excess of 20 years	Permanent	Impact may be permanent, or in excess of 20 years
Extent	Local	Extending across the site and to nearby settlements	Local	Extending across the site and to nearby settlements
Intensity	Negligible	Natural and/ or social functions and/ or processes are negligibly altered	Negligible	Natural and/ or social functions and/ or processes are negligibly altered
Probability	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur
Confidence	Medium	Determination is based on common sense and general knowledge	Medium	Determination is based on common sense and general knowledge
Reversibility	Low	The affected environment will not be able to recover from the impact - permanently modified	Low	The affected environment will not be able to recover from the impact - permanently modified
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	**Negligible - negative**		**Negligible - negative**	
Comment on significance	Refer to report			
Cumulative impacts	Refer to report			

Socio-Economic Site Sensitivity

The preliminary socio-economic impact assessment of the proposed Wildebosch Road to Trumali Street extension indicates that, at this stage, there are no significant implications or flaws identified from a socio-economic perspective. The overall net positive impacts outweigh the net negative impacts, showcasing the potential benefits of the project. While the initial analysis presents potential negative impacts, it should be noted that these can be mitigated or improved through suitable measures. A comprehensive Socio-Economic Impact Assessment will further investigate and provide in-depth information on both the baseline and potential impacts, ensuring a thorough understanding of the project's socio-economic implications.

Note from Zutari: Decommissioning and closure phase is not applicable to this project as the activity is intended for a long duration. It is likely that maintenance work would be conducted to keep the road is good working condition. It is not anticipated that the proposed project will be closed. In case that there is a need to close the extensions, a closure plan should be developed at the time of closure. All the relevant authorisations relating to decommissioning and closure should be granted before the closure activities commences.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

The below table shows the summary of the key findings and impact risk ratings:

Aspect		Impact	Pre-mitigation	Post-mitigation
Pre-construction				
No impacts have been identified for the pre-construction phase.				
Construction				
Botanical	Scenario 1 (Original)	Loss of Remnant Swartland Shale Renosterveld and Swartland Granite Renosterveld (Loss of natural vegetation and habitat)	**High (-)**	**Moderate (-)/ Medium (-)**
	Scenario 2 (preferred)	Loss of Remnant Swartland Shale Renosterveld and Swartland Granite Renosterveld (Loss of natural vegetation and habitat)	**low (-)**	**Negligible (-)/ Very low (-)**
Freshwater Aquatic Ecology		Site preparation for civil works	**Moderate (-)/ Medium (-)**	**Negligible (-)/ Low (-)**
		Construction of the Wildebosch road through the wetland	**Moderate (-)/ Medium (-)**	**Negligible (-)/ Low (-)**
		Rehabilitation of the UCVBW	**Moderate (-)/ Medium (-)**	**Negligible (-)/ Low (-)**
Operation				
Freshwater Aquatic Ecology		Operation of the culvert crossing	**Negligible (-)/ Very low (-)**	**Negligible (-)/ Very low (-)**
		Operation of the roadside drains	**Negligible (-)/ Very low (-)**	**Negligible (-)/ Very low (-)**
		Monitoring of structural integrity of the road culvert crossings	**Negligible (-)/ Very low (-)**	**Negligible (-)/ Very low (-)**
		Future maintenance of the road culvert crossings	**Moderate (-)/ Medium (-)**	**Negligible (-)/ Low (-)**
		Ongoing alien and invasive vegetation removal (if required)	**Moderate (-)/ Medium (-)**	**Negligible (-)/ Low (-)**

See summary of the impact management measures below:

Construction Phase Mitigation Measures:

- Search and Rescue of Wachendorfia brachyandra to be placed in suitable habitat nearby.
- Construction camp to be located in previously disturbed areas, such as agricultural fields.
- Installation of culverts or raised roadway to allow for movement of water through the wetland.
- Removal of alien and invasive species in the vicinity of proposed construction sites must be carried out in order to prevent establishment of these species in any disturbed areas.
- Minimize the construction footprint, in particular in the vicinity of wetland habitat as these soils are highly sensitive to compaction and disturbance.
- The re-establishment of vegetation on watercourse banks and in areas disturbed by construction activities.
- It is imperative that construction occurs during the drier summer months (January -April) using as much manual labour (not machinery) as possible to minimise the wetland disturbance footprint in terms of soil disturbance and vegetation trampling, and further to minimise hydrocarbon and oil spillages.
- Only authorised maintenance personnel may be permitted to enter the wetland as part of the clearing activities to prevent unnecessary disturbance to this wetland.
- Contractor laydown areas (if applicable) are to be established at least 32m outside of the delineated extent of this wetland.

- The outer boundary of the wetland must be demarcated using a weather resistant material by an ECO and marked as a 'no-go' area where no construction activities are planned and all construction footprint areas must remain as small as possible.
- Vegetation clearing must be limited to what is essential within the proposed road extension area.
- Alien vegetation must be managed throughout the construction phase.
- All alien and invasive vegetation species, debris and litter removed from the crossing must be removed from site (no stockpiling allowed).
- Vehicle servicing and re-fuelling must occur off-site.
- Stockpiles as a result of the removal of wetland soil may not exceed 2 m in height and must be placed outside of the delineated extent of the wetland.
- Stockpiles must not be contaminated with hydrocarbons and oils.
- The top organic layer of the soil stockpile must be separated from the lower layers and protected from moisture loss and alien vegetation encroachment, using a geotextile such as hessian sheeting, for use during the rehabilitation phase of this project.
- The stormwater channel that runs along the southern boundary of the UCVBW must be infilled upstream to promote the diffuse spread of water (albeit interflow) through the wetland.
- All areas to be cleared of vegetation must be done so in a phased approach, to reduce the risk of proliferation of alien vegetation to retain a level of protection to the freshwater ecosystem during construction.
- All cleared vegetation must be disposed of at a licensed refuse facility and may not be mulched or burned on site.
- Bare soil must ideally be restocked with indigenous vegetation immediately after the removal of alien invasive vegetation, and in cases where the soil will remain unplanted for a few days it must be covered with a hessian net to retain moisture and prevent soil desiccation.

Operational Phase Mitigation Measures:

- Long-term management of alien and invasive plant species
- Indigenous vegetation must be retained as far as possible and used during the rehabilitation phase of this wetland
- The pipe culverts must be designed in a manner to preserve the natural hydrology of this UCVBW, flows must not be concentrated downstream of the pipe culvert.
- Any loss in wetland longitudinal connectivity due to a failed culvert design must be remedied as soon as possible to reduce the duration of impact.
- An erosion protection structure must be installed at the discharge point of the side drains into the wetland and all stormwater must collect into an attenuation facility that is operated according to Sustainable Urban Drainage System principles in terms of the quantity and quality of stormwater discharging into the wetland.
- The erosion protection structures must be monitored bi-annually to ensure that these structures are still intact and can continue to safeguard the wetland against erosion.
- Hot spots for the build-up of debris and excess sediment must be identified and when necessary, debris/excess sediment must be removed by hand to prevent future flooding and potential damage to infrastructure. In this regard, special mention is made of periods following high rainfall and subsequent high instream water volumes. Removal of debris must be undertaken in line with the above listed construction mitigation measures.
- Any erosion must be identified on an ongoing basis and re-profiled and revegetated accordingly.
- Existing access roads must be used for monitoring purposes to minimise the compaction of soils and loss of riparian and instream habitat.
- The wetland must be monitored for alien and invasive vegetation encroachment and all alien vegetation/weeds must be removed according to a suitable alien vegetation control plan.
- Where applicable for the eradication of alien and invasive vegetation, care should be taken with the choice of herbicide to ensure that no additional impact and loss of indigenous plant species occurs due to the herbicide used and water contamination is avoided.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

See above.

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

See above.

4.	Explain how the proposed development will impact the surrounding communities.

The prominent impact that would affect the surrounding community relates to landscape and visual impacts. During construction the landscape and visual impacts remains minor as the overall duration is expected to be limited, however the intensity of the anticipated landscape and visual impacts is expected to be highest during the peak construction phase of the project.

The most affected receptors are those residing directly next to the site, especially residents along the southern boundary of Brandwacht on River Estate and residents on Du Clair Street (next to the site boundary at the extension of Wildebosch Road in Paradyskloof). The visual envelope will be smaller than indicated in the viewshed and overall visibility will be lower than theoretically indicated.

Landscape and visual impact are expected to be negligible during the operational phase. From a visual perspective the proposed project does not heavily impact on landscapes of significant symbolic, aesthetic, cultural and historical value.

In terms of the socio-economic impacts, the extension of the proposed Wildebosch Road to Trumali may be considered beneficial to the area in terms of an increase in accessibility and transport mechanisms, job creation, and household income.

The local as well as broader provincial municipality will likely experience a positive injection resulting from the Gross Domestic Product and production generated due to the capital and operational spend.

Taking into account the proximity of the proposed Wildebosch Road to Trumali extension to Brandwacht and Paradyskloof, consideration must be given as whether these areas will be negatively impacted in terms of sense of place and property values. The proposed Wildebosch Road to Trumali Street extension indicates that there are no significant implications or flaws identified from a socio-economic perspective. The overall net positive impacts outweigh the net negative impacts, showcasing the potential benefits of the project.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

The development of safe roads limits the dependence on municipal service infrastructure and health care and allows the applicant to be more sustainable. Climate change impacts on municipal services will increase, as will demand and as such the development and upgrade of safe roads is a positive contribution.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

No, the specialists in their various disciplines, have not provided any conflicting recommendations.

However, the botanical specialist indicated that Scenario 2 involves altering the construction footprint of the Wildebosch Road expansion to avoid the wetland habitat in which W. brachyandra is located. Avoiding this habitat should yield a significant reduction in the estimated impact, with the significance estimated to be Low Negative. This scenario did not form part of the layout options since it does not follow the proclaimed alignment.

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.

The mitigation measures and recommendations of the various specialists complement each other in the management of the potential impacts.

The recommended mitigation measures include the clearance of vegetation in a controlled manner with the appropriate rehabilitation and ongoing management of alien invasive vegetation are key components of the predominant mitigations proposed. Where applicable for the eradication of alien and invasive vegetation, care should be taken with the choice of herbicide to ensure that no additional impact and loss of indigenous plant species occurs due to the herbicide used and water contamination is avoided.

In addition, the pipe culverts must be designed in a manner to preserve the natural hydrology of the UCVBW, flows must not be concentrated downstream of the pipe culvert. The erosion protection structures must be monitored bi-annually to ensure that these structures are still intact and can continue to safeguard the wetland against erosion. Further, existing access roads must be used for monitoring purposes to minimise the compaction of soils and loss of riparian and instream habitat. Moreover, the construction footprint within the wetland area must be kept small as far as possible.

All the recommendations and mitigations provided in the specialists reports and EMPr must be implemented.

8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

The preferred option (i.e. Wildebosch Road extension) is designed in relation to the proclaimed alignment (i.e. WCG's proclamation of MR00169) and the Trumali upgrade ties into the extension. The preferred option is also chosen based on a selection criterion which aims to limit construction costs. The road cross section and implementation strategy is such that only a single sidewalk is implemented as part of this project. The road will remain inside the road reserve for the most part and therefore the impacts will be localised. The construction footprint must be kept as small as possible. The mitigation and interventions included in this BAR and the attached EMPr must be adhered to.

Due to the fact that the Wildebosch extension is proposed, impact avoidance is difficult, minimisation has been considered as far as possible and mitigation of impacts would be the main actions to be implemented.

The mitigation hierarchy from highest priority to lowest priority is as follows:

- Avoid: Avoid the potential impact
- Minimise: decrease the spatial/temporal scale of the impact as far as possible during the various project phases
- Rectify: Apply rehabilitation techniques after the impacts has occurred.
- Off-set: off-set residual impact through measures over and above rehabilitation to compensate for the residual effects on biodiversity.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

Freshwater

The proposed Wildebosch extension would cross a delineated UCVBW as indicated in the Freshwater Assessment Report. The installation of the culvert over the wetland and road construction within the 500 m regulated area of the wetland will trigger Section 21 (c & i) water uses in terms of the NWA. Section 21 (c & i) water uses relate to: Impeding or diverting the flow of water in a watercourse Altering the bed, banks, course or characteristics of a watercourse.

The construction activities will entail dewatering of a portion of the wetland in the vicinity of the proposed road extension area, the construction of the foundation of the road and installation of the drainage culvert.

The DWS risk assessment undertaken by an aquatic specialist indicated that the impacts associated with construction and installation of the culvert within the wetland showed a moderate risk significance. The determined moderate risk scores are above the threshold value (80), and therefore could not be manually down adjusted to realise a low-risk significance score (55), considering that GN509 allows for a maximum down adjustment of 25 points. Therefore, as per GN509, the proposed construction activities within the wetland and 500m regulated area of a wetland would require authorisation through a full Water Use Licence Application (WULA). Zutari is currently undertaking a WULA to authorise the proposed water uses.

The delineated wetland suffers to off channel impoundment and afforestation that have decreased the upstream catchment yield, thereby impinging on the hydrological budget of the wetland. The remaining surface flows after catchment offtake collect in a channel, which has presumably carved its course in this wetland over time through increased stormwater input, thereby decreasing ecoservice provision through decreased hydrological spread of diffuse flows. Runoff from the agriculturally transformed catchment to the west of the site and stormwater generated from the residentially-transformed catchment to the east, together with several road crossings in the upstream catchment are envisaged to negatively impact on the water quality of this wetland, particularly through elevated sediment, total suspended solids, nutrient and toxicant inputs, albeit not severely. Disturbance to the catchment of this wetland has caused the encroachment of alien or otherwise problematic vegetation which have dominated this wetland.

It is strongly recommended that the proponent must make provision for the recommended mitigation measures, which include construction during the summer dry season, preserving the flow between the upstream and downstream areas during construction, and designing the road culverts in such a manner that the hydrology of the wetland is not altered during the construction phase are most pertinent.

Botanical

With regards to the botanical assessment, a very small areas along Trumali Street have been mapped as CBA 1, and there are several parts of the study area that have been mapped as ESA 2, along the watercourse in the vicinity of Wildebosch Road.

When assessing the direct impacts, two scenarios have been considered. Scenario 1 covers the original construction plan, involving the extension of Wildebosch Road and the upgrade of Trumali Street. Owing to the presence of a population of Wachendorfia brachyandra directly in the proposed road extension of Wildebosch Road, the potential impacts and significance of these activities is estimated to be High Negative.

Scenario 2 involves altering the construction footprint of the Wildebosch Road expansion to avoid the wetland habitat in which W. brachyandra is located. Avoiding this habitat should yield a significant reduction in the estimated impact, with the significance estimated to be Low Negative.

In conclusion, the vegetation across most of the proposed project footprint is classified as Swartland Shale Renosterveld, with Swartland Granite Renosterveld in the southern portion of the site. The outcome of the assessment has determined that large portions of the sites investigated have undergone significant transformation and disturbance, preserving little to no original vegetation. One species of conservation concern, Wachendorfia brachyandra, was documented in a wetland habitat. If the recommended mitigation measures are implemented, it is estimated that the proposed project should result in a Low Negative impact and the implementation of the upgrade of Trumali Street and extension of Wildebosch Road on condition that the recommended mitigation measures are applied.

Agricultural

The site falls outside of an area that is classified as a Protected Agricultural Area (PAA). A PAA is a demarcated area in which the climate, terrain, and soil are generally conducive for agricultural production and which, historically, has made important contributions to the production of the various crops that are grown across South Africa. Within PAAs, the protection, particularly of arable land, is considered a priority for the protection of food security in South Africa, but the protection of land outside of these areas is generally not considered a food security priority.

The land along the road route is high potential vineyard land. A detailed soil map and the identification of whether soils are Pinedene or Tukulu or Kroonstad is of little relevance to this assessment. What matters is that the impacted land is high potential vineyard.

Socio-economic

Based on the socio-economic site sensitivity report, the extension of the proposed Wildebosch Road to Trumali may be considered beneficial to the area in terms of an increase in accessibility and transport mechanisms, job creation, and household income.

The local as well as broader provincial municipality will likely experience a positive injection resulting from the Gross Domestic Product and production generated due to the capital and operational spend. However, considering the proximity of the proposed Wildebosch Road to Trumali extension to Brandwacht and Paradyskloof, consideration must be given as whether these areas will be negatively impacted in terms of sense of place and property values.

The preliminary socio-economic impact assessment of the proposed Wildebosch Road to Trumali Street extension indicates that, at this stage, there are no significant implications or flaws identified from a socio-economic perspective. The overall net positive impacts outweigh the net negative impacts, showcasing the potential benefits of the project. While the initial analysis presents potential negative impacts, it should be noted that these can be mitigated or improved through suitable measures.
A comprehensive Socio-Economic Impact Assessment will further investigate and provide in-depth information on both the baseline and potential impacts, ensuring a thorough understanding of the project's socio-economic implications.

Visual

During construction the landscape and visual impacts remains minor as the overall duration is expected to be limited, however the intensity of the anticipated landscape and visual impacts is expected to be highest during the peak construction phase of the project.

Landscape and visual impact are expected to be negligible during the operational phase (except for the anticipated impact caused by the change in visual character from an 'open' rural type of unbuilt landscape to a built landscape which are rated as moderate but can be reduced to minor if mitigation guidelines are implemented).

From a visual perspective the proposed project does not heavily impact on landscapes of significant symbolic, aesthetic, cultural and historical value, however every possible effort should be made to make the road blend in with the existing environment. With reference to the existing layout, the topographical form has been respected and the organically shaped alignment integrate well with the existing contours. Considering this, the implementation of all other mitigation guidelines will lower the intensity of the landscape and visual impacts, but will in most cases, not lower the overall impact significance.

Traffic

According to the findings contained in the Traffic Impact Study, it is recommended that the implementation of the section of link road between Paradyskloof Road and Trumali Street be implemented, as it does not have any negative impact on the traffic conditions in the area and in fact has a long-term benefit of improving the traffic conditions once the full Bypass has been implemented.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)

Map is included under Appendix B.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.

Preferred alternative

Positive:

- The surrounding communities are farms.
- Upgrade of the Trumali Street will affect all the road users in a positive way.
- The alignment is optimised to have the least effect on the existing constraints along the road.
- Safer travel.
- Reduction of traffic from existing build up neighbourhood of Paradyskloof.
- Reduced travel times with improved transport efficiency.
- More consistent and reliable travel.
- Improved amenity for local communities.
- Considered beneficial to the area in terms of, job creation (especially during construction, however, job creation will not be significant in numbers), and household income.
- The extension serves a long-term vision of not only providing access .
  for the property owners in its immediate vicinity, but also areas further away which will
  eventually be linked to the road.
- Has an incremental (i.e., not significant) improvement on the traffic performance in the area.
- The proposed road link does not have any negative impact on the traffic conditions in the area.

Negative:

- Disruption of traffic during construction phase.
- Botanical impacts which will be mitigated.
- Freshwater impacts which will be mitigated.
- Loss of agricultural land (extension of the Wildebosch Road).
- Impacts in terms of sense of place and property values (extension of the Wildebosch Road).
- Noise during construction which will be mitigated.

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

Through this Draft BAR process, there has been the detailed analysis of all potential impacts of the proposed project. According to the assessments conducted on site with the assistance of relevant specialist, the overall impact of the project results in a low environmental impact. This was however aided by certain management and mitigation measures as suggested in the BAR, specialist reports and the attached EMPr.

Based on these findings, it is suggested that this proposal be approved, with the implementation of the following mitigation measures:

Construction Phase Mitigation Measures:

- The construction period should be minimized to the minimum extent possible in order not to cause unnecessary and ongoing visual intrusion for nearby communities.
- A phased approach should be taken with regards to landscape rehabilitation efforts, i.e., landscape rehabilitation should start once sections of the road has been completed.
- The row of street trees along the existing section of Wildebosch Road must be extended into the new section to allow for visual unity whilst driving (enhancing the visual experience) and to soften the "road line" if viewed from a distance.
- Construction signage should not be obtrusive and must be placed with caution in strategic locations as required.
- Make use of existing access roads so that it minimizes modification of the topography and additional clearing of vegetation.
- Should any fossils, coins, human remains, articles of value or antiquities and other items of archaeological or paleontological significance, be uncovered during construction the local Heritage Authority shall be contacted immediately.
- Forum for complaints to be raised (via complaints register) should be provided.
- No surface water, ground or storm water shall be abstracted or polluted as a result of any activities on the site.
- The applicant shall ensure that effluent will be managed and disposed of in a manner that complies with the National Water Act, 1998(Act 36 of 1998).
- All requirements of the National Water Act, 1998 (Act 36 of 1998) shall always be adhered to.
- Search and Rescue of Wachendorfia brachyandra to be placed in suitable habitat nearby.
- Construction camp to be located in previously disturbed areas, such as agricultural fields.
- Installation of culverts or raised roadway to allow for movement of water through the wetland.
- Removal of alien and invasive species in the vicinity of proposed construction sites must be carried out in order to prevent establishment of these species in any disturbed areas.
- Minimize the construction footprint, in particular in the vicinity of wetland habitat as these soils are highly sensitive to compaction and disturbance.
- The re-establishment of vegetation on watercourse banks and in areas disturbed by construction activities.
- It is imperative that construction occurs during the drier summer months (January -April) using as much manual labour (not machinery) as possible to minimise the wetland disturbance footprint in terms of soil disturbance and vegetation trampling, and further to minimise hydrocarbon and oil spillages.
- Only authorised maintenance personnel may be permitted to enter the wetland as part of the clearing activities to prevent unnecessary disturbance to this wetland.
- Contractor laydown areas (if applicable) are to be established at least 32 m outside of the delineated extent of the wetland.
- The outer boundary of the wetland must be demarcated using a weather resistant material by an ECO and marked as a 'no-go' area where no construction activities are planned and all construction footprint areas must remain as small as possible.
- Vegetation clearing must be limited to what is essential within the proposed road extension area.
- Alien vegetation must be managed throughout the construction phase.
- All alien and invasive vegetation species, debris and litter removed from the crossing must be removed from site (no stockpiling allowed).
- Vehicle servicing and re-fuelling must occur off-site.
- Stockpiles as a result of the removal of wetland soil may not exceed 2.0 m in height and must be placed outside of the delineated extent of the wetland.
- Stockpiles must not be contaminated with hydrocarbons and oils.
- The top organic layer of the soil stockpile must be separated from the lower layers and protected from moisture loss and alien vegetation encroachment, using a geotextile such as hessian sheeting, for use during the rehabilitation phase of this project.
- Similarly, the imported road construction material must also be protected from alien vegetation encroachment using hessian sheeting, thereby also preventing deposition into the wetland by wind action.
- Water must be allowed to flow to the downstream reach at all times and rip-rap or a similar erosion protection structure must be placed at the outlet to the diversion pipe to prevent erosion of the wetland floor.

- Suitable sediment traps such as geotextile wrapped hay bales or geotextile nets must be installed downstream of the proposed road extension to prevent potential sedimentation of the downstream reach of the wetland during unforeseen rainfall events due to bare ground.
- Soil surrounding the repair works must be suitably loosened on completion of construction activities and revegetated to prevent erosion.
- Avoid unnecessary trampling of vegetation irrespective of the vegetation being associated with the wetland or the surrounding terrestrial area.
- The duration of impacts within the wetland must be minimised as far as possible by ensuring that the duration of time in which flow alteration will take place is minimised. The construction period must be kept as short as possible.
- Rehabilitation works must be undertaken just before the wet season (preferably within April/May) to ensure survival of new vegetation species and prevent proliferation of alien and invasive plants.
- The stormwater channel that runs along the southern boundary of the UCVBW must be infilled upstream to promote the diffuse spread of water (albeit interflow) through the wetland.
- All areas to be cleared of vegetation must be done so in a phased approach, to reduce the risk of proliferation of alien vegetation to retain a level of protection to the freshwater ecosystem during construction.
- All cleared vegetation must be disposed of at a licensed refuse facility and may not be mulched or burned on site.
- Bare soil must ideally be restocked with indigenous vegetation immediately after the removal of alien invasive vegetation, and in cases where the soil will remain unplanted for a few days it must be covered with a hessian net to retain moisture and prevent soil desiccation.

Operational Phase Mitigation Measures:

- Long-term management of alien and invasive plant species
- Indigenous vegetation must be retained as far as possible and used during the rehabilitation phase of this wetland
- The pipe culverts must be designed in a manner to preserve the natural hydrology of this UCVBW, flows must not be concentrated downstream of the pipe culvert.
- Any loss in wetland longitudinal connectivity due to a failed culvert design must be remedied as soon as possible to reduce the duration of impact.
- An erosion protection structure must be installed at the discharge point of the side drains into the wetland and all stormwater must collect into an attenuation facility that is operated according to Sustainable Urban Drainage System principles in terms of the quantity and quality of stormwater discharging into the wetland.
- The erosion protection structures must be monitored bi-annually to ensure that these structures are still intact and can continue to safeguard the wetland against erosion.
- Hot spots for the build-up of debris and excess sediment must be identified and when necessary, debris/excess sediment must be removed by hand to prevent future flooding and potential damage to infrastructure. In this regard, special mention is made of periods following high rainfall and subsequent high instream water volumes. Removal of debris must be undertaken in line with the above listed construction mitigation measures.
- Any erosion must be identified on an ongoing basis and re-profiled and revegetated accordingly.
- Existing access roads must be used for monitoring purposes to minimise the compaction of soils and loss of riparian and instream habitat.
- The wetland must be monitored for alien and invasive vegetation encroachment and all alien vegetation/weeds must be removed according to a suitable alien vegetation control plan.
- Where applicable for the eradication of alien and invasive vegetation, care should be taken with the choice of herbicide to ensure that no additional impact and loss of indigenous plant species occurs due to the herbicide used and water contamination is avoided

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

The EMPr of this proposed development must form part of the contractual agreement and be adhered to by both the contractors and the applicant, and all recommended mitigation measures must be fully implemented.

It is the opinion of the EAP that the proposed development will comply with current relevant legislation, and that with the implementation of the mitigation measures recommended in this BA Report.

The following conditions are recommended:

- Condition 1: The EMPr must be fully complied with and included in all tender documentation.
- Condition 2: All positive impacts (detailed in this BAR, EMPr, and the attached specialists' reports) must be optimized as practical as possible.
- Condition 3: Based on the Proclaimed Alignment, EAP statement, specialist's findings, and their conclusions, it is recommended that the preferred site be pursued.
- Condition 4: The proponent must undertake a full Water Use Licence Application to authorise the proposed water uses for the project.
- Condition 5: Construction cannot commence on site without an approved Water Use Licence, since the project entails a wetland crossing and is located within the 500 m regulated area of a wetland.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

Easing traffic congestion is consistent with good environment practice (i.e. mitigation of pollution in urban areas), if undertaken in a responsible manner.

The project will provide an alternative road alignment to the recently constructed Schuilplaats Road which aligns to the Western Cape Government (WCG) R44 Access Management contract. A further benefit of the construction of the Wildebosch extension is that it creates more access opportunities to the R44 for the Paradyskloof area. The phased implementation of the Paradyskloof-Trumali Street portion would also have immediate benefits due to access restrictions on the R44 and proposed residential developments in the area.

Taking into account the low-risk significance after mitigation measures proposed by the specialist as well as those contained in the EMPr have been fully implemented, Zutari is of the opinion that the potential impacts posed by the proposed development can be adequately mitigated to prevent detrimental impacts to the environment.

With regards to traffic and municipal SDP, the project is much needed as it does not have any negative impact on the traffic conditions in the area and in fact has a long-term benefit of improving the traffic conditions.

None of the potential negative impacts of the project can be considered to be of significant long-term negative consequence on the affected socio-economic and biophysical environment that is extremely difficult to mitigate or undesirable to promote, in other words an environmental fatal flaw.

Zutari is also of the opinion that the preferred alternative may be approved on the following rationale:

- The Wildebosch road link commencing at Paradyskloof is the only connection point that will join the Trumali Street as per the proclaim alignment.
- The preferred option will have one crossing over the delineated UCVBW on Farm RE/369.
- There is no (assessed) impact that will be cause for concern, provided all recommended mitigation and management measures are fully implemented throughout the project.
- All layout alternatives will traverse the high agricultural potential area over Farm RE/369.

The Proposed Wildebosch Road Extension to Trumali Street is concluded, based on the impact assessment, to have low negative impacts on the socio-economic and biophysical environment as well as positive impacts through the provision of an alternative road alignment and improved access opportunities.

Zutari does not find any impediment to the application and therefore has no objections to the project going forward, subject to implementation of the Environmental Management Programme (EMPr) and specialist recommendations accompanying this BA Report.

Therefore, it is recommended that DEA&DP considers this Impact Assessment Report together with the Basic Assessment Report, specialists reports and EMPr and issue an Environmental Authorisation to Stellenbosch Municipality for the preferred alternative to proceed with the construction of the Proposed Wildebosch Road Extension to Trumali Street.

The following conditions are recommended for inclusion in the EA:

- Condition 1: The EMPr must be fully complied with and included in all tender documentation.
- Condition 2: All positive impacts (detailed in this BAR, EMPr, and the attached specialists' reports) must be optimized as practical as possible.
- Condition 3: Based on the Proclaimed Alignment, EAP statement, specialist's findings, and their conclusions, it is recommended that the preferred site be pursued.
- Condition 4: The proponent must undertake a full Water Use Licence Application to authorise the proposed water uses for the project.
- Condition 5: Construction cannot commence on site without an approved Water Use Licence since the project entails a wetland crossing (including installation of culverts and road construction) and is located within the 500 m regulated area of a wetland.
- Condition 6: The applicant to ascertain that there is representation of the applicant on site at all times of the project phases, ensuring compliance with the conditions of the EMPr and Environmental Authorisation thereof.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.

Freshwater Assessment

In preparing the freshwater assessment the specialist had applied the following assumptions and limitations:

- The determination of any freshwater ecosystems is confined to physical delineation within the study area, and desktop delineation (using aerial photography and digital satellite imagery) in the broader investigation area and is based on a single site visit undertaken on the 24th of October 2023. The broader extent of freshwater ecosystems will be considered when describing the impact of the catchment on the freshwater ecosystem that was identified in the study area (where and if applicable).
- Global Positioning System (GPS) technology is inherently somewhat inaccurate, and some inaccuracies due to the use of handheld GPS instrumentation may occur; however, the delineations as provided in this report are deemed appropriately accurate to fulfil the authorisation requirements.

- Wetlands and/or riparian watercourses and terrestrial zones create transitional areas where an ecotone is formed as vegetation species change from terrestrial to obligate/facultative wetland or riparian species. Within this transition zone, some variation of opinion on the freshwater ecosystem boundaries may occur. However, if the Department of Water Affairs and Forestry (DWAF) (2008) method is followed, all assessors should get largely similar results.
- With ecology being dynamic and complex, certain aspects (some of which may be important) may have been overlooked. The freshwater ecosystem delineation as presented in this report is, however, regarded as the best estimate of the boundaries based on the site conditions present at the time of the site visit and are deemed appropriately accurate to guide any future development plans.

Agricultural Site Sensitivity Verification

The specialist only prepared a site sensitivity verification report, and a list of assumptions and limitations did not form part of this report.

Botanical Assessment

The botanical specialist included the following assumptions and limitations:

- As the optimal season to conduct floral surveys in the south-western Cape is during the spring flower season, the time of the survey was ideal for seeing both the spring annuals and geophytic components of the plant community at the site. This is of particular importance in renosterveld vegetation due to the high number of geophytes present in this vegetation type.
- It is therefore assumed that the plant community observed during this survey is an accurate representation of the plant species richness of the area.

Socio-economic

The specialist only prepared a site sensitivity report; therefore, the assumptions and limitations were not included.

Landscape and Visual Impact Assessment

Regarding the visual impact assessment, the following assumptions and limitations apply:

- Determining a visual resource in absolute terms is not achievable. It is a complex procedure since it is determined through a combination of quantitative (visibility) and qualitative (aesthetic value) criteria. Therefore, a visual assessment cannot be entirely objective in this sense. Individuals will evaluate a landscape differently, based on experience, cultural, and social background.
- Various factors can enhance or reduce the visual impact of the proposed project, for instance, vegetation near a receptor's view of the proposed project. Other factors include weather, climatic conditions, and seasonal change. Therefore, it is difficult to determine the visual impact of the proposed project from the viewpoint of each receptor.
- No specific national legislation for visual assessments currently exists in South Africa. However, the assessment of visual impacts is required by implication when the provisions of relevant acts governing environmental management are considered and when certain characteristics of either the receiving environment or the proposed project indicate that visibility and aesthetics are likely to be significant issues and that visual input is required (Oberholzer, 2005).
- Access for the specialist was restricted at gated communities, however this did not influence the outcome and level of confidence for this study.
- The layouts, locations and technical specifications as received by the specialist are assumed to be correct.
- Both the viewshed and site survey assumed that the visual receptor's eye height is between 1.5 m-1.7 m above ground level, based on the average heights for men and women.
- The viewsheds resulting from the Digital Elevation Model (DEM) and as illustrated in this report, indicate the areas from which the proposed project is likely to be visible and do not take local vegetation cover (land cover) and anthropogenic structures (buildings and infrastructure) into account as these factors are too variable. Potential sensitive receptor points have therefore been ground-truthed during the site assessment.

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.

The Environmental Authorisation is required for a minimum of 30 years as the design lifespan of the road is 25 years.

The Wildebosch Road extension and upgrades of Trumali Street will commence in September 2024 and would take approximately 8 months to complete. Whereas the post-construction monitoring would be finalised within three months after construction has ended.

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

During construction, it is likely that construction workers will use bottled water. The use of potable (i.e., bottled) water would be limited to the construction phase only. This bottled water would be sourced locally from a preferred supplier identified by the contractor. Bottled water reduces the need to consume and waste clean water when compared to running tap water. It is relatively easy to reduce, control and monitor the water demand when using bottled water. It is well documented that the average quantity of (drinking) water required by a male is 3.7 L per day, and 2.7 L by a female. However, temperature and other health conditions my decrease or increase the demand for each individual.

Groundwater or surface water must not be used as potable water during construction. No abstraction of groundwater or surface water will be permitted on site during construction.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.
It is anticipated that some solid construction waste will be generated which would include (list is not exhaustive) building rubble, packaging material, scrap, overburden material and general litter from construction workers. Therefore, it is recommended that construction waste or rubble be collected and stored temporarily in designated containers for the different waste streams on site, collected by a suitably licenced service provider and disposed of at a licensed landfill. During construction, it is likely that the normal sewage will be handled via temporal ablution facilities (such as portable toilets) that will be serviced by a suitably qualified contractor on a regular interval (i.e., as, and when needed). Such wastewater is not expected to be recycled or re-used. As indicated above, waste will not be generated during operation. During maintenance, the road maintenance activities must be confined to the developed footprint of the road. All spills of potential pollutants on the road surface must be immediately remediated. It is unlikely that this type of waste will be recycled or re-used but would be disposed of at a licenced landfill.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.
Due to the nature of this development, energy efficiently strategies have not been considered in the design and implementation of the project.	

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

Note: Duplicate this section where there is more than one Applicant.

I, Shane Vinod Kumar Chandak, ID number: 790317 5208 089 in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;
- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;
- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;
- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;
- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Signature of the Applicant: Date: 04/09/2024

Stellenbosch Local Municipality
Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I Xanté Eberhardt, EAP Registration number 2021/3103 as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

Xanté Eberhardt

Signed by: Xanté Eberhardt, xante.eberhardt@zutari.com

26/09/2024 08:57:28 (UTC+02:00)

26/09/2024

Signature of the EAP: Date:

Zutari (Pty) Ltd

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP NOT APPLICABLE

I ....., EAP Registration number ..... as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST NOT APPLICABLE

Note: Duplicate this section where there is more than one specialist.

I ....., as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST NOT APPLICABLE

I ....., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s);
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

In diversity there is beauty and there is strength.

MAYA ANGELOU

Document prepared by:

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ZUTARI
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