LORNAY
ENVIRONMENTAL CONSULTING

BASIC ASSESSMENT REPORT

Proposed Development of a Single Residential Dwelling and Associated Infrastructure on Portions 125 and 126 of the Farm Hangklip No. 559, and the Reminder of the Farm No. 562, Caledon RD.

28 May 2025

Consultant:
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Western Cape Government
Environmental Affairs and Development Planning

FORM NO. BAR10/2019

BASIC ASSESSMENT REPORT

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

NOVEMBER 2019

(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)

PROPOSED DEVELOPMENT OF A SINGLE RESIDENTIAL DWELLING AND ASSOCIATED INFRASTRUCTURE ON PORTION 125, PORTION 126 OF THE FARM HANGKLIP NO. 559, AND THE REMINDER OF THE FARM NO. 562, CALEDON RD

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. 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.

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

5. 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.

6. This BAR is current as of **November 2019**. 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/eadp to check for the latest version of this BAR.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

14. 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: REGION 1 and REGION 2 **(Region 1: City of Cape Town, West Coast District)** **(Region 2: Cape Winelands District & Overberg District)**	**GEORGE OFFICE: REGION 3** **(Central Karoo District & Garden Route District)**
BAR must be sent to the following details: Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1 or 2) Private Bag X 9086 Cape Town, 8000 Registry Office 1st Floor Utilitas Building 1 Dorp Street, Cape Town Queries should be directed to the Directorate: Development Management (Region 1 and 2) at: Tel: (021) 483-5829 Fax (021) 483-4372	BAR must be sent to the following details: Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530 Registry Office 4th Floor, York Park Building 93 York Street George Queries should be directed to the Directorate: Development Management (Region 3) at: Tel: (044) 805-8600 Fax (044) 805 8650

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and

	Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape

NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

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

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	
	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:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix:	**Final comment/ROD from HWC**	N/A
	Appendix E:	**Copy of comment from Cape Nature**	✓
	Appendix E:	**Final Comment from BOCMA**	✓
	Appendix:	**Comment from the DEA: Oceans and Coast**	N/A
	Appendix:	**Comment from the DAFF**	N/A
	Appendix:	**Comment from WCG: Transport and Public Works**	N/A
	Appendix:	**Comment from WCG: DoA**	N/A

	Appendix:	**Comment from WCG: DHS**	N/A
	Appendix:	**Comment from WCG: DoH**	N/A
	Appendix:	**Comment from DEA&DP: Pollution Management**	N/A
	Appendix:	**Comment from DEA&DP: Waste Management**	N/A
	Appendix:	**Comment from DEA&DP: Biodiversity**	
	Appendix:	**Comment from DEA&DP: Air Quality**	N/A
	Appendix:	**Comment from DEA&DP: Coastal Management**	N/A
	Appendix E:	**Comment from the local authority**	✓
	Appendix:	**Comment from the District Municipality**	
	Appendix:	**Copy of an exemption notice**	N/A
	Appendix	**Pre-approval for the reclamation of land**	N/A
	Appendix:	**Proof of agreement/TOR of the specialist studies conducted.**	✓
	Appendix:	**Proof of land use rights**	
	Appendix:	**Proof of public participation agreement for linear activities**	
Appendix E:	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		✓
Appendix F:	**Specialist Report(s)** **APP F1 Terrestrial Biodiversity Impact Assessment** **APP F2 Terrestrial Biodiversity Impact Assessment (Addendum)** **APP F3 Aquatic Biodiversity Impact Assessment**		✓
Appendix G:	**EMPr**		✓
Appendix H:	**Screening tool report**		✓
Appendix I:	**Confirmation of all services (Sewage management)**		✓
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:		GEORGE OFFICE:
	REGION 1 (City of Cape Town, West Coast District	REGION 2 (Cape Winelands District & Overberg District)	REGION 3 (Central Karoo District & Garden Route District)
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Geoffrey Francois Fourie		
Name of contact person for Applicant/Proponent (if other):	-		
Company/ Trading name/State Department/Organ of State:	-		
Company Registration Number:	-		
Postal address:	PO Box 4414		
	Empangeni	Postal code: 3880	
Telephone:	082 857 5288	Cell:	
E-mail:	gfranfour@gmail.com	Fax: ( )	
Company of EAP:	Lornay Environmental Consulting Pty Ltd		
EAP name:	Michelle Naylor		
Postal address:	Unit 5/1F, Hemel and Aarde Wine Village, Hermanus		
	Hermanus	Postal code: 7200	
Telephone:	083 245 6556	Cell:	
E-mail:	michelle@lornay.co.za	Fax: ( )	
Qualifications:	Master of Science (Rhodes University)		
EAPASA registration no:	EAPASA. 2019/698,., SACNASP., IAIASA		
	Portion 125 & 126 of 559		
Duplicate this section where there is more than one landowner Name of landowner:	Applicant: Geoff Francois Fourie		
Name of contact person for landowner (if other):	-		
Postal address:	-		
	-	Postal code:-	
Telephone:	-	Cell:-	
E-mail:	-	Fax: -	
	RE/562		
Duplicate this section where there is more than one landowner Name of landowner:	Overstrand Municipality		
	Madelein Erasmus		
	-		
Name of contact person for landowner (if other):	-	Postal code:-	
Postal address:	028 316 5602	Cell:-	
Telephone:	Cnr of Molteno and Viljoen Street, Onrus Hermanus	merasmus@overstrand.gov.za	
E-mail:			
	Landowner consent attached		
Name of Person in control of the land:	As above		
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:	Overstrand Municipality – Kleinmond	
Contact person:	Timothy Europa	
Postal address:	Private Bag X3	
	Kleinmond	Postal code: 7195
Telephone	028 271 8420	Cell:
E-mail:	teuropa@overstrand.gov.za	Fax: ( )

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

1.	Is the proposed development (please tick):	New	X	Expansion		
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.					
The proposed development site is classified as a greenfield site. Although the footprint of the proposed dwelling will be situated within a historical gravel quarry which is approximately 0.24 ha in extent, this area has since undergone natural rehabilitation, with indigenous vegetation having re-established over time. Despite the prior disturbance, the site currently retains ecological value and cannot be regarded as developed or transformed for urban purposes. In addition, the proposed alignment for the new access road traverses land that remains in a largely natural state and is still vegetated with indigenous plant species. Accordingly, both the residential development footprint and the access road route are appropriately considered greenfield areas, as they are located on previously undeveloped land with existing ecological sensitivity.						
~~3.~~	**~~For Linear activities or developments~~**					
~~3.1.~~	~~Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:~~					
~~3.2.~~	~~Development footprint of the proposed development for all alternatives.~~	m²				
~~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.~~					
~~3.4.~~	~~Indicate how access to the proposed routes will be obtained for all alternatives.~~					
~~3.5.~~	~~SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives~~					
~~3.6.~~	**~~Starting point co-ordinates for all alternatives~~**					
	~~Latitude (S)~~	~~°~~	~~‘~~	~~“~~		
	~~Longitude (E)~~	~~°~~	~~‘~~	~~“~~		
	~~Middle-point co-ordinates for all alternatives~~					
	~~Latitude (S)~~	~~°~~	~~‘~~	~~“~~		
	~~Longitude (E)~~	~~°~~	~~‘~~	~~“~~		

	~~**End point co-ordinates for all alternatives**~~			
	~~Latitude (S)~~	~~°~~	~~'~~	~~"~~
	~~Longitude (E)~~	~~°~~	~~'~~	~~"~~
Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.				
4.	**Other developments**			
4.1.	Property size(s) of all proposed site(s):	• **Portion 125**: 24.43 ha • **Portion 126**: 22.22 ha • **Remainder of the Farm 562**: 285.92		
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):	There are no existing facilities Portion 125 and Portion 126 of the Farm 559. The reminder of the Farm 562 is a municipal land consists of a cemetery.		
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:	• Development platform of **800 m²** to construct a single residential dwelling • Establishment of a new access road **850 m²** (informal jeep tracks) opposite the Wastewater Treatment Works.		
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).			

The proposed development and associated activities are located on Portions 125 and 126 of the Farm Hangklip No. 559, as well as the Remainder of the Farm 562, situated between Betty's Bay and Kleinmond in the Western Cape. The applicant proposes the establishment of a low-impact, single residential dwelling on Portion 126, as well as the construction of an access road designed to limit environmental disturbance and respond appropriately to the site's ecological sensitivities.

The proposed access road will originate from the R44, directly opposite the Wastewater Treatment Works turn-off, and will traverse municipal land (Remainder of Farm 562) via a to-be-registered servitude to reach the residential site on Portion 126. The road will also provide future access to the adjacent Portion 125, which currently lacks formal access. Both Portion 125 and Portion 126 are owned by the applicant.

Residential Dwelling

→ The dwelling will be sited within an existing old quarry, thus significantly reducing the need for further vegetation clearance and minimizing visual and ecological impacts.
→ The total footprint required for the dwelling is approximately **800 m²**.

Access Road

→ Access off the R44 to the proposed dwelling site presented as one of the main challenges associated with the proposal.
→ Access to the proposed dwelling will be facilitated via a new informal / jeep track road constructed over the Remainder of Farm 562 (municipal land) through a registered servitude and onto 126 and 125.
→ The preferred access option (Alternative 3) proposes an informal jeep track-style road originating from the R44, directly opposite the entrance to the Municipal Wastewater Treatment Works. this access point has been confirmed via a servitude and consent from the Overstrand Municpality.
→ The access track will be approximately **860 m** in length, jeep track / twee spoor style road.
→ Limited earthworks and site preparation will be undertaken in sections of the access road alignment that traverse within a few metres of identified wetland area to ensure structural stability and mitigate hydrological impacts.
→ The road will also provide future formal access to Portion 125, which currently has no access since access cannot be taken off the R44 due to line-of-sight regulations.

Water Supply

- → Domestic water will be supplied through rainwater harvesting and groundwater. The use falls under Schedule 1: Reasonable domestic use and therefore no water use licence, or general authorisation is required for t
- → Collection infrastructure such as roof catchment systems and storage tanks will be installed on-site to meet household water demands.

Sewage Management

- → A sealed conservancy tank will be installed adjacent to the residential unit to manage sewage effluent.
- → The tank will be positioned more than 100 m from any delineated watercourses, in compliance with relevant environmental guidelines.
- → Sewage will be regularly removed and transported by Boland Toilet Services to the local municipal Wastewater Treatment Works. The service provider has confirmed capacity for this function (refer to Appendix I).

Electricity Supply

- → The dwelling will be fully off-grid and powered by a solar energy system.
- → Photovoltaic panels and associated battery storage will be installed to ensure reliable electricity supply, with no reliance on Eskom infrastructure.

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.

Initially it was proposed that access will be via the Overstrand Municipal graveyard access road, where the road would be extended from the graveyard site. This alternative was assessed in the first round of public participation. However, the Overstrand Municpality then revoked this agreement and various other access options had to be explored. Access off the R44 was also limited by the Western Cape Department of Infrastrucrure (Roads) due to line-of-sight regulations and safe turning distances.

The final feasible option for access to the proposed site is as described in the final preferred alternative and as per the approved municipal Servitude agreement and specialist comment. Access off the R44 will be taken from the R44 (Clarence Drive) regional road, directly opposite the existing turn-off leading to the Kleinmond Waste Water Treatment Works (WWTW). This access point has been recommended by the relevant municipal authorities and Western Cape Department of Infrastructure as the most appropriate and practical solution. The proposed access road will extend approximately 850 m in length and approximately 3 m wide as an informal jeep track. The route will traverse the Remainder of Farm 562, located to the east of Portion 126 of Farm Hangklip No. 559, before reaching the proposed development site. The road will then dog leg southwards to offer future access options for Farm 125, which currently has no viable access route.

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:																					
	Portion 125 of the Farm 559	C	0	1	3	0	0	0	0	0	0	0	0	0	5	5	9	0	0	1	2	5
	Portion 126 of the Farm 559	C	0	1	3	0	0	0	0	0	0	0	0	0	5	5	9	0	0	1	2	6
	Remainder of the Farm 562	C	0	1	3	0	0	0	0	0	0	0	0	0	5	6	2	0	0	0	0	0

4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	34°	20‘	14.90“
	Longitude (E)	18°	58’	55.70“

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 x

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 x
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 x
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. A General Authorisation for the Section 21c&I wateruses for development within the regulated area of a wetland, will be applied for as per the NWA requirements and as recommended in the Aquatic Impact Assessment.	YES x	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 x
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	YES	NO x
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	YES	NO x
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	YES	NO x
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 x

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
N/A

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.
WESTERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK, 2014 (PSDF) The proposed low-impact residential development aligns with the core principles and strategic objectives of the Western Cape Provincial Spatial Development Framework (PSDF), 2014, particularly those promoting sustainable land use, ecological integrity, and responsible development within rural and sensitive coastal environments. The PSDF advocates for the protection of biodiversity and ecosystem services, the management of development in areas of environmental sensitivity, and the promotion of compact, resource-efficient development forms. In this context, the siting of the residential dwelling within an already disturbed old quarry minimizes further transformation of the natural landscape and reduces visual and ecological impacts. Furthermore, the off-grid infrastructure approach through solar power, rainwater harvesting, and a sealed conservancy tank supports the PSDF's goals of promoting renewable energy use and sustainable service delivery, especially in rural areas with limited municipal infrastructure. The proposed access road, designed as a narrow jeep track with minimal earthworks and a route informed by specialist input, reflects the PSDF's directive for context-sensitive infrastructure development that avoids fragmentation of natural habitats. Additionally, the reuse of already disturbed land and the consideration of wetland crossings during design demonstrate an alignment with the PSDF's ecological network policy, which calls for the

preservation and reinforcement of ecological corridors and critical biodiversity areas. Lastly, by facilitating appropriate access and responsible land use on private landholdings, the proposal contributes to rural land reform and improved land management, which is also emphasized in the PSDF's strategic spatial agenda.

OVERSTRAND MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK, 2020 (SDF)

The broad policy objectives of the SDF include enhancing the image of the Overstrand as a liveable urban and rural area which provides a range of facilities as activities which tourists and residents can enjoy. Development proposals should also capitalise on the unique sense of place which rural areas in the Overstrand are renown for. The SDF promotes developments which enhance the visual quality and attraction of the built environments while preserving the social and cultural attributes which are valued by inhabitants.

Consistency of the proposal with the policy

- The promotion of rural tourism development based on the ecological and heritage value of the region is encouraged. The tourist accommodation will be highly dependent on the ecological value of surrounding natural systems as the subject property is located within the popular Hemel and Aarde Valley. Wine tours are very popular to the area
- The maintenance of the dominance of the natural and agricultural environment is encouraged. This proposal is of a low intensity and will not interfere with the dominance of natural and agricultural environment which is prevalent on the subject farms.

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.

- EIA GUIDELINE AND INFORMATION DOCUMENT SERIES, DATED MARCH 2013: APPLIED TO VARIOUS COMPONENTS IN THE BASIC ASSESSMENT PROCESS. THE FOLLOWING GUIDELINES WERE CONSIDERED THROUGHOUT THIS BASIC ASSESSMENT PROCESS:
  - Guideline for the Review of Specialist Input in the EIA process (June 2005);
  - Guideline for Environmental Management Plans (June 2005)
  - Guideline on Alternatives (March 2013)
  - Guideline on Need and 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

Agriculture Theme – Medium Sensitivity

The subject properties are located on land currently zoned as "undetermined." However, the proposed development is consistent with the land use rights afforded by the zoning scheme, specifically for the establishment of a single residential dwelling. No agricultural activities are currently being undertaken on-site, and the scale of the proposed development is not anticipated to compromise the agricultural potential of the broader area. No further assessment required.

Animal Species Theme – High Sensitivity

According to the National Web-Based Environmental Screening Tool, approximately ten animal species of conservation concern have been identified as potentially occurring within on the broader subject properties, Portions 125 and 126 of the Farm 599 and Remainder of the Farm 562, on the farm , with sensitivity ratings ranging

from Medium to High. These include eight avian (birds) species, one amphibian species (*Cape platanna Xenopus gilli*), and one invertebrate species (the mountain grasshopper *Aneuryphymus montanus),* as detailed in the table below. The proposed residential dwelling is situated on a previously disturbed quarry site in a disturbed habitat, and the associated development footprint is minimal. Nevertheless, a pre-construction site walk-through will be undertaken to identify and appropriately manage the presence of any fauna, as well as nests or breeding sites.

For the construction of the access road, a range of mitigation measures will be implemented, including a Search-and-Rescue protocol for plant and slow moving / sedentary faunal species in the development areas. The use of a jeep track is proposed to further limit the extent of habitat disturbance and road engineering. According to the Freshwater Specialist, following mitigation, the impact on fauna is anticipated to be of Low negative significance. Therefore, the development layout has been designed to avoid encroachment into wetland habitat areas. Construction zones will be clearly demarcated to prevent unintended disturbance beyond the designated footprint. Although the alignment of the access road lies within a few metres of a hillslope seep wetland, it is highly probable that any biota loss will be localised and limited in extent (i.e., of low intensity). All the mitigation measures regarding the fauna being proposed by the freshwater specialist will be implemented.

African marsh harrier (*Ave-Circus ranivorus)*

The African Marsh Harrier is listed as a species of High Sensitivity on the National Environmental Screening Tool, primarily due to its reliance on wetland and marshland habitats, which are increasingly under pressure from agricultural expansion, urbanisation, and infrastructure development. It is currently classified as Vulnerable in South Africa, largely due to habitat degradation and loss of suitable breeding and foraging grounds.

This medium-sized raptor occurs in marshes, reedbeds, vlei margins, floodplains, and occasionally along seasonally inundated grasslands. It prefers wetland complexes with tall emergent vegetation, which provide cover for nesting and hunting. The species is known to nest on the ground, typically within dense reeds or sedges, making nests highly susceptible to disturbance during construction and vegetation clearance.

Within the context of the proposed development on Portion 126 of Farm 559, the proximity of the proposed jeep track to the R44 may reduce the habitat suitability for this species, however a pre construction site walk must be undertaken to survey for nests / presence of these birds.

Black Stork (*Ciconia nigra)*

Typically found near water sources like pools, lakes, and estuaries, and in other marshy or wetland areas. It is particularly reliant on the presence of intact freshwater ecosystems and surrounding riparian vegetation. Black Storks breed once annually, nesting in tall trees or cliff ledges often near water sources where they require minimal human disturbance for successful reproduction. This preferred habitat does not align with the site characteristics; however a preconstruction site scan must be done by the appointed ECO / other responsible person. The scan should observe for the presence of both this species and their nests. Should any nests or breeding activity be identified within or near the proposed development footprint, immediate consultation with the ECO to determine the way forward. Construction must be halted in the vicinity of the nest, and a suitable buffer zone must be implemented to avoid disturbance.

Lanner Falcon (*Falco biarmicus*)

They prefer open areas with good visibility for hunting, such as grasslands, fields, and along coastlines, rivers, and lakes. Lanner Falcons are most common around cliffs used for nesting and roosting, but may also use buildings, electricity pylons, and trees. A site scan for these species must be undertaken prior to construction of the development however their preferred habitat choice does not align with where the construction and operations will take place on this property. The preferred habitat does not align with the proposed development area on site.

Striped Flufftail (*Sarothrura affinis)*

The Striped Flufftail (*Sarothrura affinis*) is a small, secretive bird with a patchy distribution across eastern and southern Africa. They are typically found in areas with dense cover near open foraging areas, like dry upland grasslands or fynbos. They are found in fynbos regions. They are often associated with water sources but prefer drier areas compared to other flufftail species A site scan for these species must be undertaken prior to construction of the development to prevent any of their habitat loss.

Verreaux's eagle (*Aquila verreauxii*)

They prefer mountainous, rocky terrain, especially areas with cliffs and ledges where hyraxes are abundant. Nests are typically built on cliffs or ledges, though they may also be found in trees or on artificial structures like power lines. Breeding seasons vary across their range, with peak breeding occurring in different months depending on location. Habitat preference does not align with development area on site.

Cape Platanna (*Xenopus gilli*)

The Cape Platanna is an endangered species found primarily in the Southwestern Cape. Its preferred habitat includes blackwater seepages and ponds, often within or near Mediterranean-type shrubby vegetation, freshwater marshes, and intermittent freshwater marshes. The site development layout has been designed to avoid encroachment into wetland habitat areas and the loss of these species. The site scan must be undertaken prior to construction, and demarcation of the development site must be made in order to avoid the extent to areas outside the development footprint.

The Black Harrier (*Circus maurus*)

The Black Harrier is a rare, endemic raptor found in southern Africa, particularly in the Western Cape province of South Africa. Its core range is within the Fynbos Biome, and it also extends to the southern reaches of the Karoo and Grassland biomes. Black Harriers prefer coastal and mountain fynbos, highland grasslands, Karoo sub-desert scrub, and open plains with low shrubs and croplands. They breed in the montane fynbos, renosterveld, and strandveld habitats. A site scan for Black Harrier nests must be conducted prior to construction. Should any nests be found, the proposed development must be postponed to a later date. Black Harriers, build their nests on the ground, in tall vegetation near wetlands or in reedbeds, using dried vegetation like stems, grass, reeds, and weeds.

Denham's bustard (*Neotis denhami*)

Denham's Bustard is a large terrestrial bird that can occur in relatively high densities within landscapes composed of a mosaic of cultivated pastures, croplands, and natural vegetation. Its habitat use is known to vary seasonally, reflecting its adaptability to different environmental conditions (Allan, 2002). The species exhibits flexible foraging habits and distinctive breeding behaviour, often influenced by habitat structure and human land-use patterns. Due to its conservation significance and sensitivity to habitat disturbance, a targeted site scan for Denham's Bustard must be conducted prior to the commencement of construction activities, however with the proposed activities confined for a small section of the property along the R44, no impact is anticipated.

Hottentot Buttonquail (*Turnix hottentottus*)

The Hottentot Buttonquail is mostly restricted to the Fynbos Biome in Western Cape. It occurs from Cape Point (Table Mountain National Park), eastwards throughout the Cape Fold Mountains, with records from Hottentots Holland and adjacent ranges (e.g. near Somerset West, Kogelberg, Kleinmond and the Limietberg-Bain's Kloof areas; Taylor 2000b). It is also known from the Langeberg and Overberg regions (Bontebok National Park, De Hoop Nature Reserve, Potberg, Malgas and Wydgelee; Ryan and Hockey 1995). In the east of its range, it extends eastwards to the border of Eastern Cape along the Outeniqua, Kamanassie, Gamkasberg and Kouga ranges (Lee 2013). It was previously recorded as far east as Addo Elephant Park and Port Elizabeth, Eastern Cape (Grobler and Braack 1984) although there have been no recent records from this area (Allan and Colahan 1997). It also occurs in Strandveld along the West Coast, with occasional reports near Langebaan, and has been found breeding in Renosterveld near Melkbosstrand (Ryan and Hockey 1995).

A pre-construction site walk must be undertaken to detect any signs of the Hottentot Buttonquail, including calls, tracks and nesting evidence. If individuals are observed or habitat is confirmed to be suitable, mitigation measures such as timing construction activities outside the breeding season may need to be considered, however it is important to note that the development proposed is confirmed to the southern areas of the sites, alongside the R44 road, and therefore it is not expected that habitat for this species would be lost due to the proposed development.

Yellow-winged Agile Grasshopper (*Aneuryphymus montanus*)

The Yellow-winged Agile Grasshopper is a Vulnerable invertebrate species according to the IUCN Red List, primarily due to ongoing habitat loss and degradation, and a decline in the number of mature individuals. This species is

endemic to parts of the Western Cape and is considered to have a restricted and fragmented distribution, making it particularly sensitive to habitat transformation. It typically inhabits rocky foothill environments dominated by evergreen sclerophyllous vegetation, such as fynbos. It is believed to favour cooler, south-facing slopes that retain moisture and offer shelter, although this microhabitat preference remains under further ecological investigation. The species is generally flightless and has limited dispersal ability, which heightens its vulnerability to localised habitat disturbances.

The proposed development area falls within a region containing fynbos vegetation however the natural rocky terrain and slopes are further inland from the proposed development area. A pre-construction site survey must be conducted and If individuals are found within the proposed development footprint or immediate surroundings, a Search and Rescue operation must be initiated, with relocation to nearby suitable undisturbed habitat. Note Areas supporting rocky outcrops or south-facing slopes are further north on the submit property and not included in the development area discussed herein thereby reducing the overall risk to this species.

In conclusion, although there are 5 faunal species rated as high and 5 rated as low, for the property, the Screening Tool assessment was conducted for the entire property and not in the specific vicinity where the development is proposed. The development area has been historically disturbed by quarry activity and the road access route has been determined in conjunction with the botanist and wetland specialist to avoid sensitive areas. In addition, the road proposed will be low-key jeep track, and only used for domestic use, i.e. there will not be high traffic traversing the property. The development areas are also confined to the southern areas on the properties, close to the busy R 44, which has already created impacts on the lower section so these properties. Given these factors, it is concluded that no further Faunal Assessment will be conducted beyond the recommendations for pre-construction mitigation above.

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Ciconia nigra
High	Aves-Falco biarmicus
High	Aves-Sarothrura affinis
High	Aves-Aquila verreauxii
Medium	Amphibia-Xenopus gilli
Medium	Aves-Circus maurus
Medium	Aves-Neotis denhami
Medium	Aves-Turnix hottentottus
Medium	Invertebrate-Aneuryphymus montanus

Aquatic Biodiversity Theme – Very High Sensitivity

The proposed single residential dwelling is situated on a historically disturbed quarry platform and lies more than 32m from the nearest delineated watercourses. A detailed aquatic biodiversity assessment confirmed the presence of a hillslope seep wetland and a channelled valley bottom wetland within the broader landscape. However, these wetland features will not be directly impacted by the residential footprint.

Notably, the construction of the proposed access road from Clarence Drive to Portion 126 will traverse Municipal land and pass in close proximity within a few metres to the hillslope seep wetland. Due to spatial constraints, it is not possible to align the access road in a manner that adheres to the recommended minimum 10m buffer from wetland habitat as stipulated by the Buffer Zone Guidelines (Macfarlane & Bredin, 2017). Given the proximity of the road to the wetland, the likelihood of disturbance to wetland habitat is considered Highly Probable. However, the extent of the impact is site-specific, limited to the hillslope seep wetland, and the duration is expected to be Short-Term, correlating with the construction phase of the road. As such, the overall impact significance is assessed to be Low (negative) in the absence of mitigation.

Archaeological and Cultural Heritage Impact Assessment – Low Sensitivity

The development proposed is not large scale, mitigation measures can be implemented for the construction phase in the unlikely event that finds are uncovered. Based on the scope of the development, it does not trigger the requirements set out under the National Heritage Resources Act (NHRA), which are described as below.

Section 38 of the Act states as follows:
38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m^2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m^2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Civil Aviation Theme – Low Sensitivity

The proposed development does not fall within any controlled civil aviation zones and is therefore not expected to interfere with aviation operations. No further assessment is required.

Defence Theme – Low Sensitivity

The subject properties do not fall within any designated military or defence zones. As such, no conflict with national defence interests is anticipated and no further investigation is required.

Palaeontology Theme – High Sensitivity

The development proposed is not large scale, mitigation measures can be implemented for the construction phase in the unlikely event that finds are uncovered. No further assessment required.

Plant Species Theme – High Sensitivity

This theme overlaps with the Terrestrial Biodiversity Theme. The site is generally in good ecological condition, with intact natural vegetation aside from a pre-existing access track. The vegetation comprises Hangklip Sand Fynbos, a Critically Endangered ecosystem type. Although plant Species of Conservation Concern (SCC) were identified elsewhere on the site, none were recorded within the quarry platform earmarked for development. The proposed dwelling and road extension have been strategically located to limit disturbance to sensitive areas. As a precautionary measure, a search and rescue operation will be conducted prior to construction to relocate any plants of conservation concern within the footprint.

Terrestrial Biodiversity Theme – Very High Sensitivity

The botanical assessment confirms that the vegetation on site is mapped as Kogelberg Sandstone Fynbos, which is a Critically Endangered vegetation type under the National Biodiversity Assessment 2018. The site is also included within a Critical Biodiversity Area (CBA1) in the Western Cape Biodiversity Spatial Plan. All of Portion 126 can be considered undisturbed and pristine with plant species of conservation concern identified, except for the two old gravel quarries, which have now naturally rehabilitated to some extent since being quarried some 10-15 years ago. The vegetation in the old quarries is a subset of what is present outside the quarries and is dominated by *Protea repens* and *Leucadendron laureolum*. No plant Species of Conservation Concern (SoCC) occur in the quarries.

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; —	The access road runs in the middle of the delineated wetland and establishment and construction of the road may extend to within the 32 m area.
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 (i) a watercourse;	Due to the vicinity of the jeep track alongside the delineated wetland, there may be instances where material will need to be placed along the jeep track length to allow for access, particularly during wet periods.
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 metres or more of indigenous vegetation 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	The proposed development area is characterised by Kogelberg Sandstone Fynbos, with a small portion of Hangklip Sand Fynbos located on the southeastern side of the site. Both vegetation types are classified as Critically Endangered ecosystems.

Note:

- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.

List the applicable waste management listed activities in terms of the NEM:WA

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

List the applicable listed activities in terms of the NEM:AQA

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

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

The preferred alternative involves the development of a single residential dwelling on Portion 126 of Farm 559, located in Kleinmond, within the Western Cape Province. The proposed dwelling will occupy a footprint of approximately 800 m² and will be sited within a 2400 m² former quarry area, minimising disturbance to undisturbed vegetation and natural topography.

Access to the site will be obtained directly from the R44 regional road, at a location opposite the turn-off to the Kleinmond Wastewater Treatment Works (WWTW). This access route will serve both Portion 126, where the dwelling is to be established, and Portion 125, also under the ownership of the applicant. The preferred access solution (Alternative 3) was identified through a comprehensive evaluation of three route options, considering environmental constraints, land ownership, municipal input, and comments from the Western Cape Rods and Infrastructure department relating to road safety requirements and line of sight.

Evaluation of access road alternatives

Access to the applicants 2 properties presented a challenge.

There is a registered servitude which starts at Portion 124, runs along 124 and then onto Portion 125. However, upon inspection by the Freshwater specialist it was found that this registered servitude access (with no established road) crosses multiple wetlands and streams and was considered not desirable from the Freshwater specialist's recommendations.

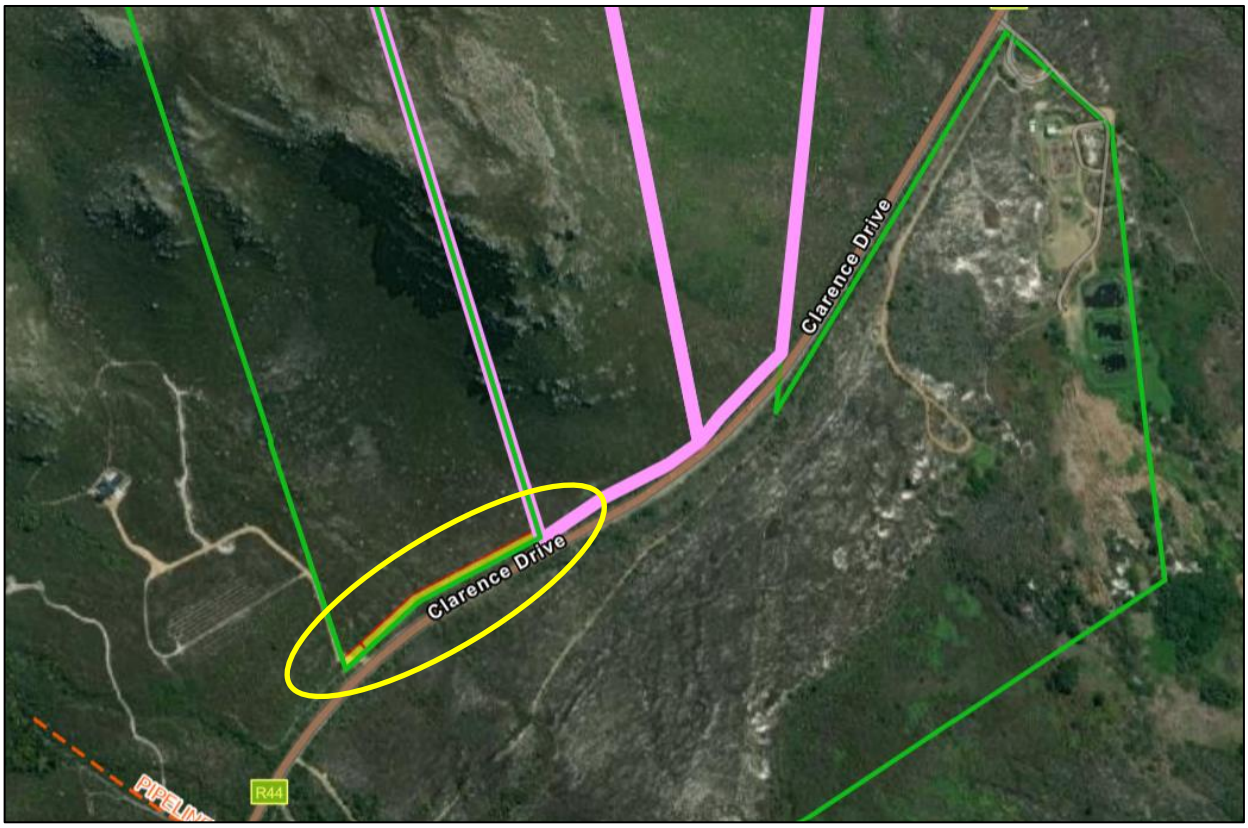
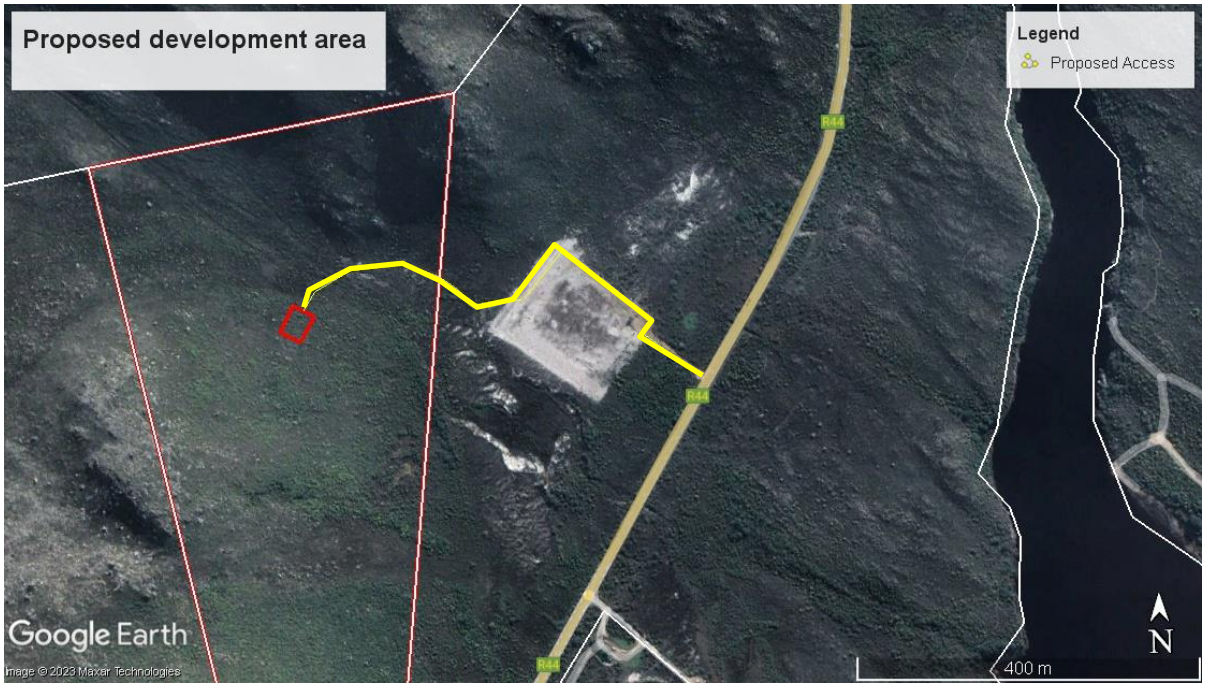
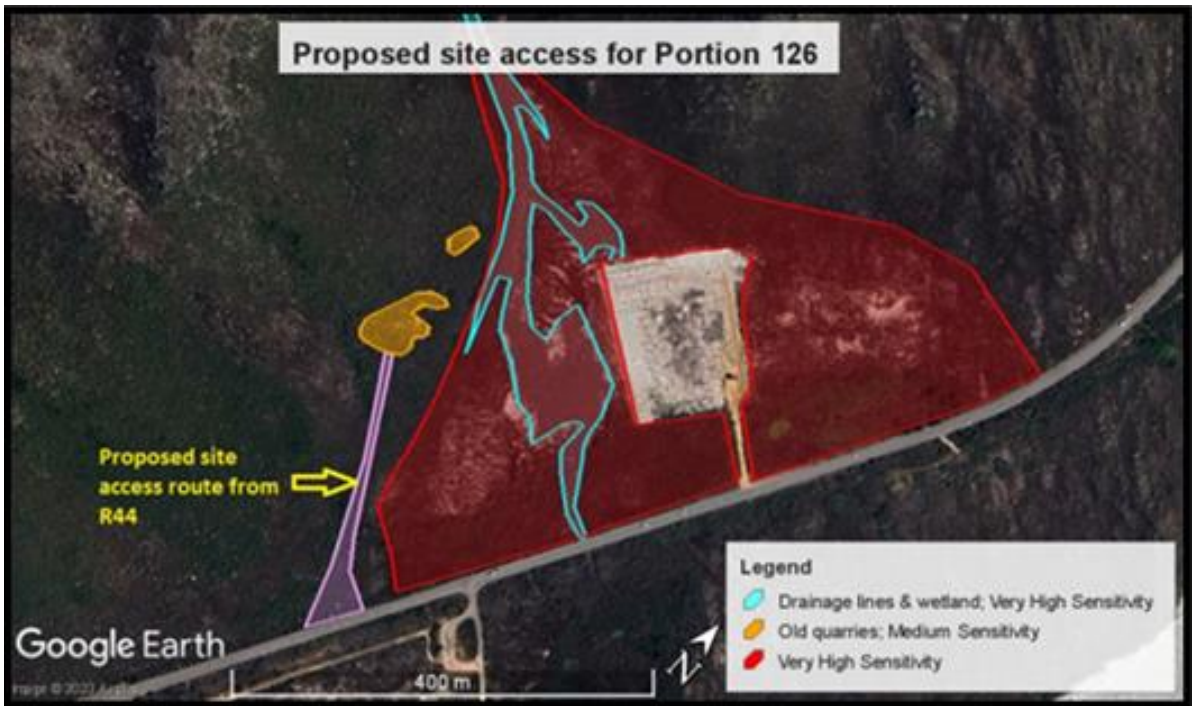


Figure above shows the applicants 2 properties in purple (125 and 126 of 559) with the existing and registered servitude access on 124 indicated by the yellow circle.

Access was considered via the exiting Overstrand Municipalities graveyard site on re/562 and this option was assessed in the first round of public participation as Alternative 1. The benefit of this access was that the majority of the access road was already in place as well as access off the R44. However the municipality then revoked this option for access after the first round of public participation.



Access was also considered directly from 125 western boundary, however the botanist also found that this possible access point contained multiple Botanical SoCC and was considered bot possible from a terrestrial impact perspective. In addition, access from this point was NOT supported by the Department of Infrastructure: Roads, as it is located on a bend in the road.



The final preferred alternative took all the above factors into account, as well as botanical and freshwater specialist recommendations. A servitude was then approved by the Overstrand Municpality as per **Appendix J** of the BAR.

Alternative 1

Initially, Alternative 1 proposed the construction of an access road approximately 350m in length via the existing Overstrand Municipalities graveyard access off the R44 on Remainder of Farm No. 562 (**Figure 1**). However, after the first round of public participation, the Municpality receded consent for this access route, necessitating the exploration of alternative access options.

Alternative 2

Alternative 2 proposed a 650 m access road originating from the R44 to connect to the proposed dwelling on Portion 126 (**Figure 2**). This option was rejected by the Western Cape Department of Infrastructure due to line-of-sight constraints, which posed safety risks for vehicular access. Sensitive botanical features were also present in this option.

Preferred Alternative (Alternative 3)

Alternative 3, the preferred option, was selected following recommendations from the local municipality, road authorities, and specialist assessments. This alternative involves the establishment of an 840 m long jeep track, directly opposite the road leading to the Kleinmond Waste Water Treatment Works (WWTW). The route will traverse the Remainder of Farm 562, including a 220 m section on municipally owned property to the east of the development site, secured through a registered servitude and lease agreement **(Appendix J).** The access road will serve both Portion 126 (where the dwelling will be located) and Portion 125, both owned by the applicant.

Figure 1: Alternative 1- A 350 m access road through a graveyard on Remainder of Farm 562 was rejected by the local municipality due to cultural and regulatory objections.

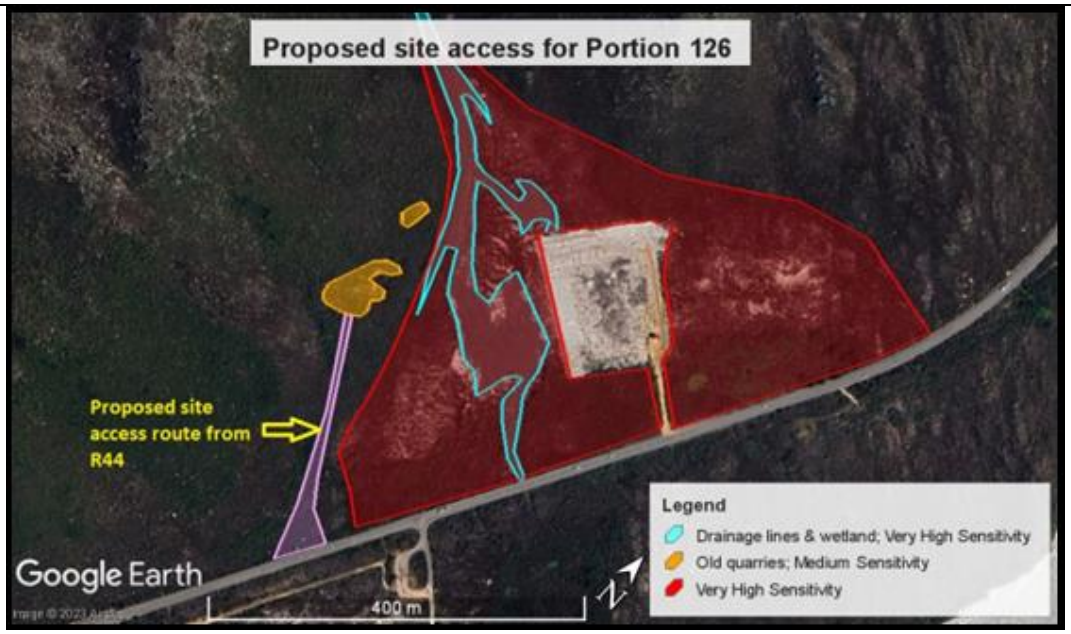


Figure 2: Alternative 2 proposed site access for single residential dwelling, this access was rejected.

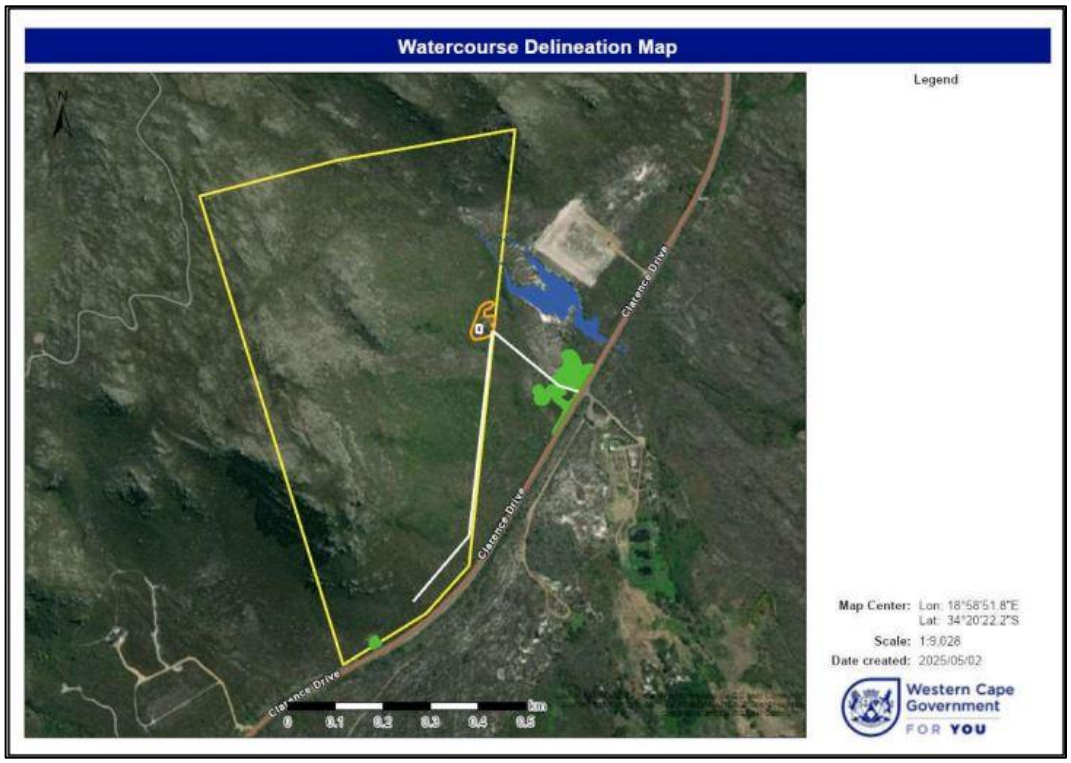


Figure 3: Alternative 3 (preferred), aerial photo showing proposed access and proposed development area (800 m^2), via neighbouring residential property (Remainder 562).

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.

Portion 125 and Portion 126 of Farm 559 are zoned as Undetermined Zone under the Overstrand Municipality's Zoning Scheme. This zoning designation indicates that the properties are not yet assigned a specific land use but are identified as suitable for low-density residential development, including single-family homes. The proposed development of a

single residential dwelling with an approximate footprint of 800 m² on Portion 126 is consistent with the zoning provisions, which permit low-density residential use.

The proposed access road to the residential dwelling on Portion 126 will traverse the Remainder of Farm 562**,** a municipal owned property zoned as "Open Space Zone 1: Nature Reserve" under the Overstrand Municipality's Zoning Scheme. This zoning typically restricts development to conservation-related activities and prohibits permanent structures or intensive land uses. The preferred access road option, Alternative 3, involves the construction of an 840 m long, 2.9 m wide informal jeep track, designed to minimize environmental impacts. This low-impact infrastructure is supported by a registered servitude agreement with the Overstrand Municipality.

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.

N/A

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

The proposed development on Portions 125 and 126 of the Farm Hangklip No. 559, situated between Betty's Bay and Kleinmond in the Western Cape, aligns with the objectives and principles outlined in the Western Cape Provincial Spatial Development Framework (PSDF) 2014. The PSDF serves as a strategic guide for spatial planning in the province, aiming to coordinate, integrate, and align provincial and national development strategies with municipal plans.

One of the primary objectives of the PSDF is to promote sustainable land use and development practices that respect the natural environment. The proposed development is low-impact residential use which involves utilisation of an existing old quarry for the placement of a residential dwelling, this demonstrates a commitment to minimising environmental disruption on a medium sensitive area, avoiding very high and high sensitive areas mapped by the botanist in the study area. Additionally, the use of rainwater harvesting for domestic water supply, a closed conservancy tank for sewage, and solar power for electricity reflects an adherence to sustainable resource management practices, aligning with the PSDF's goals of environmental stewardship and the efficient use of resources.

The PSDF also emphasizes the importance of integrating infrastructure development with spatial planning to support sustainable growth. The proposed access road, approximately 860m in length and 2.9m wide, designed as jeep tracks, illustrates a thoughtful approach to infrastructure that minimises land disturbance. The inclusion of specialist assessments during the planning process, particularly concerning access road options, underscores a commitment to informed decision-making and alignment with the PSDF's directive to coordinate infrastructure development effectively.

4.2	The Integrated Development Plan of the local municipality.

The proposed development on Portions 125 and 126 of the Farm Hangklip No. 559, situated between Betty's Bay and Kleinmond, is aligned with the strategic objectives and spatial directives outlined in the Overstrand Municipality's Integrated Development Plan (IDP). The IDP encompasses all of a municipality's goals and objectives for economic and social development in the short, medium and long-term. The Overstrand Municipal IDP, as a strategic document consist of five overarching strategic objectives, namely:

- the provision of democratic and accountable governance;
- the provision and maintenance of municipal services,
- encouragement of structured community participation,
- the creation and maintenance of a safe and healthy environment;
- and the promotion of tourism, economic, and social development

This development, which entails the construction of a single residential dwelling on Portion 126 and an access road serving both Portions 125 and 126, contributes to several of these objectives. Firstly, the proposal supports basic

service delivery and sustainable infrastructure by incorporating off-grid, environmentally conscious solutions. The dwelling will utilise rainwater harvesting for potable use, solar panels for electricity generation, and a sealed conservancy tank for sewage management. These design elements significantly reduce the need for extensive service infrastructure and associated vegetation clearance. The absence of long trenching or pipe-laying eliminates additional disturbance to sensitive vegetation and avoids costly and environmentally impactful connections to existing municipal bulk services.

The proposed access road, approximately 860 m in length will be constructed as a low-impact jeep track. This design minimises habitat fragmentation and soil disturbance, directly supporting the IDP's goal of creating and maintaining a healthy environment. It is also aligned with the principles of the Overstrand Spatial Development Framework (SDF), which prioritises densification on already disturbed or degraded land over greenfield expansion. The dwelling will be sited within a historically disturbed area (an old quarry), further demonstrating environmental sensitivity and responsible land use planning.

Importantly, the development also aligns with the objective of promoting ethical and inclusive governance by securing legal, safe access to both land parcels for the first time. This promotes spatial equity and service delivery in a manner consistent with the principles of the IDP. The proposed access road will link directly to the R44 regional road, near an existing Wastewater Treatment Works, reflecting the IDP's directive to locate new development in proximity to established infrastructure nodes.

4.3.	The Spatial Development Framework of the local municipality.

The proposed development on Portions 125 and 126 of Farm Hangklip No. 559, situated between Betty's Bay and Kleinmond, aligns with the strategic directives of the Overstrand Municipality Spatial Development Framework (SDF, 2020). The SDF emphasizes sustainable land use, environmental conservation, and spatial efficiency, particularly in ecologically sensitive coastal regions.

Utilization of Previously Disturbed Land

The proposed residential dwelling on Portion 126 is planned within an existing disturbed area (an old quarry), adhering to the SDF's principle of promoting development on previously impacted sites to minimize further environmental degradation. This approach supports the SDF's objective of limiting urban sprawl and preserving natural landscapes.

Low-Impact Infrastructure Development

The access road, designed as a narrow jeep track approximately 860 meters in length and 2.9 meters in width, minimizes habitat disruption and aligns with the SDF's goal of maintaining the natural character of the area. The road's alignment from the R44, opposite the Wastewater Treatment Works, ensures connectivity while respecting environmental constraints.

Sustainable Service Provision

The development incorporates off-grid solutions: rainwater harvesting for domestic use, solar power for electricity, and a sealed conservancy tank for sewage management. These measures reduce the need for extensive municipal infrastructure, aligning with the SDF's emphasis on sustainable service delivery in rural and semi-rural areas.

Enhancement of Spatial Equity

By establishing legal and physical access to both Portions 125 and 126 for the first time, the development addresses spatial justice concerns highlighted in the SDF. Providing access through a registered servitude over municipal land ensures equitable land use and supports the municipality's broader spatial planning objectives.

4.4.	The Environmental Management Framework applicable to the area.

The proposed development on Portions 125 and 126 of Farm Hangklip No. 559, situated between Betty's Bay and Kleinmond, aligns with the Overstrand Municipality's Environmental Management Framework (EMF). Although the site is flagged as a Protected Area Buffer in the Overstrand GIS Map Viewer, it is privately owned and not designated as conservation-worthy land by the municipality. The EMF aims to protect the integrity of adjacent nature reserves from negative external pressures associated with the developments while allowing for appropriate land use within buffer zones. Activities within these zones may be permitted with the municipal written consent, provided they minimise negative impacts on the environment.

The proposed development demonstrates a commitment to environmental sensitivity by utilising an existing disturbed area (an old quarry) for the residential dwelling, thereby avoiding further habitat disruption in highly sensitive areas. The proposed access road will be designed as a low-impact jeep track, minimising soil disturbance and preserving the natural landscape of the area.

Furthermore, the development incorporates off-grid sustainable infrastructure, including rainwater harvesting, solar power, and a conservancy tank for sewage management, reducing reliance on municipal services and minimising further environmental impact. These measures align with the EMF's objectives of promoting sustainable development and protecting ecological integrity of the natural landscapes.

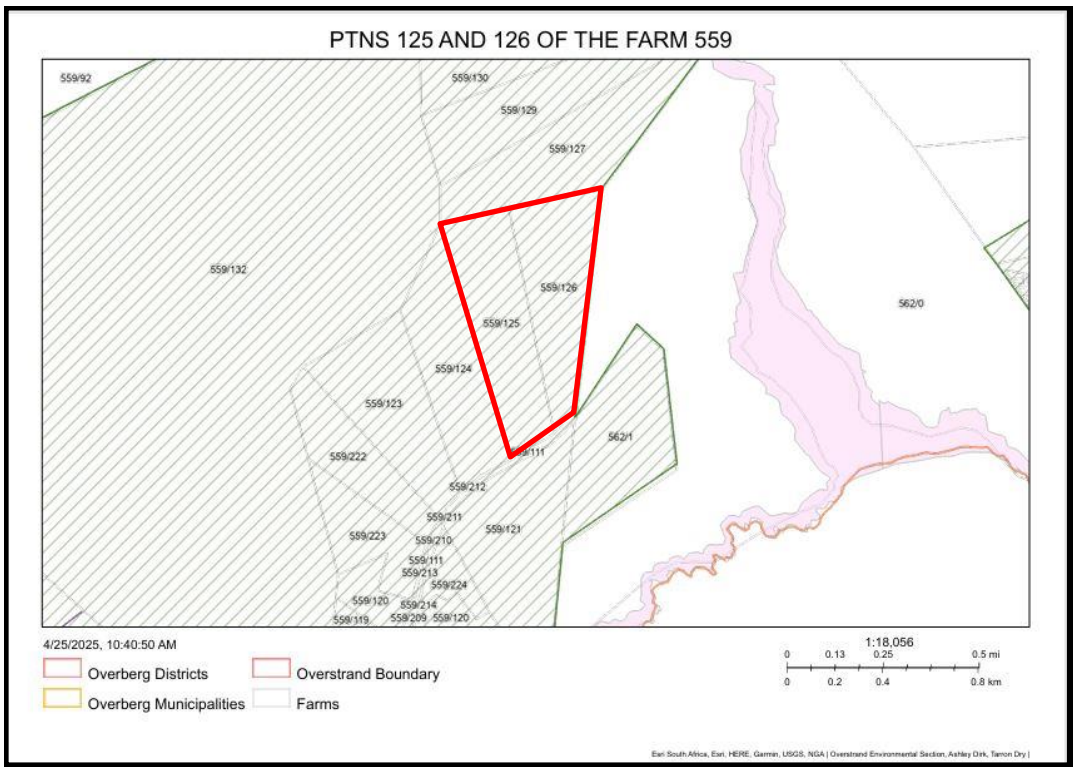


Figure 4: Subject properties (Portions 125 and 126) are within a protected area buffer; *source,* Overstrand Public Viewer.

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

The proposed development of a single residential dwelling on Portion 126 of Farm 559 has been significantly shaped by comments from relevant authorities and specialists, particularly with respect to biodiversity and line of sight. The Western Cape Biodiversity Spatial Plan (2023) indicates the study area as a Critical Biodiversity Area, containing

critically endangered vegetation types Kogelberg Sandstone Fynbos and Hangklip Sand Fynbos, as mapped by South African Vegetation Mapping (2024). A seep wetland and non-perennial rivers have been identified near the northeastern boundary of Portion 126. Below are the comments received during the first round of public participation which have then influenced the development, followed by a description of the preferred alternative.

Cape Nature

CapeNature emphasized the high biodiversity value of the site, highlighting its classification as a CBA I and the presence of critically endangered Kogelberg Sandstone Fynbos, which is the most species-rich ecosystem in South Africa. CapeNature rejected the Site Sensitivity Verification Report (SSVR) submitted during the first round of public participation which claimed that no specialist studies were needed, given the high sensitivity for terrestrial and aquatic biodiversity, and plant and animal species. They mandated terrestrial and aquatic biodiversity assessments, a plant species assessment for 162 potential species of conservation concern, and faunal impact evaluations. These requirements ensured the development footprint and access road were strategically placed to minimize impacts on sensitive ecosystems identified by the specialist during the site investigation. CapeNature also recommended a fire management plan to address the fire-prone fynbos, influencing the dwelling's design to reduce risk without harming natural habitat, and suggested formal conservation for the site's remainder, reinforcing the commitment to preserve most of the remaining areas of the property which are outside of the development footprint. All these recommendations have been taken up into this report.

DEADP

The Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) required specialist statements to confirm negligible botanical and freshwater impacts and a thorough investigation of alternatives to ensure the selected site was optimal from a biophysical perspective. This prompted rigorous evaluation of access road options and inclusion of the adjacent municipal property (Remainder of Farm 562) in the assessment.

Overstrand Municipality

The Overstrand Municipality's Environmental Management Section recommended pre-construction surveys for plant species of conservation concern and compliance with Environmental Management Overlay Zones (EMOZ), limiting development above the 120 m contour line.

BOCMA

The Breede-Olifants Catchment Management Agency (BOCMA) mandated compliance with the National Water Act, ensuring the dwelling and conservancy tank were located outside the 1:100-year flood line and over 32 m from the on-site wetland, protecting aquatic resources. These comments collectively minimized the development footprint, optimized site selection, and integrated mitigation measures from the specialist assessments.

Influence on the proposed development

The preferred alternative (Alternative 3) for the proposed development on Portion 126 of Farm 559 entails a single residential dwelling with an 800 m² footprint on a 2400 m² former quarry site, minimizing disturbance to Kogelberg Sandstone Fynbos. The proposed residential dwelling is located over 32 m from the delineated unchanneled valley bottom wetland and away from the two non-perennial rivers. Due to these sites' constraints, the proposal utilises the off-grid bulk services to support the development, through utilisation of a closed conservancy tank which will be installed at 100m away from the watercourses and will be serviced by the municipality or private contractor. Domestic water use is mainly through rainwater harvesting, and energy will be generated by means of solar grid.

Access is via an 840 m long, 2.9 m wide informal jeep track from the R44, opposite the turn-off to the Kleinmond Water Treatment Works, traversing Remainder of Farm 562 (a 220 m section on municipal property) secured by a servitude.

The track serves both Portion 126 and Portion 125, owned by the applicant, and minimise development on sensitive biodiversity areas. Alternative 1 (350 m road through a graveyard) was rejected due to municipal objections, and Alternative 2 (650 m road from the R44) was dismissed for line-of-sight safety issues. The majority of the site will remain conserved, with Search and Rescue for all plant species of conservation concern prior to construction phase, and a fire management plan will be compiled.

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

The proposed development involves the construction of a single residential dwelling on a degraded old quarry site situated on Portion 126 of the Farm 559. By means of access to the proposed single residential dwelling, an access road will be established from R44 road opposite the turnoff road going to Kleinmond WWTW. From this point, this 850m long x 2.9 width, irregular jeep track will transverse a length of about 220m through municipal land (Remainder of the 562) to the proposed single residential dwelling situated on Portion 126, from there the road will connect Portion 125, with the length of 630m^2, which will be utilised for future access to the latter portion, of which are both owned.

During the initial site investigation, the CapeNature Spatial Biodiversity Plan (Pence, 2017) was consulted by the botanical specialist. This plan indicated that the majority of Portion 126 is designated as a Critical Biodiversity Area 1 (CBA1) (terrestrial), with a small eastern portion identified as CBA1 (aquatic). A subsequent site visit by a specialist validated the accuracy of this desktop assessment, confirming the biodiversity significance of the area. Additionally, the Remainder of the Farm 562 includes municipal land flagged as a Protected Area due to the presence of a cemetery. However, the specialist has contested this classification, arguing that the existence of a cemetery suggests the area does not fully meet the criteria of a true Protected Area, highlighting a potential inconsistency in the mapping.

The updated Western Cape Biodiversity Spatial Plan (2023) was also reviewed, revealing that the entirety of Portion 126 is now mapped solely as CBA1 (terrestrial), with the CBA1 (aquatic) designation on the eastern side no longer applicable. This update reflects an evolution in the spatial planning data, which has been considered in the development proposal.

The WCBSP (2023) handbook provides guidelines for development within CBAs, emphasizing the need to avoid or minimize impacts on biodiversity. Given the small-scale nature of the proposed development (±1650 m²) and its consistency with the property's land use rights (undetermined zone 1), the applicant has strategically planned to confine construction to an already disturbed area on the site. This approach aligns with the WCBSP guidelines, which encourage the use of degraded or previously impacted land to reduce further ecological disruption. The jeep track access road has similarly been designed to limit its environmental footprint by utilizing a simple, low-impact design.

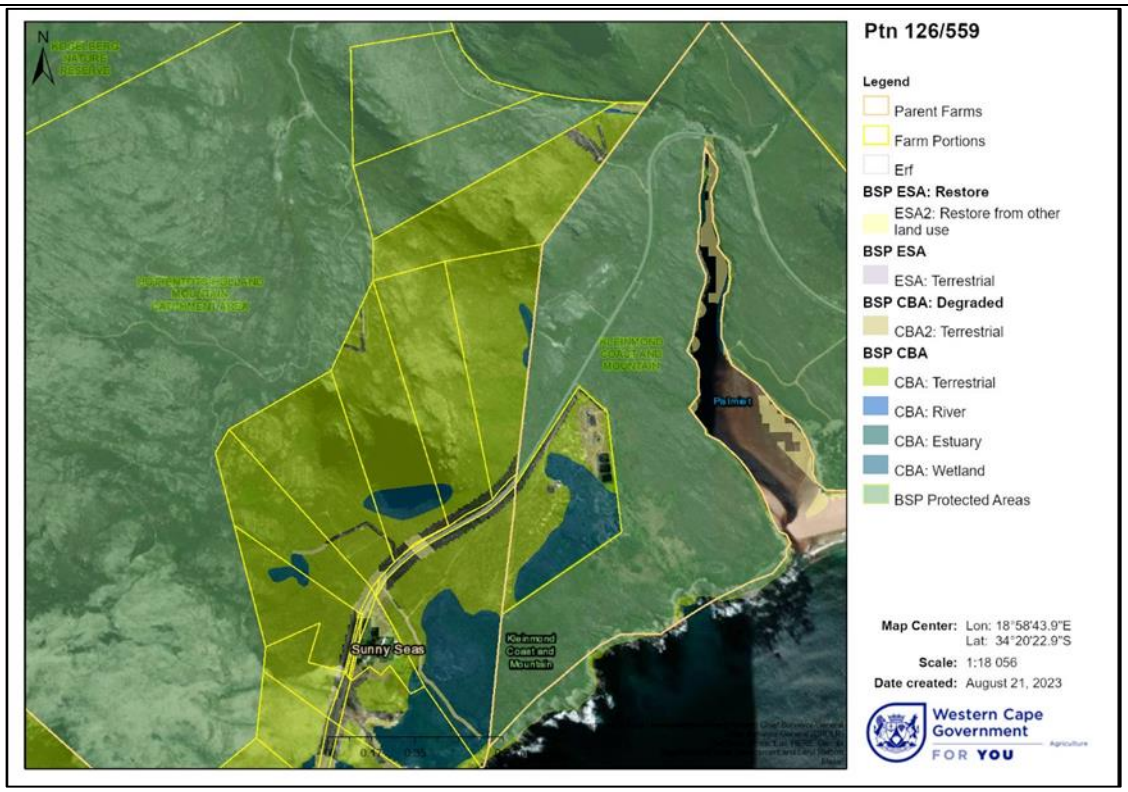


Figure 5: Extract of CapeNature Spatial Biodiversity Plan (Pence 2017) showing that most of Portion 126 is mapped as CBA1 (terrestrial), with a small bit on the east as CBA1 (aquatic).

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.

The proposed development has been assessed in the context of the Integrated Coastal Management Act (ICMA), 2008 (Act No. 24 of 2008), particularly with regard to its location within the Coastal Protection Zone (CPZ), as identified through the Overstrand Public Viewer mapping tool. While the property is partially located within the CPZ, it is important to note that the site lies on the mountain slope, above the 50-metre contour line and at a distance well exceeding 100 metres inland from the High-Water Mark of the sea. Approximately 1.5 km from the HWM. As such, the proposed development is situated outside the more environmentally sensitive lower-lying coastal areas typically associated with heightened ecological vulnerability and coastal processes.

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 screening tool has not changed from the one already submitted on the NOI.

9.	Explain how the proposed development will optimise vacant land available within an urban area.

The proposed development site is located outside of an urban edge and therefore does not relate to the optimisation of vacant land within an urban area. Instead, the development is proposed on rural properties and has been designed to be contextually appropriate to its natural surroundings. The layout has been carefully planned to limit environmental disturbance, maintain the rural character of the area, and ensure compatibility with surrounding land uses.

10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.

The proposed development seeks to optimise the use of existing resources and infrastructure by making use of the existing access point off the R44 (Clarence Drive). From this established access point, a new internal route will be developed in the form of a low-impact jeep track, thereby reducing the need for extensive road construction and

limiting disturbance to the natural environment. This approach ensures that the development leverages existing infrastructure while maintaining ecological sensitivity.	
11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
The service requirements for the proposed development are minimal due to the nature of the proposed use. The residential dwelling will be powered by off-grid solar energy, and water supply will be sourced from rainwater harvesting, reducing reliance on municipal services. A closed conservancy tank will be utilised for wastewater management, with regular servicing by a private contractor (Boland Toilet Services) to ensure compliance with environmental and health standards. As such, services are not a limiting factor for the proposal, and the development does not place significant demand on existing municipal infrastructure. Confirmation of sufficient service capacity has been obtained from Boland Toilet Services (**Appendix I**), and the relevant service providers have indicated that they can accommodate the proposed development. A signed and completed confirmation letter from the service provider will be available during the final submission of the BAR.	
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 development is a small scape proposal. the applicant owns both portion 125 and 126 and the development of a single residential house will facilitate better management of the remainder of the properties.	

SECTION F: PUBLIC PARTICIPATION

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

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

N/A

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

Proof of Public Participation attached hereto, conducted in line with the NEMA requirements.

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

DEA&DP Cape Nature Overstrand Municipality Overberg District Municipality BOCMA

Western Cape Department of Infrastructure (Roads)

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

N/A

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

N/A

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.

Cape Nature	
Comments	**Responses**
CapeNature disagrees with the SSV report's motivation to forgo specialist studies and recommends: • Terrestrial Biodiversity Assessment Due to the site's location within a CBA1 and presence of critically endangered fynbos, this assessment is essential. The mitigation hierarchy must be applied to show why development cannot be avoided. • Aquatic Biodiversity Assessment Freshwater features (non-perennial rivers and seep wetlands) on or near the site may be inaccurately mapped. The access road traverses a riverbed. A wetland delineation using standard methods is required. • Plant Species Assessment Despite the site being largely intact, a dedicated plant species assessment is needed. The site flagged 162 species of conservation concern,	These assessments were undertaken as required and included in the BAR. The applicant owns both Portions 125 and 126. The proposal, relative to the size of these properties, is small and only serves to create a single residential dwelling for the landowner. Whilst it is acknowledged that the site is located within a CBA and highly sensitive, a disturbed quarry site which is in an area rated as Medium sensitive does not host plant species of conservation concern and was thus preferred and supported by the botanical specialist. Refer to Section I, subsection 8 of the BAR for mitigation hierarchy. An Aquatic Biodiversity Assessment has been undertaken for the proposed development, which included the delineation of seep wetlands, a uvb wetland, and associated drainage lines within and surrounding the site. The proposed single residential dwelling is situated more than 32 metres away from any delineated watercourse or wetland located near or adjacent to the property. However, an access road will pass within a few metres of parts of the hillslope seep wetland that occurs on the municipality land between the site and the R44 road. All of the proposed development-related activities that would potentially generate negative impacts were found to be associated with a LOW-risk class. Therefore, the proposed development qualifies for a General Authorisation, according to freshwater specialist. The plants species theme was undertaken and assessed under the Terrestrial Biodiversity Assessment. The landowner is not permitted to take access off the R44. The only option to access the site is via the adjacent graveyard access road. The mitigation recommended for search and

and this study can be incorporated with the terrestrial biodiversity study. • Animal Species Theme Five high-sensitivity faunal species (mainly birds) were flagged. While impacts may be limited, an overview of potential effects should be included in the terrestrial biodiversity assessment.	rescue prior to development is recommended as a condition of EA. A single residential dwelling will not have an impact on faunal.
A Fire Management Plan is required, with enhanced mitigation measures that avoid significant habitat disruption.	The landowner is aware of the fire risk and appropriate building designs and emergency preparedness will be implemented to manage this as far as possible.
CapeNature recommends that the landowner consider formal conservation options for the property, possibly as mitigation for the development.	The landowner will look into options for conservation of the remainder.
All municipal planning requirements and zoning controls must be factored into the development proposal. This includes the Environmental Management Overlay Zones (EMOZ) for which the property is located within the Protected Area Buffer EMOZ.	The proposed development is in line with the EMOZ. And the proposed residential dwelling will be situated below the 60m contour.
A reassessment of the development location and associated infrastructure (e.g. access road, conservancy tank) is necessary.	A conservancy tank was covered in the aquatic biodiversity assessment. The conservancy tank will be situated 100m away from the identified watercourse.
DEADP	
Comments	**Responses**
The Site Sensitivity Verification (SSV) Report lacks adequate detail on site condition and justification for excluding specialist studies.	The Terrestrial and Aquatic Biodiversity Assessment have been undertaken as required, and the SSVR was amended.
No botanical or freshwater specialist input was obtained despite ecological sensitivity.	The studies were undertaken and the BAR was amended.
DEA&DP requires a minimum a specialist statement confirming no significant botanical or freshwater impacts.	As above.

If a competent authority requests specialist studies (e.g., CapeNature or BGCMA), DEA&DP will support the requirement.	The studies have been undertaken and the BAR was amended, accordingly.
Details of this portion must be added to the BAR and application form.	The details have been amended and added in the BAR.
Municipal consent and a completed landowner consent form from the municipality must be included.	Landowner consent form will be submitted with the Final BAR.
The EIA must include a comparative assessment of all reasonable and feasible alternatives.	The alternatives were identified and investigated as part of the assessment process. The alternatives included three access road alignments (Alternative 1, 2, and 3), with each assessed for feasibility, environmental impact, and regulatory compliance.
A clear motivation must be provided if no alternatives (beyond the preferred and no-go options) are found.	The preferred alternative (Alternative 3) was selected following input from the local municipality, Department of Infrastructure, and specialist assessments. This route is the only access option supported by the road authority and both the botanical and freshwater specialists, and it avoids traversing sensitive cultural or ecological features such as a graveyard or areas of high ecological sensitivity.
It is unclear whether the selected location is the best practicable option from a biophysical perspective.	With regard to the placement of the dwelling, it is acknowledged that access constraints informed the location. However, this site was also confirmed to be the least environmentally sensitive area on the property, as verified by the botanical specialist. While the broader site is mapped as having high and very high botanical sensitivity, the proposed footprint is located within a medium sensitivity area a previously disturbed former quarry site. This location therefore represents the best practicable environmental option (BPEO) for siting the dwelling, minimizing the need for vegetation clearance and slope modification.
The report claims most of the site will be conserved, but no explanation is given on how this will be implemented or if CapeNature has been consulted in this regard.	It is confirmed that only a small portion of the site (approximately 800 m² out of 2400 m²) will be developed, specifically within a previously disturbed quarry area. The remainder of the site, which includes areas of high ecological sensitivity, will be left undisturbed and conserved. CapeNature has been consulted as part of the commenting authority.

Written confirmation must be obtained from the Breede-Gouritz Catchment Management Agency (BGCMA) to confirm if a WULA or General Authorisation is required.	The proposed single residential dwelling is situated more than 32 metres away from any delineated watercourse or wetland located near or adjacent to the property. However, an access road will pass within a few metres of parts of the hillslope seep wetland that occurs on the municipality land between the site and the R44 road. All of the proposed development-related activities that would potentially generate negative impacts were found to be associated with a LOW-risk class. Therefore, the proposed development qualifies for a General Authorisation, according to freshwater specialist.
Written confirmation is required from: • The municipality, stating they will service the conservancy tank, or • A registered service provider, confirming they have the capacity to regularly empty the tank.	The proposed development will be serviced by a private contractor (Boland Toilet Services), refer to **Appendix I**. However, a signed confirmation letter will be submitted with the Final BAR.
The SDP must show all project components, including any buffer or no-go areas based on specialist recommendations.	The SDP is attached as Appendix B.
BOCMA	
Comments	**Responses**
No objections on the proposed development	Noted – No actions required.
Overstrand Municipality	
Comments	Response
No objection to the proposed development. Recommended that a Search and Rescue initiative for plant species of Conservation Concern should be undertaken.	Noted – No action required. Recommendation for Search and Rescue has been added to the conditions of EA in the 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 x**
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 x
2.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		
The assessment confirmed the presence of a hillslope seep wetland and a channelled valley bottom wetland on municipal land between the site and Clarence Drive, though no wetlands were found within the boundaries of Portions 125 and 126. Two non-perennial drainage lines were also identified, particularly relevant to the alternative access route via the municipal cemetery. The proposed residential dwelling on Portion 126 was strategically located in a historic			

quarry site, which is sufficiently set back from all downslope aquatic habitats. This placement ensures that the dwelling itself poses no direct risk to wetlands or watercourses, minimizing ecological impacts.

The preferred access road (Alternative 3) extending 250 meters from the Wastewater Treatment Works turn-off to the quarry site, comes within a few meters of a hillslope seep wetland. The construction of the new residential dwelling at the quarry site will not cause any wetland habitat disturbance given that the distance between the proposed site and the nearest wetland is approximately 100m and the scale of the construction project is small (limited to a single residential dwelling). On the contrary, construction of the access road from Clarence Drive to Portion 126 will pass within a few metres of parts of the hillslope seep wetland that occurs on the Municipal land between the site and Clarence Drive. There is no opportunity to set the access road back from this wetland sufficiently and comply with the recommendations of the Buffer Guidelines (Macfarlane and Bredin, 2017) of a minimum buffer of 10m as there is insufficient space. Accordingly, the intensity rating for the potential impact is rated to be Medium.

Given the proximity of the proposed access road to wetland habitat, the likelihood of wetland habitat being disturbed is Highly Probable. The extent of the impact is site specific as only the hillslope seep wetland would be disturbed and the duration is Short Term given the short time it would take to construct the access road. Accordingly, the impact significance is rated to be Low (-ve) without any mitigation. Through clearly demarcating the edge of the development footprint of the proposed road with visible and weather-proof markers and designating the area beyond the development footprint as a No-Go area during the construction phase, minimal disturbance of wetland habitat would occur. In addition, the placement of construction materials and the driving of vehicles outside of the construction footprint is strictly prohibited with the nearest material stockpiles being permitted at a minimum distance of 20m from any wetland edge.

All the impacts were rated to be at low risk, and a General Authorisation will be required.

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	NO x
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 X	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
Nick Helme – Nick Helme Botanical Surveys			

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 proposed development on Portion 125 and 126 of Farm 559, Betty's Bay, has been informed by several systematic conservation planning tools and biodiversity informants, including the CapeNature Biodiversity Spatial Plan (Pence 2017), the National Vegetation Map (Mucina & Rutherford 2018, with confirmation from the 2024 update), Google Earth satellite imagery, and the Fields Area Measure application. These tools were utilized during a detailed botanical assessment conducted by Nick Helme Botanical Surveys on 21 July 2023, ensuring that the development aligns with environmental sensitivity and conservation priority areas.

The CapeNature Biodiversity Spatial Plan identifies most of Portion 126 as a Critical Biodiversity Area 1 (terrestrial), with a small eastern portion classified as CBA1 (aquatic). Ground-truthing by the botanical specialist largely confirmed this mapping, highlighting the site's high conservation value. The CBA1 designation indicates that the area supports irreplaceable biodiversity and ecological processes, necessitating careful planning to avoid significant impacts. This influenced the decision to confine the residential dwelling to an area of medium sensitivity (the old quarry) and to limit the access road alignment to the least ecologically disruptive route.

The National Vegetation Map (2024) classifies the majority of Portion 126 as Kogelberg Sandstone Fynbos, with a small southeastern section as Hangklip Sand Fynbos both gazetted as Critically Endangered ecosystems (**Figure 6**). Kogelberg Sandstone Fynbos retains 83% of its original extent, with over 59% conserved, yet it supports numerous plant Species of Conservation Concern (SoCC) and requires fire for ecological functioning (Rouget et al 2004; Helme & Rebelo 2016). Hangklip Sand Fynbos, with less than 68% intact and under 17% conserved, faces greater threats from urban development and invasive species (Raimondo et al 2009). The botanical specialist validated these classifications, noting high species diversity and the presence of 11 plant species of conservation concern (SoCC), including Vulnerable and Near Threatened species (such as *Leucospermum prostratum, Ixia micrandra*). This data shaped the development by prioritizing the use of the rehabilitated quarry 1 (Medium sensitivity) for the dwelling, avoiding the High and Very High sensitivity areas of intact fynbos.

Google Earth satellite imagery (November 2022) and the Fields Area Measure application facilitated on-site mapping of vegetation and sensitivity zones, ensuring accurate delineation of development footprints. The field assessment confirmed that most of Portion 126 is pristine, except for two old gravel quarries, with Quarry 1 measuring 0.24 ha whereas, Quarry 2 measuring 0.05 ha, and have naturally rehabilitated. However, no plant SoCC were observed on these areas. The proposed residential dwelling covering a development footprint of approximately 800 m² will be positioned in Quarry 1, the area was selected as the ecologically preferred location for the dwelling due to its Medium sensitivity. The assessment also identified a seasonal drainage line and wetland area in the northern part of Portion 126, classified as Very High sensitivity due to its unique Hangklip Sand Fynbos and five plant SoCC.

Moreover, the previously preferred access road as shown in **Figure 7** below was ruled out by the Western Cape Department of Infrastructure access road, suggesting that an access point should be taken off the R44, opposite the access road leading to the Wastewater Treatment Works. This newly preferred access route (Alternative 3) is approximately 860 m x 2.9 m wide and will be jeep track providing access road for Portion 125 and 126 (**Figure 8**). It is important to note that the specialist team agreed with the decision of undertaking the road in this area.

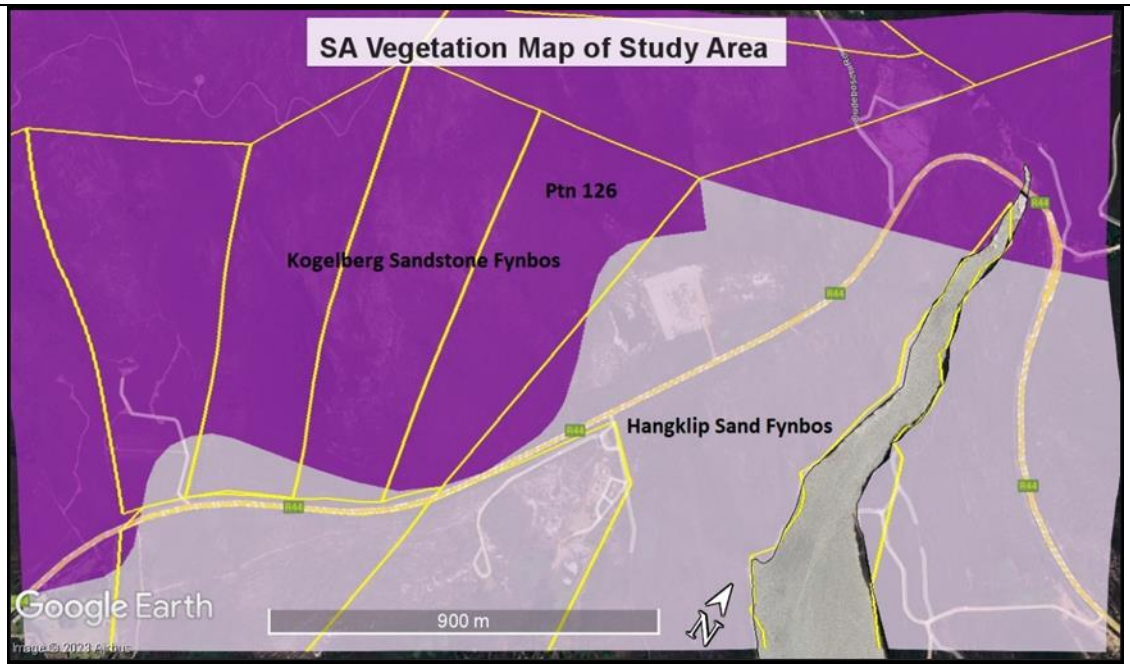


Figure 6: Extract of the SA Vegetation Map, showing that most of Portion 126 is mapped as Kogelberg Sandstone Fynbos.

Photo 1. View of re-established indigenous vegetation in the old gravel quarry on Portion 126, marked as quarry 1 in Figure 4. This is the ecologically preferred position for the dwelling and is about 0.24ha in extent. ***Source***: (Helme, 2023).

Photo 2. View, looking north, from close to the eastern boundary of Portion 126, some 150m north of the cemetery. This area includes a drainage line and narrow wetland (just left of the powerlines) and highly sensitive Hangklip Sand Fynbos that is not present elsewhere on site, and is not suitable for an access road, due to the ecological sensitivity of this area. At least 5 plant Species of Conservation Concern occur in this area (and would also have occurred in what is now the cemetery). Source: (Helme, 2023).

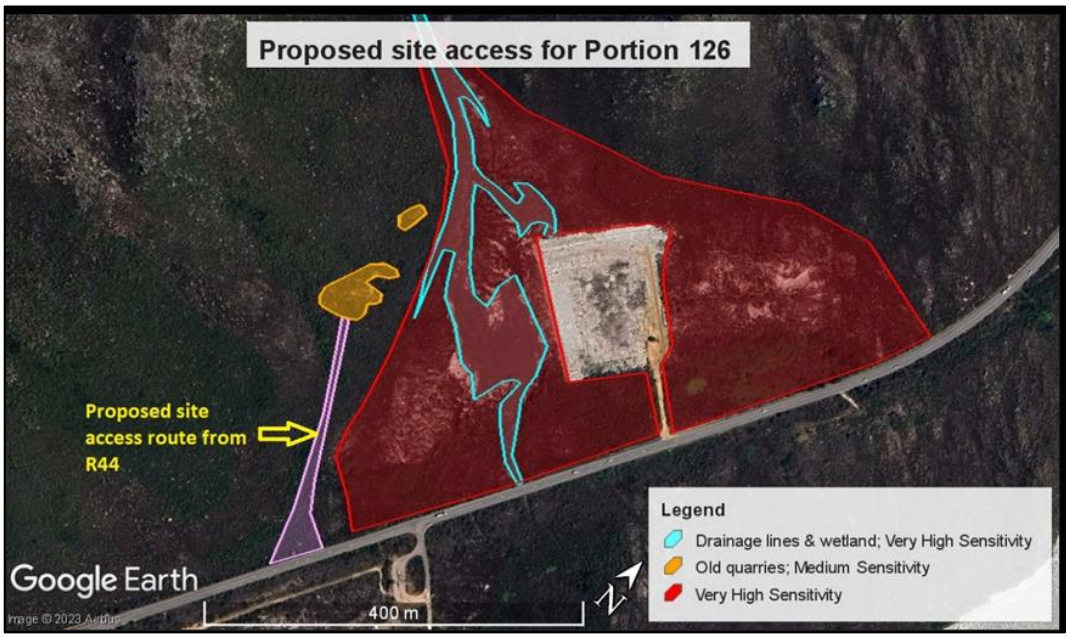


Figure 7: Map showing the site access for Portion 126 from R44. This was ruled out by the Western Cape Department of Infrastructure. (Alternative 2)

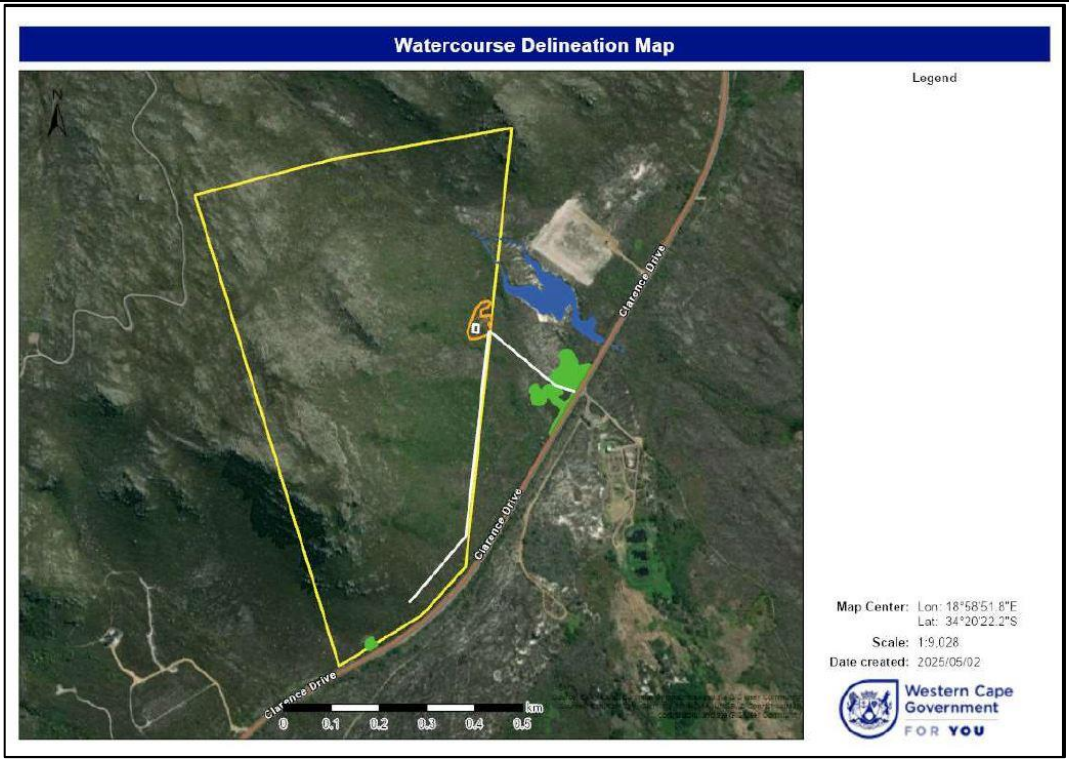


Figure 8: The white lines indicate the preferred access route to the proposed dwelling on Portion 126 and to Portion 125. *Source*: (Steytler, 2025).

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 proposed development on Portion 126 of Farm 559, Betty's Bay, has been guided by the objectives and management guidelines of the Western Cape Biodiversity Spatial Plan (BSP) (Pence 2017), a systematic conservation planning tool developed by CapeNature. The BSP's overarching objectives are to identify and conserve Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), support sustainable development, promote ecosystem resilience, and meet conservation targets.

The BSP identifies most of Portion 126 as a Critical Biodiversity Area (terrestrial), with a small eastern portion as CBA1 (aquatic), reflecting its critical role in conserving irreplaceable biodiversity, including Critically Endangered Kogelberg Sandstone Fynbos and Hangklip Sand Fynbos, and supporting 11 plant Species of Conservation Concern (SoCC). The objective to maintain these CBAs in a natural state directly influenced the development by limiting the footprint to areas of lower ecological sensitivity. The BSP's goal of sustainable development was addressed by restricting the proposal to a single residential dwelling and access road, avoiding broader habitat loss or fragmentation.

The BSP's management guidelines for CBAs stipulate that such areas must remain in a natural or near-natural state, with no further habitat loss, and that development should be avoided unless low-impact and mitigated effectively. For Portion 126, the botanical assessment identified the site as predominantly High to Very High sensitivity, except for two rehabilitated quarries rated as Medium sensitivity due to the absence of plant SoCC and partial natural rehabilitation. In line with these guidelines, the residential dwelling (800 m²) has been confined to Quarry 1, avoiding the pristine CBA1 areas that support diverse fynbos and plant SoCC. The guidelines also influenced the access road design, restricting it to a single 860 m long, 2.9 m wide jeep track from the R44 opposite the Wastewater Treatment Works. This route minimises disturbance to the Very High-sensitivity northern channelled valley bottom wetland, however, resulting to minimum impact on the and Hangklip Sand Fynbos, adhering to the BSP's directive to avoid degradation of CBAs and mitigate impacts where development is unavoidable.

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.

The specialist team indicated that the proposed site is Highly sensitive in terms of botanical perspectives, this is due to the occurrence of plant Species of Conservation Concern (SoCC) observed on site, besides the area proposed for residential dwelling.

The area proposed for the access road will contribute to minor loss of a wetland due to construction of a jeep track which will if required, include levelling in the wetland area. On the contrary, construction of the access road from Clarence Drive to Portion 126 will pass within a few metres of parts of the hillslope seep wetland that occurs on the Municipal land between the site and Clarence Drive. There is no opportunity to set the access road back from this wetland sufficiently and comply with the recommendations of the Buffer Guidelines (Macfarlane and Bredin, 2017) of a minimum buffer of 10m as there is insufficient space. Accordingly, the intensity rating for the potential impact is rated to be Medium.

Given the proximity of the proposed access road to wetland habitat, the likelihood of wetland habitat being disturbed is Highly Probable. The extent of the impact is site specific as only the hillslope seep wetland would be disturbed and the duration is Short Term given the short time it would take to construct the access road. Accordingly, the impact significance is rated to be Low (-ve) without any mitigation. Through clearly demarcating the edge of the development footprint of the proposed road with visible and weather-proof markers and designating the area beyond the development footprint as a No-Go area during the construction phase, minimal disturbance of wetland habitat would occur. In addition, the placement of construction materials and the driving of vehicles outside of the construction footprint is strictly prohibited with the nearest material stockpiles being permitted at a minimum distance of 20m from any wetland edge.

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.

The BSP maps adjacent Municipal land (Remainder of Farm 562) to the north of the R44 as a "Protected Area." The botanical specialist, in his report highlight that this classification is inaccurate, as part of this land is used as a cemetery, which is inconsistent with typical protected area management objectives. The proposed access route, which traverses this land, is approximately 220m long and represents the most direct alignment to the proposed house site. It minimizes the extent of disturbance by requiring the shortest possible servitude and avoiding areas with high densities of plant Species of Conservation Concern (SoCC). The botanical assessment concluded that this route is acceptable from a botanical perspective and would result in no more than a medium negative impact, with appropriate mitigation measures in place.

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.

N/A

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.

Topography

Portion 126 features a varied topography, with steep, rocky slopes supporting Kogelberg Sandstone Fynbos and flatter lowland areas with Hangklip Sand Fynbos near the Municipal land boundary. The site includes two old gravel quarries, with Quarry 1 (~0.24 ha) selected for the dwelling due to its relatively level, rehabilitated surface. The construction of a residential dwelling on Quarry 1 will involve minimal alteration to the natural topography, as the platform leverages the existing flat quarry floor. The access road from the R44 (Clarence Drive)may require minor levelling across undulating terrain and a hillslope seep wetland on Municipal land, but its narrow jeep track design limits earthworks. The steep slopes outside the quarry will remain undisturbed, preserving the site's natural gradient and visual landscape.

Hydrological connectivity

A seasonal drainage line flows through the northern part of Portion 126, feeding a large wetland on Municipal land above the R44. The quarry area exhibits minor seasonal water flow (dry for ~9 months annually), while the access road crosses near a hillslope seep wetland. The dwelling in Quarry 1 avoids hydrological features, with the specialist confirming no wetland conditions beyond a 3 m strip of seasonal flow. The access road, however, will result in minor disturbance to the hillslope seep wetland due to potential levelling, affecting localized water flow and soil moisture. This impact is site-specific, short-term (construction phase), and rated Low (-ve) significance with mitigation, ensuring minimal disruption to broader hydrological functions.

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	NO x
6.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		

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.
N/A

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
The property is located outside the urban area.	
8.2.	Explain the socio-economic value/contribution of the proposed development.
The proposal is small scale and will result in small scape job creation during the planning, construction and development phases	
8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
Labour and expertise to be sourced locally as far as practically and financially feasible.	
8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.
The proposal is extremely small scale which includes the assess road and for that reason, the impact on sense of place, visual etc is negligible to zero.	

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 application pertains to Portion 125 and Portion 126 of the Farm Hangklip No. 599, as well as the Remainder oof the Farm 562 (municipal land) located between Kleinmond and Betty's Bay along the R44. During the initiation of the project, the landowner, identified the impacted quarry situated on Portion 126 for the placement of a single residential dwelling. Both properties are owned by the applicant, and the development is small-scale, designed with a minimal construction footprint to limit environmental disturbance. The preferred site for the residential dwelling is a previously disturbed quarry area on Portion 126, identified through specialist investigations as suitable due to its medium sensitivity rating and impacted nature. Following the constrains related to how the site would be accessed in an environmentally friendly manner, as well as in line with provincial roads and traffic policies and over municipal land, these constraints provided basis for the evolution of the site route alternatives. The application for the right of way servitude across the municipality land (Remainder 562) was submitted to the Overstrand Municipality.

The roads will be unpaved jeep tracks to minimise environmental impact, some sections may require minor stabilisations. The preferred access road alternative (Alternative 3) connects the quarry site to the R44, opposite the road leading to the Wastewater Treatment Works (WWTW), traversing approximately 220 meters of municipal land (Remainder of the Farm 562). This route was selected following the rejection of two prior alternatives (Alternative 1 and Alternative 2) during public participation and consultation with regulatory authorities. The dwelling's placement on the quarry site, located approximately 100 meters from the nearest wetland, was deemed by the freshwater specialist to pose no significant risk to wetland habitats due to the small scale of construction and sufficient separation distance. The access road, however, presents minor unavoidable impacts, which are addressed below.

Site Alternatives Considered for the access road

Given that Portion 125 and Portion 126 are the only properties owned by the applicant, no alternative properties were feasible for this development. The quarry site on Portion 126 emerged as the sole viable location for the residential dwelling due to its prior disturbance and lower ecological sensitivity compared to the pristine, high-sensitivity areas elsewhere on the properties. Specialist studies confirmed that this site avoids negative impacts on SoCC and wetlands, while its pre-existing disturbance reduces the need for additional vegetation clearance, thereby maximizing positive impacts by preserving intact ecosystems.

For the access road, three layout alternatives were evaluated to connect the R44 to both portions, with the goal of minimizing environmental impacts while ensuring practical access:

Alternative 1

This option proposed utilizing an existing access route off the R44 through a cemetery to reach the quarry site. The intent was to leverage the established road to avoid encroachment into areas of Very High and High Botanical Sensitivity. However, this route would have impacted a drainage line on the northeastern boundary of Portion 126 and traversed a Very High Sensitivity area. During the initial public participation process, the Overstrand Municipality and Western Cape Department of Infrastructure rejected this access, citing safety concerns relative to line-of-site, prompting further exploration of alternative access.

Alternative 2

Following feedback received during the public participation process, this alternative proposed a route off the R44 through Portion 126, utilizing an area identified by the botanical specialist as least sensitive and aligning with an existing registered servitude to both portions. Despite avoiding Very high-sensitivity areas, this option was also rejected by the Western Cape Department of Infrastructure, and Overstrand municipality retracted permission to access by the graveyard, necessitating another alternative route.

Alternative 3 (Preferred)

The Municipality has endorsed this new access road starting from the Clarence Drive / WWTW turn-off and heading in a northly direction across municipal land until the erf boundary some 200m from Clarence Drive. From the erf boundary the access road is proposed to lead directly to the quarry site. While this alignment avoids direct encroachment into the drainage lines and a valley-bottom wetland identified on the northern areas of the farms, it passes within a few meters of a hillslope seep wetland. There is no opportunity to set the access road back from this wetland sufficiently and comply with the recommendations of the Buffer Guidelines (Macfarlane and Bredin, 2017) of a minimum buffer of 10m as there is insufficient space. The extent of the impact is site specific as only the hillslope seep wetland would be disturbed and the duration is Short Term given the short time it would take to construct the access road.

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

N/A

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

Both properties (Portion 125 and 126) are owned by the applicant, and the preferred alternative comprises a dwelling on a previously disturbed quarry site on Portion 126, along with proposed access provided via an unpaved jeep track extending approximately 200 meters from the R44 opposite the Wastewater Treatment Works (WWTW) road across municipal land (RE/562). This layout, identified as Alternative 3 for the access road, emerged as the most practical and feasible option due to significant access constraints, ownership limitations, provincial roads and traffic policies and over municipal land which resulted to an exploration of a new proposed access road to the site. The motivation for this preference is supported by specialist assessments, regulatory feedback, and a site selection matrix, detailed below.

The applicant's ownership is limited to Portion 125 and Portion 126, restricting property alternatives to these two parcels. Access to these sites is challenging, as direct entry from the R44 to Portion 126 is prohibited by the Western Cape Department of Infrastructure (roads) due to poor line-of-sight conditions, a critical safety concern for vehicular access onto a provincial road. This constraint necessitated alternative access solutions, leading to the evaluation of site options within the owned properties and adjacent municipal land.

The quarry site on Portion 126 was selected for the dwelling due to its prior disturbance and medium sensitivity rating, as confirmed by botanical and freshwater specialists, while the access road via RE/562 was endorsed by the Overstrand Municipality as a legally viable route.

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

The preferred alternative was derived by limiting factor of access to the site following constraints related to how the site would be accessed in an environmentally friendly manner, as well as in line with provincial roads and traffic policies and over municipal land, these constraints provided basis for the evolution of the site route alternatives.

Site Alternatives Considered for the access road

Given that Portion 125 and Portion 126 are the only properties owned by the applicant, no alternative properties were feasible for this development. The quarry site on Portion 126 emerged as the sole viable location for the residential dwelling due to its prior disturbance and lower ecological sensitivity compared to the pristine, high-sensitivity areas elsewhere on the properties. Specialist studies confirmed that this site avoids negative impacts on SoCC and wetlands, while its pre-existing disturbance reduces the need for additional vegetation clearance, thereby maximizing positive impacts by preserving intact ecosystems.

For the access road, three layout alternatives were evaluated to connect the R44 to both portions, with the goal of minimizing environmental impacts while ensuring practical access:

Alternative 1

This option proposed utilizing an existing access route off the R44 through a cemetery to reach the quarry site. The intent was to leverage the established road to avoid encroachment into areas of Very High and High Botanical Sensitivity. However, this route would have impacted a drainage line on the northeastern boundary of Portion 126 and traversed a Very High Sensitivity area. During the initial public participation process, the Overstrand Municipality and Western Cape Department of Infrastructure rejected this access, citing safety concerns relative to line-of-site, prompting further exploration to alternative access.

Alternative 2

Following feedback received during the public participation process, this alternative proposed a route off the R44 through Portion 126, utilizing an area identified by the botanical specialist as least sensitive and aligning with an existing registered servitude to both portions. Despite avoiding Very high-sensitivity areas, this option was also rejected by the Western Cape Department of Infrastructure, and Overstrand municipality retracted permission to access by the graveyard, necessitating another alternative route.

Alternative 3 (Preferred)

The Western Cape Department of Infrastructure suggested this route which extends from the R44 opposite the WWTW access road, crossing approximately 200 meters of municipal land to reach the quarry on Portion 126. While this alignment avoids direct encroachment into high-sensitivity botanical areas and leverages, it passes within a few meters of a hillslope seep wetland. There is no opportunity to set the access road back from this wetland sufficiently and comply with the recommendations of the Buffer Guidelines (Macfarlane and Bredin, 2017) of a minimum buffer of 10m as there is insufficient space. The extent of the impact is site specific as only the hillslope seep wetland would be disturbed and the duration is Short Term given the short time it would take to construct the access road.

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

The applicant owns the property and therefore there are no other feasible options.

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

The evaluation relates to the alternative access options considered for the access to the proposed residential dwelling on Portion 126, as well as the connection of access from Portion 126 (proposed residential dwelling) to Portion 125.

Alternative 1

Positive impacts

- Utilise the existing access route off the R44 through the cemetery on the municipal land (remainer of the Farm 562) rather than establishing a new access route on the highly sensitive area.

Negative impacts

- The construction of the road through the cemetery would have caused the drainage line would have been costly, add would otherwise require hard engineering which would involve culverts that would otherwise have wide implication of the drainage line and hydrological connectivity
- Assessing from the graveyard access may offer limitations when they are burial ceremonies
- Proximity to the drainage line could lead to erosion or sediment runoff into wetland systems, especially during construction, posing a moderate risk to water quality.

Alternative 2

Positive impacts

- None identified or supported due to rejection by the authorities.

Negative impacts

- Rejection by the Western Cape Department of Infrastructure suggests potential alignment or safety issues (e.g., line-of-sight from R44), though specific environmental impacts were not the primary rejection factor.

Alternative 3 (preferred):

Positive impacts

- The proposed access road opposite the WWTW road turn-off leverages proximity to an established route, reducing safety issues related to line-of-sight, which was the main concern raised by the relevant authority.
- The route through municipal land avoids Portion 126's High Sensitivity botanical areas, preserving SoCC and intact ecosystems.
- The small-scale road (2.9m wide) requires minimal clearance, primarily on already managed municipal land, minimizing impacts on native vegetation.

Negative impacts

- The route passes within a few meters of a hillslope seep wetland, where spatial constraints prevent a full 10-meter buffer (per Macfarlane and Bredin, 2017). This could lead to minor indirect impacts, such as sediment runoff or hydrological disruption during construction.
- Some very-high and high vegetation on RE/562 may be removed, though this is minimal and inevitable, since there is a need for an access to the proposed dwelling.
- Temporary noise, dust, and soil disruption may occur along the 200-meter route, though the small scale and EMP measures (e.g., silt fencing, stormwater controls) will minimize these effects.
- While minor, the wetland proximity could contribute to subtle long-term effects if not properly managed, necessitating strict adherence to mitigation protocols.

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

Provide a description of the preferred activity alternative.

No activity alternatives exist

Provide a description of any other activity alternatives investigated.

N/A

Provide a motivation for the preferred activity alternative.

N/A

Provide a detailed motivation if no activity alternatives exist.

N/A

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

N/A

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.

Alternative 3

There are no other feasible and reasonable layout alternatives to the site. The landowner cannot get permission to access the property off the R44 due to poor line of site. The preferred alternative comprises a dwelling on a previously disturbed quarry site on Portion 126, along with proposed access provided via an unpaved jeep track extending approximately 220m from the R44 opposite the Wastewater Treatment Works (WWTW) road across municipal land (RE/562). This layout, identified as Alternative 3 for the access road, emerged as the most practical and feasible option due to significant access constraints, ownership limitations, provincial roads and traffic policies and over municipal land which resulted to an exploration of a new proposed access road to the site. The municipality has confirmed that the landowner can access the site from this point.

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

N/A

Provide a motivation for the preferred design or layout alternative.

The selection of the quarry site as the building platform for the residential dwelling is driven by its practicality and environmental suitability. Specialist investigations, including botanical and freshwater assessments, identified the quarry as an area of medium sensitivity within Portion 126, contrasting with the surrounding pristine zones rated as very-high and high sensitivity due to the presence of Plant Species of Conservation Concern (SoCC). The quarry, having been previously disturbed, contains no plant SoCC, as confirmed by the botanical specialist, making it an ideal location to avoid encroachment into ecologically intact areas. Furthermore, the site's pre-existing disturbance minimizes the need for additional vegetation clearance or earthworks, reducing construction-related environmental impacts.

From a practical perspective, the quarry's relatively flat terrain and stable substrate provide a cost-effective and structurally suitable platform for a single residential dwelling. The freshwater specialist further supported this location, noting that the quarry is approximately 100 meters from the nearest wetland, a distance sufficient to prevent habitat disturbance given the small scale of the proposed construction. Thus, the quarry site maximizes positive impacts by leveraging existing degradation to preserve the broader property's ecological integrity while meeting the landowner's development needs.

The preferred access road layout (Alternative 3) involves a route commencing from the R44, opposite the WWTW access road, and traversing municipal land (RE/562) to reach the quarry site on Portion 126 and to Portion 125. This alignment emerged as the only viable option following the evaluation of alternatives and consultation with relevant authorities, including the Overstrand Municipality and the Western Cape Department of Infrastructure.

Direct access from the R44 to Portion 126 was deemed unfeasible due to poor line-of-sight conditions, a critical safety concern for vehicular access onto a provincial road. The landowner's request for a direct R44 access point was rejected by the road authority, necessitating an alternative entry. The municipality subsequently confirmed that access could be secured via the neighbouring municipal property (RE/562), providing a legal and practical solution.

Provide a detailed motivation if no design or layout alternatives exist.

The landowner owns only Portion 125 and Portion 126 of the Farm Hangklip No. 599. No other properties are available for consideration, restricting the development to these two portions. Portion 125 was excluded as a potential site due to its specific characteristics such pristine state of vegetation (very-high and high sensitivity), plant species of conservation concerns, leaving Portion 126 as the sole candidate.

The botanical assessments identified the majority of Portion 126 as containing pristine areas of high ecological sensitivity, including Plant Species of Conservation Concern (SoCC). These areas are unsuitable for development under NEMA's

principles of avoiding significant environmental harm. In contrast, the quarry site, a previously disturbed area, was rated as medium sensitivity with no SoCC present. This makes it the only location on Portion 126 where development can occur without encroaching on intact ecosystems, rendering alternative building sites within the property unfeasible.

The quarry's flat, stable terrain, resulting from prior disturbance, provides a practical and cost-effective platform for a small-scale residential dwelling. Alternative undisturbed areas would require significant vegetation clearance and earthworks, increasing environmental impacts and costs, which contradicts the project's minimal footprint objective. The freshwater specialist further confirmed that the quarry's location, approximately 100m from the nearest wetland, poses no risk to aquatic habitats.

Given these factors no feasible or reasonable design or layout alternatives exist for the proposed development on Portion 126. The quarry site is the only practical building platform due to ownership limits, ecological sensitivities, and its disturbed state, while the access road through RE/562 is dictated by the R44 access prohibition and municipal approval. Alternative layouts were explored and rejected for the proposed access route based on environmental, regulatory, and practical grounds, leaving the proposed design as the sole viable option.

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

Building Platform: Preferred Quarry Site on Portion 126

Positive impacts

- The quarry is a previously disturbed area with no Plant Species of Conservation Concern (SoCC), avoiding the need to clear intact vegetation or encroach on high-sensitivity botanical zones elsewhere on Portion 126.
- By siting the dwelling on a medium-sensitivity, degraded area, the development protects pristine habitats with SoCC, maintaining biodiversity on the broader property.
- The quarry's flat, stable terrain requires minimal earthworks, limiting soil disruption and erosion risks compared to developing undisturbed areas.
- The site proposed for residential dwelling is situated approximately 100 meters from the nearest wetland, the small-scale construction poses no direct disturbance to aquatic habitats, as confirmed by the freshwater specialist.

Negative impacts

- Although previously disturbed, minor additional soil compaction or surface alteration may occur during construction, though this is limited by the small scale of the dwelling.
- Construction activities could generate minor runoff or dust, though the limited footprint and EMP mitigation measures (e.g., silt fencing) will minimize this impact.

Access Road Alternatives

Three layout alternatives were considered for the access road. Below, the positive and negative environmental impacts of each are outlined, reflecting their influence on vegetation, wetlands, and land disturbance.

***Alternative 1**: Access via Cemetery Route off R44*

Positive impacts

- Leveraging an existing road through the cemetery reduces the need for new land clearance, minimizing additional vegetation removal beyond the established path.

- By following a pre-existing route, this option limits the extent of new soil disturbance compared to creating an entirely new road.

Negative Impacts

- The route crosses a drainage line on the northeastern boundary of Portion 126 and a Very High Sensitivity botanical area, risking disturbance to SoCC and wetland-adjacent habitats.
- Despite using an existing road, some vegetation clearance would be required to widen or stabilize the path, particularly where it intersects sensitive zones.
- Proximity to the drainage line could lead to erosion or sediment runoff into wetland systems, especially during construction, posing a moderate risk to water quality.
- The alignment through high-sensitivity areas negates the benefit of limited disturbance, leading to a higher overall environmental impact.

***Alternative 2**: Access via Portion 126 with Existing Servitude off R44*

Positive Impacts

- The route passes through an area identified by the botanical specialist as least sensitive within Portion 126, avoiding Very High and High Sensitivity zones with SoCC.
- The small-scale road would require only minor vegetation clearance in a less ecologically valuable area, preserving most of the property's biodiversity.

Negative Impacts

- Some clearance of low-sensitivity vegetation would still occur, though significantly less than in high-sensitivity zones.
- Construction on Portion 126 terrain could generate minor soil disturbance or runoff, though the limited scale and EMP measures (e.g., erosion control) would mitigate this.
- Rejection by the Western Cape Department of Infrastructure suggests potential alignment or safety issues (e.g., line-of-sight from R44), though specific environmental impacts were not the primary rejection factor.

***Alternative 3 (Preferred):** Access via RE/562 from R44 Opposite WWTW Road*

Positive Impacts

- Extending from the WWTW road turn-off leverages proximity to an established route, reducing safety issues related to line-of-sight.
- The route through municipal land avoids Portion 126's High Sensitivity botanical areas, preserving SoCC and intact ecosystems.
- The small-scale road (2.9m wide) requires minimal clearance, primarily on already managed municipal land, minimizing impacts on native vegetation.

Negative Impacts

- The route passes within a few meters of a hillslope seep wetland, where spatial constraints prevent a full 10-meter buffer (per Macfarlane and Bredin, 2017). This could lead to minor indirect impacts, such as sediment runoff or hydrological disruption during construction.
- Some very-high and high vegetation on RE/562 may be removed, though this is minimal and inevitable, since there is a need for an access to the proposed dwelling.
- Temporary noise, dust, and soil disruption may occur along the 200-meter route, though the small scale and EMP measures (e.g., silt fencing, stormwater controls) will minimize these effects.

- While minor, the wetland proximity could contribute to subtle long-term effects if not properly managed, necessitating strict adherence to mitigation protocols.

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:

Solar power generation is the preferred energy source for the proposed development.

Provide a description of any other technology alternatives investigated.

N/A

Provide a motivation for the preferred technology alternative.

N/A

Provide a detailed motivation if no alternatives exist.

No specific technology alternatives exist, however the best possible technologies will be included into the design, in order to reduce the impact on environment, service infrastructure and social aspects, as far as possible

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

N/A

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 exist, small scape single residential dwelling is proposed.

Provide a description of any other operational alternatives investigated.

N/A

Provide a motivation for the preferred operational alternative.

N/A

Provide a detailed motivation if no alternatives exist.

N/A

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

N/A

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

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

The No-go option is not preferred because it means no development will take place, which is something that is against the intent of this application.

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.

N/A

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

The preferred site alternative is Portion 125 and Portion 126 of the Farm No. 559, as well as Remainder of the Farm No. 586. The proposed single residential dwelling is situated on a historical quarry site to avoid high and very high botanical sensitive areas on the study area, as well as species of conservation concern. This residential dwelling location was further supported by the specialists' assessments. Alternative 3 has been identified as the preferred option, providing the only safe and practicable access to Portion 126 via the municipal land (Remainder of Farm 562) from the Clarence Drive/WWTW turn-off. The residential dwelling will be located on the former quarry platform within Portion 126 an area of medium botanical sensitivity thereby avoiding all high-sensitivity wetlands and drainage lines. This layout achieves the best balance between engineering feasibility, environmental protection, and minimal disturbance, and is therefore the preferred location and configuration for the proposed development.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).

There are no No-go areas identified during the identification of the alternatives.

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.

An impact is any change to a resource or receptor brought about by a project component or through the execution of a project related activity. The evaluation of baseline data provides information for the process of evaluating and describing how the project could affect the biophysical and socio-economic environment.

Impact is described according to their nature or type, as follows:

Nature/ Type

Nature/ Type of impact	Definition
Positive	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Negative	An impact that is considered to represent an adverse change from the baseline or introduces a new undesirable factor.
Direct	Impacts that result from a direct interaction between a planned project activity and the receiving environment/receptors (e.g. between occupation of a site and the pre-existing habitats or between an effluent discharge and receiving water quality).
Indirect	

	Impacts that result from other activities that are encouraged to happen as a consequence of the Project (e.g. in-migration for employment placing a demand on resources).
Cumulative	Impacts that act together with other impacts (including those from concurrent or planned future third-party activities) to affect the same resources and/or receptors as the Project.

Significance

Impacts are described in terms of significance. Significance is a function of the magnitude of the impact and the likelihood of the impact occurring:

Impact Magnitude	
Extent	**On site** – impacts that are limited to the boundaries of the development site.
	Local – impacts that affect an area in a radius of 20 km around the Development site.
	Regional – impacts that affect regionally important environmental resources or are experienced at a regional scale as determined by administrative boundaries, habitat type/ecosystem.
	National – impacts that affect nationally important environmental resources or affect an area that is nationally important/ or have macro-economic consequences
Duration	**Temporary** – impacts are predicted to be of short duration and intermittent/occasional.
	Short-term – impacts that are predicted to last only for the duration of the construction period.
	Long-term – impacts that will continue for the life of the Project but ceases when the project stops operating
	Permanent – impacts that cause a permanent change in the affected receptor or resource (e.g. removal or destruction of ecological habitat) that endures substantially beyond the project lifetime
	BIOPHYSICAL ENVIRONMENT
	Negligible – the impact on the environment is not detectable.
	Low – the impact affects the environment in such a way that natural functions and processes are not affected.
	Medium – where the affected environment is altered but natural functions and processes continue, albeit in a modified way.
Intensity	**High** – where natural functions or processes are altered to the extent that they will temporarily or permanently cease
	SOCIO-ECONOMIC
	Negligible – there is no perceptible change to people's livelihood
	Low - people/communities are able to adapt with relative ease and maintain pre-impact livelihoods
	Medium – people/communities are able to adapt with some difficulty and maintain pre-impact livelihoods but only with a degree of support
	High - affected people/communities will not be able to adapt to changes or continue to maintain pre-impact livelihoods.

Likelihood- the likelihood that an impact will occur

Likelihood	
Unlikely	The impact is unlikely to occur
Likely	The impact is likely to occur under the most conditions.
Definite	The impact will occur

Once an assessment is made of the magnitude and the likelihood, the impact significance is rated through a matrix process:

Significance				
Magnitude		**Unlikely**	**Likely**	**Definite**
	Negligence	Negligible	Negligible	Minor
	Low	Negligible	Minor	Minor
	Medium	Minor	Moderate	Moderate
	High	Moderate	Major	Major

Definition of significance:

Negligible	An impact of negligible significance (or an insignificant impact) is where a resource or receptor (including people) will not be affected in any way by a particular activity, or the predicted effect is deemed to be 'negligible'.
Minor	An impact of minor significance is one where an effect will be experienced, but the impact magnitude is small (with and without mitigation) and within accepted standards, and/or the receptor is of low sensitivity/value.
Moderate	An impact of moderate significance is one within accepted limits and standards. The emphasis for moderate impacts is on demonstrating that the impact has been reduced to a level that is as low as reasonably practicable. This does not necessarily mean that 'moderate' impacts have to be reduced to 'minor' impacts, but that moderate impacts are managed effectively and efficiently.
Major	An impact of major significance is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued / sensitive resource / receptors. A goal of the EIA process is to get to a position where the Project does not have any major residual impacts.

Significance of an impact is then qualified through a statement of the degree of confidence. Degree of confidence is expressed as low, medium or high.

Significance colour scale (if applicable):

Negative	Positive
Negligible	Negligible
Minor	Minor
Moderate	Moderate
Major	Major

Impact rating colour scale:

Negative	Positive
Negligible	Negligible
Low	Low
Medium	Medium
High	High

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

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

ALTERNATIVE 1:
Cemetery access road

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**1. Ecological/ Botanical impacts** The clearance and disturbance of the fewest plant SoCC.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Habitat fragmentation, leading to loss or degradation of Plant Species of Conservation Concern (SoCC) and disruption of wetland ecosystems.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium- High
Degree to which the impact can be reversed:	Low-Medium
Indirect impacts:	Reduced seed dispersal and genetic diversity of SoCC-
Cumulative impact prior to mitigation:	Progressive decline in botanical and ecological integrity of the area, exacerbating habitat fragmentation and wetland degradation over time
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium

Proposed mitigation:	The vegetation on site is now due for a burn and should thus ideally be burnt prior to any development on the site, which will also help reduce fire hazard in the near future.
Residual impacts:	Partial loss or slow recovery of SoCC populations despite revegetation efforts, with some persistent ecological alteration.
Cumulative impact post mitigation:	Reduced but persistent degradation of botanical diversity and wetland function, potentially compounded by future land use changes, though minimized by mitigation and the small road footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) **Potential impact and risk:**	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**1. Disturbance to Wetland habitat** Impact on aquatic habitats, including the drainage line, leading to disruption of habitat downstream.
Nature of impact:	Negative
Extent and duration of impact:	Local ; long-term
Consequence of impact or risk:	Most of the impacts arise when wetland vegetation is damaged and topsoil compacted as a result of the driving of construction vehicles in and near wetland areas.
Probability of occurrence:	Highly Probable
Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Disturbance to the hydrological connectivity
Cumulative impact prior to mitigation:	Increased degradation of wetland function and downstream aquatic ecosystems due to repeated disturbance and sediment input during construction.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low-Medium
Degree to which the impact can be mitigated:	Low-Medium
Proposed mitigation:	• Clearly demarcate the edge of the development footprint of each accommodation area using weather-proof markers for the full duration of the construction phase and declare all areas outside the development footprint as No-Go areas for the full duration of the construction phase; • Only with written permission from the ECO may construction workers be permitted to enter the No-Go area and this should only be for the purposes of rehabilitation (in the event that the wetland area is damaged) or for the purpose of collecting wind-blown construction waste. • Ensure that all construction vehicles remain within the development footprint of the access road. If turning areas are required then ensure that these are located in

	the terrestrial areas between the wetland area and the quarry site (note: this is subject to endorsement by the appointed terrestrial biodiversity specialist). • Ensure that all material stockpiles and construction machinery are located/parked at least 20m from any wetland habitat.
Residual impacts:	Minor ongoing disturbance to wetland vegetation and soil structure due to unavoidable proximity of the access road to the drainage line; potential for limited sediment runoff despite mitigation measures, affecting water quality downstream.
Cumulative impact post mitigation:	Reduced but persistent degradation of wetland habitat and hydrological function over time, exacerbated by any future maintenance activities or incidental breaches of No-Go areas.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**2. Alteration of Flow regime** In order to construct the proposed dwelling and the access road indigenous vegetation would have to be cleared and this would have the effect of reducing catchment roughness.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	The reduced catchment roughness would cause accelerated run-off and reduced infiltration with the likely consequence of altering the natural flow regime in any nearby receiving watercourse.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Low
Indirect impacts:	Increased erosion potential downstream due to accelerated runoff; potential sedimentation in nearby watercourses affecting aquatic ecosystems.
Cumulative impact prior to mitigation:	Progressive alteration of local hydrological patterns, potentially exacerbating flood risk or drought conditions in the receiving watercourse over time, especially if combined with other regional developments.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-High
Degree to which the impact can be avoided:	Low-Medium
Degree to which the impact can be managed:	Low-Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	N/A
Residual impacts:	Minor increases in runoff velocity and reduced infiltration within the development footprint, with limited ongoing effects on the flow regime post-construction due to the small scale and temporary nature of vegetation clearance.
Cumulative impact post mitigation:	Slight long-term alteration of local flow patterns, reduced by mitigation but potentially compounded by future land use

	changes in the catchment, though limited by the project's small footprint.	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE		
Potential impact and risk:	**3. Increased Erosion and Sedimentation** Clearing of vegetation resulting in the exposure of the site's highly erosive soils to stormwater erosion; • Importation of fill material to construct new access road which, prior to compaction, would also be temporarily vulnerable to stormwater erosion; • Soil, sand and stone (if fines are present) stockpiles which, if exposed to rain, would be susceptible to erosion; and • Repeated driving of construction vehicles on the site which would result in disturbance of vegetation thereby exposing the underlying highly erosive soils to erosion and causing the concentration of run-off which would exacerbate erosion.	
Nature of impact:	Negative	
Extent and duration of impact:	Local; short-term	
Consequence of impact or risk:	Increased soil loss and sediment transport into nearby watercourses (e.g., drainage line), potentially degrading water quality, smothering aquatic habitats, and altering downstream hydrological conditions.	
Probability of occurrence:	Highly probable	
Degree to which the impact may cause irreplaceable loss of resources:	Likely	
Degree to which the impact can be reversed:	Low	
Indirect impacts:	Sedimentation in downstream aquatic ecosystems, potentially affecting biodiversity; increased turbidity impacting water quality and aquatic life; potential for gulley formation if erosion is severe.	
Cumulative impact prior to mitigation:	Progressive degradation of soil stability and water quality in the local catchment, potentially amplifying erosion risks and sedimentation during future rainfall events or developments in the area.	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High	
Degree to which the impact can be avoided:	Low-Medium	
Degree to which the impact can be managed:	Medium	
Degree to which the impact can be mitigated:	Medium	
Proposed mitigation:	• Limit the construction phase to the dry summer months when rainfall is at its lowest; • Minimise the time that exposed soils are potentially exposed to the elements (as far as practically possible); • Cover all soil, sand and stone stockpiles with plastic sheeting to ensure that the stockpiles are protected from rain;	

	• Actively repair any erosion runnels and prevent any sediment-laden run-off from exiting the construction area through placement of sandbags or similar; and • Immediately after construction of the buildings and associated infrastructure is complete, revegetate any exposed areas with locally occurring indigenous plant species.	
Residual impacts:	Minor residual erosion and sedimentation from compacted road surfaces or incomplete revegetation, with limited ongoing sediment runoff during heavy rain events.	
Cumulative impact post mitigation:	Reduced but persistent minor sediment input to the drainage line, potentially contributing to subtle long-term changes in local watercourse conditions if combined with other catchment disturbances.	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE		
Potential impact and risk:	**4. Water Quality impairment** During the construction phase there is a reasonable likelihood that as a result of the operation of machinery and vehicles, and if oil leaks remain unchecked and fuel spillages occur during refuelling, then contamination of the stormwater and ultimately the receiving watercourses would occur.	
Nature of impact:	Negative	
Extent and duration of impact:	Local; Short-term	
Consequence of impact or risk:	Contamination of stormwater with hydrocarbons (oil and fuel), leading to pollution of downslope wetlands and receiving watercourses, potentially harming aquatic ecosystems, degrading water quality, and affecting downstream users or habitats.	
Probability of occurrence:	Highly probable	
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High	
Degree to which the impact can be reversed:	Low-Medium	
Indirect impacts:	Toxicity to aquatic organisms in wetlands and watercourses; potential bioaccumulation of contaminants in the food chain; reduced ecological functioning of wetlands (e.g., filtration capacity); downstream impacts on water usability	
Cumulative impact prior to mitigation:	Progressive contamination of local water bodies, amplifying ecological stress and water quality degradation during construction, with potential long-term effects if combined with other pollution sources in the catchment.	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium	
Degree to which the impact can be avoided:	Low-Medium	
Degree to which the impact can be managed:	Medium	
Degree to which the impact can be mitigated:	Medium-High	
Proposed mitigation:	• Undertake the construction of the access road during the dry summer months. • Ensure that all construction machinery and vehicles are checked routinely for oil leaks and are in good working	

	order before being permitted onto the development site; • Use drip-trays at all times when operating petrochemical driven construction machinery (e.g. generators and cement mixers); • Use drip trays and other appropriate containment methods while refuelling of vehicles and machinery; • Demarcate an area for the refuelling of machinery and vehicles (this is recommended to be at the Municipal WWTW); • Ensure that hazardous substances and chemicals are stored in a contained, impermeable area which has the capacity to contain at least 110% of the total volume of stored substances. • Store cement is a secure weather-proof area (e.g. shipping container) and ensure that used cement • bags are placed in plastic bin-bags prior to placement in the on-site solid waste storage area; • All cement batching on the site must be undertaken on impermeable and bunded batching boards to ensure cement slurry is contained; and • Any cement residues and concrete waste within the construction site must be removed at the end of every working day and disposed of as rubble.
Residual impacts:	Minor residual contamination from undetected micro-spills or runoff during heavy rain, with limited ongoing water quality effects post-construction due to mitigation and the short-term nature of the activity.
Cumulative impact post mitigation:	Slight long-term water quality impairment in the local catchment, minimized by mitigation but potentially compounded by future pollution events, though constrained by the project's small scale.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**5. Loss of Biota** Construction activities within and/or in close proximity to watercourses inevitably cause biota loss, primarily biota mortality as a result of being crushed by vehicles driving in or near aquatic habitat or through the indiscriminate placement of machinery and/or construction materials.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Direct mortality of aquatic and semi-aquatic biota (e.g., invertebrates, amphibians, small fish) in the drainage line and nearby wetlands, leading to reduced biodiversity and disruption of local ecosystem functions.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Low-Medium

Indirect impacts:	Disruption of food chains and ecological interactions dependent on affected biota; potential decline in wetland-dependent species (e.g., birds, insects); reduced ecosystem resilience to future disturbances.	
Cumulative impact prior to mitigation:	Progressive loss of biodiversity in the local aquatic ecosystem, potentially leading to long-term degradation of wetland and watercourse health if combined with other construction or land-use impacts in the catchment.	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-High	
Degree to which the impact can be avoided:	Medium	
Degree to which the impact can be managed:	Medium	
Degree to which the impact can be mitigated:		
Proposed mitigation:	• Clearly demarcate the edge of the development footprint of the proposed access road using weather-proof markers for the full duration of the construction phase and declare all areas outside the development footprint as No-Go areas for the full duration of the construction phase; • Only with written permission from the ECO may construction workers be permitted to enter the No-Go area and this should only be for the purposes of rehabilitation (in the event that the wetland area is damaged) or for the purpose of collecting wind-blown construction waste. • Ensure that all construction vehicles remain within the development footprint of the access road. If turning areas are required then ensure that these are located in the terrestrial areas between the wetland area and the quarry site (note: this is subject to endorsement by the appointed terrestrial biodiversity specialist). • Ensure that all material stockpiles and construction machinery are located/parked at least 20m from any wetland habitat.	
Residual impacts:	Minor residual loss of biota due to unavoidable disturbance within the construction footprint or accidental incursions, with limited ongoing effects post-construction due to the small scale and temporary nature of the activity.	
Cumulative impact post mitigation:	Slight long-term reduction in local biodiversity, minimized by mitigation but potentially compounded by future disturbances in the catchment, though constrained by the project's limited extent.	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)	Medium (-)
POST-CONSTRUCTION PHASE		
Potential impact and risk:	**1. Alteration of Flow Regime** The access road upstream would cause accelerated run-off and increased flood peaks because of the compaction of road surface as a result of being driven on which would limit infiltration.	
Nature of impact:	Negative	

Extent and duration of impact:	Local; long term
Consequence of impact or risk:	Increased runoff velocity and flood peaks altering the natural hydrological regime of the two drainage lines and downstream wetlands, potentially leading to erosion, reduced groundwater recharge, and habitat degradation.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Low
Indirect impacts:	Increased downstream erosion and sedimentation; potential drying of wetland areas due to reduced infiltration; altered habitat conditions affecting aquatic and wetland-dependent species.
Cumulative impact prior to mitigation:	Progressive disruption of the local hydrological system, exacerbating flood risks and wetland degradation over time, particularly when combined with other catchment alterations or climate change effects.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium-High
Proposed mitigation:	• Where the proposed access road is aligned through sloping terrain near wetland habitat (e.g. the first 60m of the access road after leaving Clarence Drive) install drainage control structures every 10m that direct road run-off away from the road and into the surrounding veld.
Residual impacts:	Minor ongoing increases in runoff and reduced infiltration due to the road's presence, with limited alteration of flow regime post-mitigation, though some flood peak increases may persist during heavy rain.
Cumulative impact post mitigation:	Slight long-term hydrological changes in the local catchment, minimized by mitigation but potentially compounded by future land use or climate impacts, though constrained by the small road footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**2. Erosion and Sedimentation** The proposed new access road is the primary cause of run-off acceleration (see Impact 1 above) and therefore any stormwater run-off discharged from the access road into the surrounding area has potential to cause erosion and sediment loading of the nearby hillslope seep.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Increased erosion along the access road and sediment deposition into the hillslope seep wetland, potentially degrading soil stability, water quality, and wetland habitat integrity.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High

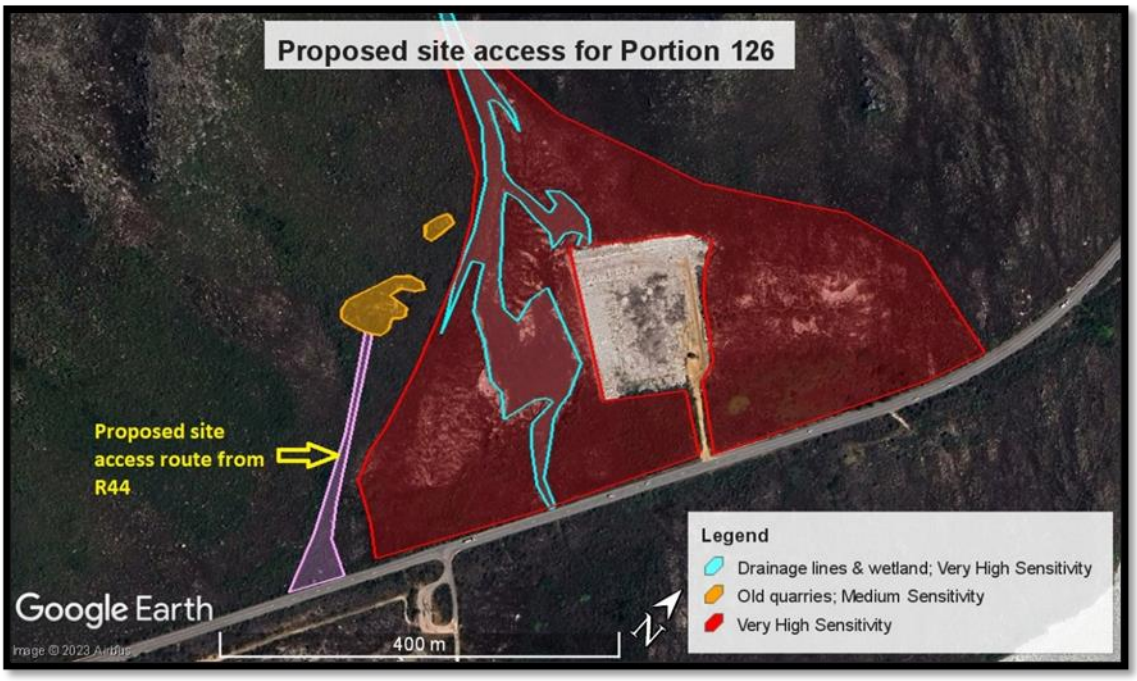
Degree to which the impact can be reversed:	Low
Indirect impacts:	Sedimentation smothering wetland vegetation and biota; altered hydrological function of the hillslope seep; downstream water quality degradation affecting aquatic ecosystems.
Cumulative impact prior to mitigation:	Progressive soil loss and sediment accumulation in the hillslope seep and downstream areas, exacerbating wetland degradation and erosion risks over time, particularly with ongoing road use and regional disturbances.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium- High
Proposed mitigation:	• Where the proposed access road is aligned through sloping terrain near wetland habitat (e.g. the first 60m of the access road after leaving Clarence Drive) install drainage control structures every 10m that direct road run-off away from the road and into the surrounding veld.
Residual impacts:	Minor ongoing erosion and sediment transport from the road surface during heavy rain, with limited sediment loading into the hillslope seep due to mitigation, though some soil instability may persist.
Cumulative impact post mitigation:	Slight long-term sediment accumulation in the hillslope seep, minimized by mitigation but potentially compounded by future runoff events or catchment changes, though constrained by the small road footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**3. Water quality impairment** Domestic effluent (including sewage) spill from the proposed conservancy tank during emptying and leakages in the system due to damaged pipework and/or conservancy tank.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Contamination of surface water and soil with pathogens, nutrients, and organic matter from effluent, potentially polluting nearby drainage lines and downstream wetlands, and posing risks to aquatic ecosystems and human health.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium-High
Indirect impacts:	Proliferation of pathogens affecting aquatic biota and wetland-dependent species; nutrient enrichment leading to eutrophication and algal blooms; potential contamination of groundwater if leaks infiltrate deeply.
Cumulative impact prior to mitigation:	Gradual degradation of water quality in the local catchment, increasing ecological stress and health risks over time if spills recur or combine with other pollution sources (e.g., runoff from the road).

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low-Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Ensure that the conservancy tank is appropriately sized (input should be obtained from a professional civils engineer and the calculation endorsed by the municipality). • Formalise an operational agreement between the owner/s and the Municipality/3rd party contractor that specifies the timing of tank emptying; and • During the operational phase, monitor the site for any odorous liquids possibly being associated with a leaking sewerage system.
Residual impacts:	Minor residual risk of undetected micro-leaks or rare spill incidents, with negligible ongoing water quality effects post-mitigation due to rapid response and containment measures.
Cumulative impact post mitigation:	Minimal long-term water quality impairment, significantly reduced by mitigation, with low potential for cumulative effects unless combined with significant external pollution events.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**4. Water quality impairment** Oil leaks from the vehicles passing through the bridge on the proposed access road situated upstream which could be detrimental to aquatic biota and flora.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Contamination of surface water in drainage lines and downstream wetlands with hydrocarbons from oil leaks, leading to toxicity, reduced water quality, and harm to aquatic biota and flora.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Bioaccumulation of hydrocarbons in aquatic organisms, affecting food chains; degradation of wetland vegetation and ecosystem services (e.g., water purification); potential contamination of downstream water sources.
Cumulative impact prior to mitigation:	Progressive deterioration of water quality and ecological health in the local catchment, amplifying toxicity and habitat degradation over time with repeated vehicle use and potential additional pollution sources.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium

Proposed mitigation:	**Recommended mitigation by the EAP:** • Design the bridge with impermeable surfaces and raised edges or curbs to contain oil leaks, directing runoff to collection points away from watercourses; • Install oil-absorbent mats or booms beneath the bridge at drainage line crossings to capture leaks before they enter water bodies; • Regularly inspect and maintain vehicles using the road to prevent oil leaks, encouraging residents to report issues; • Place spill kits (e.g., absorbent pads) near the bridge for immediate response to leaks; • Establish vegetated swales or buffer strips downstream of the bridge to filter any runoff before it reaches wetlands; • Monitor water quality in drainage lines and wetlands annually by an Environmental Control Officer (ECO) to detect and address contamination early.	
Residual impacts:	Minor residual oil contamination from undetected leaks or runoff during heavy rain, with limited ongoing effects on water quality and biota post-mitigation due to containment and monitoring.	
Cumulative impact post mitigation:	Slight long-term water quality degradation in the catchment, minimized by mitigation but potentially compounded by future pollution events, though constrained by the small road footprint and low traffic volume.	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)	Medium (-)
POST-CONSTRUCTION PHASE		
Potential impact and risk:	**5. Loss of Biota** Any discharge of untreated effluent, whether from an overflowing conservancy tank or leakages from the sewerage reticulation system, would cause some loss of wetland biota if the contaminants reached the channelled valley bottom wetland approximately 100m downslope of the site proposed for the dwelling and conservancy tank.	
Nature of impact:	Negative	
Extent and duration of impact:	Local; Long-term	
Consequence of impact or risk:	• Contamination of surface water in drainage lines and downstream wetlands with hydrocarbons from oil leaks, leading to toxicity, reduced water quality, and harm to aquatic biota and flora.	
Probability of occurrence:	Probable	
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High	
Degree to which the impact can be reversed:	Low-Medium	
Indirect impacts:	Low-Medium	
Cumulative impact prior to mitigation:	Bioaccumulation of hydrocarbons in aquatic organisms, affecting food chains; degradation of wetland vegetation and ecosystem services (e.g., water purification); potential contamination of downstream water sources.	

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Ensure that the conservancy tank is appropriately sized (input should be obtained from a professional civil engineer and the calculation endorsed by the Municipality). • Formalise an operational agreement between the owner/s and the municipality that specifies the timing of tank emptying; and • During the operational phase, monitor the site for any odorous liquids possibly being associated with the sewerage system.
Residual impacts:	Minor residual oil contamination from undetected leaks or runoff during heavy rain, with limited ongoing effects on water quality and biota post-mitigation due to containment and monitoring.
Cumulative impact post mitigation:	Slight long-term water quality degradation in the catchment, minimized by mitigation but potentially compounded by future pollution events, though constrained by the small road footprint and low traffic volume.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	N/A
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

ALTERNATIVE 2

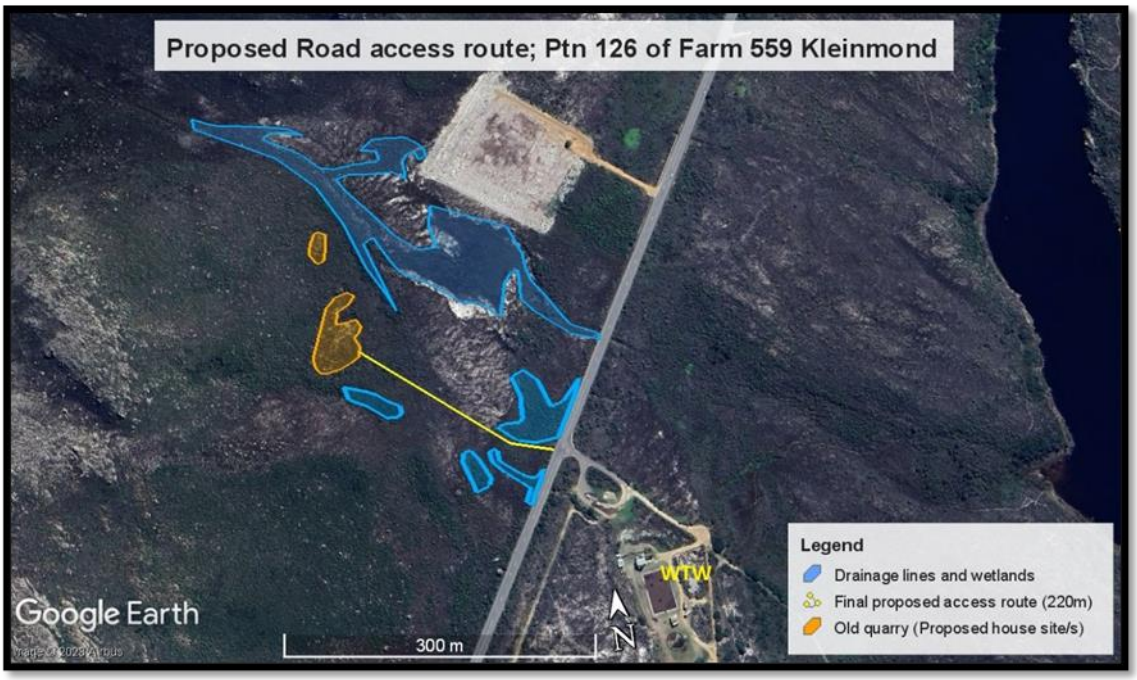


PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**1. Ecological/Botanical Impacts** Loss of highly sensitive indigenous vegetation as well as plant species of conservation concern.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Loss of highly sensitive indigenous vegetation and plant species of conservation concern, resulting in reduced biodiversity, compromised ecosystem services.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Medium-High
Indirect impacts:	Habitat fragmentation, isolating plant populations and reducing genetic diversity. Increased risk of invasive species establishment in disturbed areas.
Cumulative impact prior to mitigation:	High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	**Low-Medium**
Degree to which the impact can be managed:	**Medium- High**
Degree to which the impact can be mitigated:	**Medium**
Proposed mitigation:	• The vegetation on site is now due for a burn and should thus ideally be burnt prior to any development on the site, which will also help reduce fire hazard in the near future.
Residual impacts:	Permanent loss of some highly sensitive vegetation and species of conservation concern within the development footprint.

Cumulative impact post mitigation:	Contribution to regional biodiversity loss
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Medium (-)**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**2. Wetland loss** No impact on watercourses
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**3. Alteration of Flow regime** No impacts on watercourses
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Neglegable
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**N/A**
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

ALTERNATIVE 3 (PREFERRED)



PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**2. Ecological/ Botanical impacts** The clearance and disturbance of the fewest plant SoCC.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Habitat fragmentation, leading to loss or degradation of Plant Species of Conservation Concern (SoCC) and disruption of wetland ecosystems.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium- High
Degree to which the impact can be reversed:	Low-Medium
Indirect impacts:	Reduced seed dispersal and genetic diversity of SoCC-
Cumulative impact prior to mitigation:	Progressive decline in botanical and ecological integrity of the area, exacerbating habitat fragmentation and wetland degradation over time
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• The vegetation on site is now due for a burn and should thus ideally be burnt prior to any development on the site, which will also help reduce fire hazard in the near future.
Residual impacts:	Partial loss or slow recovery of SoCC populations despite revegetation efforts, with some persistent ecological alteration.
Cumulative impact post mitigation:	Reduced but persistent degradation of botanical diversity and wetland function, potentially compounded by future land use changes, though minimized by mitigation and the small road footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**3. Disturbance to Wetland habitat** A construction of the access road from Clarence Drive to Portion 126 will pass within a few metres of parts of the hillslope seep wetland, potentially disturbing the wetland habitat.
Nature of impact:	Negative
Extent and duration of impact:	Local ; long-term
Consequence of impact or risk:	Most of the impacts arise when wetland vegetation is damaged and topsoil compacted as a result of the driving of construction vehicles in and near wetland areas.
Probability of occurrence:	Highly Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium

Degree to which the impact can be reversed:	Medium
Indirect impacts:	Minor disturbance to the hydrological connectivity
Cumulative impact prior to mitigation:	The potential impacts associated with the proposed single residential use of Portion 126 and the construction of an access road to Portion 125 would contribute to this significant cumulative impact in the future, albeit only in a minor way.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low-Medium
Degree to which the impact can be mitigated:	Low-Medium
Proposed mitigation:	• Clearly demarcate the edge of the development footprint of each accommodation area using weather-proof markers for the full duration of the construction phase and declare all areas outside the development footprint as No-Go areas for the full duration of the construction phase; • Only with written permission from the ECO may construction workers be permitted to enter the No-Go area and this should only be for the purposes of rehabilitation (in the event that the wetland area is damaged) or for the purpose of collecting wind-blown construction waste. • Ensure that all construction vehicles remain within the development footprint of the access road. If turning areas are required then ensure that these are located in the terrestrial areas between the wetland area and the quarry site (note: this is subject to endorsement by the appointed terrestrial biodiversity specialist). • Ensure that all material stockpiles and construction machinery are located/parked at least 20m from any wetland habitat. • The placement of construction materials and the driving of vehicles outside of the construction footprint is strictly prohibited with the nearest material stockpiles being permitted at a minimum distance of 20m from any wetland edge.
Residual impacts:	Minor ongoing disturbance to wetland vegetation and soil structure due to unavoidable proximity of the access road to the drainage line; potential for limited sediment runoff despite mitigation measures, affecting water quality downstream.
Cumulative impact post mitigation:	Reduced but persistent degradation of wetland habitat and hydrological function over time, exacerbated by any future maintenance activities or incidental breaches of No-Go areas.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**4. Alteration of Flow regime**

	In order to construct the proposed dwelling and the access road indigenous vegetation would have to be cleared and this would have the effect of reducing catchment roughness.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	The reduced catchment roughness would cause accelerated run-off and reduced infiltration with the likely consequence of altering the natural flow regime in any nearby receiving watercourse.
Probability of occurrence:	Highly Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased erosion potential downstream due to accelerated runoff; potential sedimentation in nearby watercourses affecting aquatic ecosystems.
Cumulative impact prior to mitigation:	Progressive alteration of local hydrological patterns, potentially exacerbating flood risk or drought conditions in the receiving watercourse over time, especially if combined with other regional developments.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	N/A
Residual impacts:	Minor increases in runoff velocity and reduced infiltration within the development footprint, with limited ongoing effects on the flow regime post-construction due to the small scale and temporary nature of vegetation clearance.
Cumulative impact post mitigation:	Slight long-term alteration of local flow patterns, reduced by mitigation but potentially compounded by future land use changes in the catchment, though limited by the project's small footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**6. Increased Erosion and Sedimentation** Clearing of vegetation resulting in the exposure of the site's highly erosive soils to stormwater erosion; • Importation of fill material to construct new access road which, prior to compaction, would also be temporarily vulnerable to stormwater erosion; • Soil, sand and stone (if fines are present) stockpiles which, if exposed to rain, would be susceptible to erosion; and Repeated driving of construction vehicles on the site which would result in disturbance of vegetation thereby exposing the underlying highly erosive soils to erosion and causing the concentration of run-off which would exacerbate erosion.
Nature of impact:	Negative

Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Increased soil loss and sediment transport into nearby watercourses (e.g., drainage line), potentially degrading water quality, smothering aquatic habitats, and altering downstream hydrological conditions.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Likely
Degree to which the impact can be reversed:	Low
Indirect impacts:	Sedimentation in downstream aquatic ecosystems, potentially affecting biodiversity; increased turbidity impacting water quality and aquatic life; potential for gulley formation if erosion is severe.
Cumulative impact prior to mitigation:	Progressive degradation of soil stability and water quality in the local catchment, potentially amplifying erosion risks and sedimentation during future rainfall events or developments in the area.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	• Limit the construction phase to the dry summer months when rainfall is at its lowest; • Minimise the time that exposed soils are potentially exposed to the elements (as far as practically possible); • Cover all soil, sand and stone stockpiles with plastic sheeting to ensure that the stockpiles are protected from rain; • Actively repair any erosion runnels and prevent any sediment-laden run-off from exiting the construction area through placement of sandbags or similar; and • Immediately after construction of the buildings and associated infrastructure is complete, revegetate any exposed areas with locally occurring indigenous plant species.
Residual impacts:	Minor residual erosion and sedimentation from compacted road surfaces or incomplete revegetation, with limited ongoing sediment runoff during heavy rain events.
Cumulative impact post mitigation:	Reduced but persistent minor sediment input to the drainage line, potentially contributing to subtle long-term changes in local watercourse conditions if combined with other catchment disturbances.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**7. Water Quality impairment** During the construction phase there is a reasonable likelihood that as a result of the operation of machinery and vehicles, and if oil leaks remain unchecked and fuel spillages occur during refuelling, then contamination of the stormwater and ultimately the receiving watercourses would occur.

Nature of impact:	Negative
Extent and duration of impact:	Local; Short-term
Consequence of impact or risk:	Contamination of stormwater with hydrocarbons (oil and fuel), leading to pollution of downslope wetlands and receiving watercourses, potentially harming aquatic ecosystems, degrading water quality, and affecting downstream users or habitats.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Low-Medium
Indirect impacts:	Toxicity to aquatic organisms in wetlands and watercourses; potential bioaccumulation of contaminants in the food chain; reduced ecological functioning of wetlands (e.g., filtration capacity); downstream impacts on water usability
Cumulative impact prior to mitigation:	Progressive contamination of local water bodies, amplifying ecological stress and water quality degradation during construction, with potential long-term effects if combined with other pollution sources in the catchment.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Undertake the construction of the access road during the dry summer months. • Ensure that all construction machinery and vehicles are checked routinely for oil leaks and are in good working order before being permitted onto the development site; • Use drip-trays at all times when operating petrochemical driven construction machinery (e.g. generators and cement mixers); • Use drip trays and other appropriate containment methods while refuelling of vehicles and machinery; • Demarcate an area for the refuelling of machinery and vehicles (this is recommended to be at the Municipal WWTW); • Ensure that hazardous substances and chemicals are stored in a contained, impermeable area which has the capacity to contain at least 110% of the total volume of stored substances. • Store cement is a secure weather-proof area (e.g. shipping container) and ensure that used cement • bags are placed in plastic bin-bags prior to placement in the on-site solid waste storage area; • All cement batching on the site must be undertaken on impermeable and bunded batching boards to ensure cement slurry is contained; and • Any cement residues and concrete waste within the construction site must be removed at the end of every working day and disposed of as rubble.

Residual impacts:	Minor residual contamination from undetected micro-spills or runoff during heavy rain, with limited ongoing water quality effects post-construction due to mitigation and the short-term nature of the activity.
Cumulative impact post mitigation:	Slight long-term water quality impairment in the local catchment, minimized by mitigation but potentially compounded by future pollution events, though constrained by the project's small scale.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very- low
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**8. Loss of Biota** Construction activities within and/or in close proximity to watercourses may cause localised and very limited biota loss as a result of being crushed by vehicles driving in or near aquatic habitat or through the indiscriminate placement of machinery and/or construction materials.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Direct limited loss of aquatic and semi-aquatic biota (e.g., invertebrates, amphibians, small fish) in the drainage line and nearby wetlands, leading to reduced biodiversity and disruption of local ecosystem functions.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Disruption of food chains and ecological interactions dependent on affected biota; potential decline in wetland-dependent species (e.g., birds, insects); reduced ecosystem resilience to future disturbances.
Cumulative impact prior to mitigation:	Progressive loss of biodiversity in the local aquatic ecosystem, potentially leading to long-term degradation of wetland and watercourse health if combined with other construction or land-use impacts in the catchment.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium-High
Proposed mitigation:	• Clearly demarcate the edge of the development footprint of the proposed access road using weather-proof markers for the full duration of the construction phase and declare all areas outside the development footprint as No-Go areas for the full duration of the construction phase; • Only with written permission from the ECO may construction workers be permitted to enter the No-Go area and this should only be for the purposes of rehabilitation (in the event that the wetland area is damaged) or for the purpose of collecting wind-blown construction waste.

	• Ensure that all construction vehicles remain within the development footprint of the access road. If turning areas are required then ensure that these are located in the terrestrial areas between the wetland area and the quarry site (note: this is subject to endorsement by the appointed terrestrial biodiversity specialist). • Ensure that all material stockpiles and construction machinery are located/parked at least 20m from any wetland habitat.
Residual impacts:	Minor residual loss of biota due to unavoidable disturbance within the construction footprint or accidental incursions, with limited ongoing effects post-construction due to the small scale and temporary nature of the activity.
Cumulative impact post mitigation:	Slight long-term reduction in local biodiversity, minimized by mitigation but potentially compounded by future disturbances in the catchment, though constrained by the project's limited extent.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very - Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**6. Alteration of Flow Regime** The access road upstream would cause accelerated run-off and increased flood peaks because of the compaction of road surface as a result of being driven on which would limit infiltration.
Nature of impact:	Negative
Extent and duration of impact:	Local; long term
Consequence of impact or risk:	Increased runoff velocity and flood peaks altering the natural hydrological regime of the two drainage lines and downstream wetlands, potentially leading to erosion, reduced groundwater recharge, and habitat degradation.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased downstream erosion and sedimentation; potential drying of wetland areas due to reduced infiltration; altered habitat conditions affecting aquatic and wetland-dependent species.
Cumulative impact prior to mitigation:	Progressive disruption of the local hydrological system, exacerbating flood risks and wetland degradation over time, particularly when combined with other catchment alterations or climate change effects.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium-High
Proposed mitigation:	• Where the proposed access road is aligned through sloping terrain near wetland habitat (e.g. the first 60m of the access road after leaving Clarence Drive) install drainage control

	structures every 10m that direct road run-off away from the road and into the surrounding veld.
Residual impacts:	Minor ongoing increases in runoff and reduced infiltration due to the road's presence, with limited alteration of flow regime post-mitigation, though some flood peak increases may persist during heavy rain.
Cumulative impact post mitigation:	Slight long-term hydrological changes in the local catchment, minimized by mitigation but potentially compounded by future land use or climate impacts, though constrained by the small road footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very -Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**7. Erosion and Sedimentation** The proposed new access road is the primary cause of run-off acceleration (see Impact 1 above) and therefore any stormwater run-off discharged from the access road into the surrounding area has potential to cause erosion and sediment loading of the nearby hillslope seep.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Increased erosion along the access road and sediment deposition into the hillslope seep wetland, potentially degrading soil stability, water quality, and wetland habitat integrity.
Probability of occurrence:	Highly probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Sedimentation smothering wetland vegetation and biota; altered hydrological function of the hillslope seep; downstream water quality degradation affecting aquatic ecosystems.
Cumulative impact prior to mitigation:	Progressive soil loss and sediment accumulation in the hillslope seep and downstream areas, exacerbating wetland degradation and erosion risks over time, particularly with ongoing road use and regional disturbances.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	Medium- High
Proposed mitigation:	• Where the proposed access road is aligned through sloping terrain near wetland habitat (e.g. the first 60m of the access road after leaving Clarence Drive) install drainage control structures every 10m that direct road run-off away from the road and into the surrounding veld.
Residual impacts:	Minor ongoing erosion and sediment transport from the road surface during heavy rain, with limited sediment loading into the hillslope seep due to mitigation, though some soil instability may persist.

Cumulative impact post mitigation:	Slight long-term sediment accumulation in the hillslope seep, minimized by mitigation but potentially compounded by future runoff events or catchment changes, though constrained by the small road footprint.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very- Low
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**8. Water quality impairment** Domestic effluent (including sewage) spill from the proposed conservancy tank during emptying and leakages in the system due to damaged pipework and/or conservancy tank.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Contamination of surface water and soil with pathogens, nutrients, and organic matter from effluent, potentially polluting nearby drainage lines and downstream wetlands, and posing risks to aquatic ecosystems and human health.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium-High
Indirect impacts:	Proliferation of pathogens affecting aquatic biota and wetland-dependent species; nutrient enrichment leading to eutrophication and algal blooms; potential contamination of groundwater if leaks infiltrate deeply.
Cumulative impact prior to mitigation:	Gradual degradation of water quality in the local catchment, increasing ecological stress and health risks over time if spills recur or combine with other pollution sources (e.g., runoff from the road).
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low-Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Ensure that the conservancy tank is appropriately sized (input should be obtained from a professional civils engineer and the calculation endorsed by the municipality). • Formalise an operational agreement between the owner/s and the Municipality/3rd party contractor that specifies the timing of tank emptying; and • During the operational phase, monitor the site for any odorous liquids possibly being associated with a leaking sewerage system.
Residual impacts:	Minor residual risk of undetected micro-leaks or rare spill incidents, with negligible ongoing water quality effects post-mitigation due to rapid response and containment measures.
Cumulative impact post mitigation:	Minimal long-term water quality impairment, significantly reduced by mitigation, with low potential for cumulative effects unless combined with significant external pollution events.

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very - Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**9. Water quality impairment** Oil leaks from the vehicles passing through the bridge on the proposed access road situated upstream which could be detrimental to aquatic biota and flora.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Contamination of surface water in drainage lines and downstream wetlands with hydrocarbons from oil leaks, leading to toxicity, reduced water quality, and harm to aquatic biota and flora.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Bioaccumulation of hydrocarbons in aquatic organisms, affecting food chains; degradation of wetland vegetation and ecosystem services (e.g., water purification); potential contamination of downstream water sources.
Cumulative impact prior to mitigation:	Progressive deterioration of water quality and ecological health in the local catchment, amplifying toxicity and habitat degradation over time with repeated vehicle use and potential additional pollution sources.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	**Recommended mitigation by the EAP:** • Design the bridge with impermeable surfaces and raised edges or curbs to contain oil leaks, directing runoff to collection points away from watercourses; • Install oil-absorbent mats or booms beneath the bridge at drainage line crossings to capture leaks before they enter water bodies; • Regularly inspect and maintain vehicles using the road to prevent oil leaks, encouraging residents to report issues; • Place spill kits (e.g., absorbent pads) near the bridge for immediate response to leaks; • Establish vegetated swales or buffer strips downstream of the bridge to filter any runoff before it reaches wetlands; • Monitor water quality in drainage lines and wetlands annually by an Environmental Control Officer (ECO) to detect and address contamination early.

Residual impacts:	Minor residual oil contamination from undetected leaks or runoff during heavy rain, with limited ongoing effects on water quality and biota post-mitigation due to containment and monitoring.
Cumulative impact post mitigation:	Slight long-term water quality degradation in the catchment, minimized by mitigation but potentially compounded by future pollution events, though constrained by the small road footprint and low traffic volume.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**10. Loss of Biota** Any discharge of untreated effluent, whether from an overflowing conservancy tank or leakages from the sewerage reticulation system, would cause some loss of wetland biota if the contaminants reached the channelled valley bottom wetland approximately 100m downslope of the site proposed for the dwelling and conservancy tank.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Contamination of surface water in drainage lines and downstream wetlands with hydrocarbons from oil leaks, leading to toxicity, reduced water quality, and harm to aquatic biota and flora.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High
Degree to which the impact can be reversed:	Low-Medium
Indirect impacts:	Low-Medium
Cumulative impact prior to mitigation:	Bioaccumulation of hydrocarbons in aquatic organisms, affecting food chains; degradation of wetland vegetation and ecosystem services (e.g., water purification); potential contamination of downstream water sources.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Ensure that the conservancy tank is appropriately sized (input should be obtained from a professional civil engineer and the calculation endorsed by the Municipality). • Formalise an operational agreement between the owner/s and the municipality that specifies the timing of tank emptying; and • During the operational phase, monitor the site for any odorous liquids possibly being associated with the sewerage system.
Residual impacts:	Minor residual oil contamination from undetected leaks or runoff during heavy rain, with limited ongoing effects on water quality and biota post-mitigation due to containment and monitoring.
Cumulative impact post mitigation:	Slight long-term water quality degradation in the catchment, minimized by mitigation but potentially compounded by future

	pollution events, though constrained by the small road footprint and low traffic volume.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	N/A
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

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.

Terrestrial Biodiversity Impact Assessment

- The site features two vegetation types: Kogelberg Sandstone Fynbos (Critically Endangered, 83% intact, 59% conserved) and Hangklip Sand Fynbos (Critically Endangered, 68% intact, 17% conserved), both under pressure from urban development and alien invasives.
- Most of Portion 126 is pristine, supporting high-diversity Kogelberg Sandstone Fynbos, except for two old gravel quarries (0.24 ha and 0.05 ha) that have partially rehabilitated.
- A small area near the cemetery supports very high-sensitivity Hangklip Sand Fynbos. A seasonal drainage line and wetland occur in the northern part, flowing toward municipal land.
- The majority of Portion 126 is rated High botanical sensitivity due to its pristine Kogelberg Sandstone Fynbos, steep terrain, and presence of numerous plant Species of Conservation Concern (SoCC).
- The Hangklip Sand Fynbos near the cemetery and the drainage line/wetland area are rated Very High sensitivity due to rare species (e.g., *Othonna sp. nov., Ixia micrandra*) and ecological importance.
- The two quarries are rated Medium sensitivity, lacking SoCC and featuring a subset of surrounding vegetation (e.g., *Protea repens, Leucadendron laureolum*), with minor seasonal water flow in Quarry 1 not constituting a wetland.
- At least 11 SoCC were recorded (e.g., *Erica paucifolia* – Endangered, *Leucospermum prostratum* – Vulnerable), mostly scattered across the site, with two specific to the Hangklip Sand Fynbos. Most are shrubs with sensitive roots, making transplantation unfeasible except for *Ixia micrandra*. Additional undetected SoCC are moderately likely.
- The site last burned in 2013, making it due for a fire (optimal every 8-12 years for Fynbos). Alien invasives (e.g., Pinus, Hakea drupacea) are present but have been managed previously.
- most of Portion 126 is mapped as CBA1 (terrestrial), with a small eastern section as CBA1 (aquatic), which Helme largely confirms. The adjacent municipal land (including the cemetery) is inaccurately mapped as a Protected Area, given there is a cemetery.

Impact Management Measures:

- Site any dwelling in the two old gravel quarries (Medium sensitivity, 0.24 ha and 0.05 ha) to avoid High and Very High sensitivity areas. Quarry 1 (0.24 ha) is ecologically preferred due to its prior disturbance and lack of SoCC.
- The vegetation on site is now due for a burn and should thus ideally be burnt prior to any development on the site, which will also help reduce fire hazard in the near future.

Aquatic Biodiversity Impact Assessment

Aquatic features

- The National Wetlands Map Version 5 (NWM5) identifies a 6.4 ha hillslope seep partially within Portion 126 and a 60-ha floodplain wetland 100 m southeast of the site, south of Clarence Drive. Two 1st-order non-perennial drainage lines traverse the northern part of Portion 126.
- No wetlands are within Portions 125 or 126 at direct risk from the dwelling construction. However, downslope of Portion 126 (on municipal land between the site and Clarence Drive), a smaller hillslope seep (0.5 ha) and a channelled valley bottom wetland (0.8 ha) were delineated, at risk from the access road. The mapped hillslope

seep extent was overstated, and the area east of the cemetery was reclassified as a channelled valley bottom wetland.

Ecological Assessment

Hillslope Seep Wetland

- ET-EcoServices: Intermediate, with High scores for erosion control and biodiversity maintenance due to intact vegetation, and Moderately High for sediment/nutrient removal.
- Present Ecological State (PES): Category D (largely modified), due to Clarence Drive's barrier effect on hydrology, historical infilling (20% loss), and partial vegetation transformation.
- Ecological Importance and Sensitivity (EIS): Moderate, supporting rare biota within Critically Endangered Kogelberg Sandstone Fynbos and Endangered Southwest Sandstone Fynbos wetland vegetation, but common regionally and resilient to hydrological shifts.
- Recommended Ecological Category (REC): Category C, as improving to C (e.g., removing Clarence Drive) is infeasible.

Channelled Valley Bottom Wetland

- WET-EcoServices: Intermediate, with High scores for erosion control and biodiversity due to vegetation cover, and Moderate for sediment/nutrient removal.
- PES: Category C (moderately modified), due to minor hydrological and geomorphological changes from sheet erosion and sedimentation, with 70% of vegetation intact.
- EIS: Moderate, supporting rare biota in sensitive vegetation types, but common regionally and sensitive to hydrology and water quality changes.
- REC: Category C, to maintain current PES with no further degradation allowed.

Risk Assessment (NWA)

All Section 21(c) and (i) water uses (impeding/diverting flow, altering watercourse characteristics) rated LOW risk with mitigation, qualifying for a General Authorisation (GA) rather than a Water Use Licence (WUL).

Impact Management Measures

Construction Phase Mitigation

- Demarcate development footprints with weather-proof markers, designating wetlands as No-Go zones unless authorized by the ECO for rehabilitation or waste collection.
- Restrict construction vehicles and stockpiles to 20 m from wetlands, using terrestrial turning areas (subject to botanical endorsement).
- Limit construction to dry summer months, cover stockpiles, repair erosion, and revegetate post-construction with indigenous species.
- Prevent water quality impairment via drip trays, contained refueling, and secure cement storage/batching.
- For the cemetery route: Design bridge structures to span drainage lines without in-channel footings.

Operational Phase Mitigation

- Install drainage controls (every 10 m on slopes) to direct road runoff into surrounding veld, reducing flow alteration and erosion.
- Size conservancy tanks appropriately (engineer-certified), formalize tank-emptying agreements, and monitor for leaks to prevent water quality impairment and biota loss.

Concluding statement from the EAP perspective

The preferred layout alternative (Alternative 3) for the proposed access road a 250-meter jeep track from the turn-off to the Municipal Wastewater Treatment Works (WWTW) across Remainder Farm 562 to the quarry site on Portion 126 represents the most balanced and environmentally sustainable option for the development of a single residential dwelling and access to Portions 125 and 126 of Farm 599, Betty's Bay. This conclusion is robustly substantiated by the integrated findings and recommendations of the terrestrial biodiversity specialist (Nick Helme) and the aquatic biodiversity specialist (Nick Steytler), which have been carefully considered and incorporated into the project design and Environmental Management Programme (EMP).

Alternative 3 avoids the significant botanical constraints identified by Helme, notably the Very High sensitivity Hangklip Sand Fynbos and the northern drainage line/wetland on Portion 126, which would be severely impacted by the longer cemetery route (Alternative 1, 550 m). The botanical assessment rates the cemetery route as having a High negative impact due to its traversal of pristine vegetation and rare Species of Conservation Concern (SoCC) like *Othonna sp. nov. and Ixia micrandra*, rendering it ecologically untenable. In contrast, Alternative 3 leverages the existing municipal land and a shorter path (220m), minimising vegetation clearance to a narrow jeep track footprint (approximately 2.9m wide), which Helme supports as a Medium impact option when routed to avoid sensitive areas. This aligns with the specialist's recommendation to site development in the Medium sensitivity Quarry 1 (0.24 ha), a directive fully adopted to preserve the High sensitivity Kogelberg Sandstone Fynbos dominating Portion 126.

From a freshwater perspective, aquatic biodiversity assessment confirms that the dwelling in Quarry 1 poses no direct risk to wetlands within Portions 125 or 126, reinforcing its suitability. While Steytler prefers the cemetery route for its setback from the downslope hillslope seep (0.5 ha) and channelled valley bottom wetland (0.8 ha), rating its impacts as Very Low (-ve) and mitigable to Insignificant with bridge spans over two non-perennial drainage lines, he acknowledges Alternative 3 as acceptable with mitigation. The WWTW route's proximity to the hillslope seep (a few meters) results in Low (-ve) construction impacts and Medium (-ve) operational impacts (flow alteration, water quality), all reducible to Very Low (-ve) through measures like 20 m buffers, dry-season construction, and drainage controls every 10 m on slopes. Crucially, Alternative 3's shorter length and jeep track design avoiding major construction works like paving, minimise hydrological disruption and sedimentation risks compared to a longer, potentially more engineered route, supporting the freshwater specialist LOW risk rating under the National Water Act (NWA) and eligibility for a General Authorisation.

The jeep track approach, endorsed by both specialists as a mitigation strategy, reduces the clearance of indigenous vegetation to a minimal footprint (estimated at less than 0.1 ha), limiting extensive machinery or paved infrastructure. This aligns with the applicant's commitment to environmentally friendly operations, preserving the site's ecological integrity while providing practical access.

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

Terrestrial Biodiversity Impact Assessment

Impact Management Measures

- Site any dwelling in the two old gravel quarries (Medium sensitivity, 0.24 ha and 0.05 ha) to avoid High and Very High sensitivity areas. Quarry 1 (0.24 ha) is ecologically preferred due to its prior disturbance and lack of SoCC.
- The vegetation on site is now due for a burn and should thus ideally be burnt prior to any development on the site, which will also help reduce fire hazard in the near future.

Aquatic Biodiversity Impact Assessment

Impact Management Measures

Construction Phase Mitigation

Disturbance to wetland habitat

- Clearly demarcate the edge of the development footprint of each accommodation area using weather-proof markers for the full duration of the construction phase and declare all areas outside the development footprint as No-Go areas for the full duration of the construction phase;
- Only with written permission from the ECO may construction workers be permitted to enter the No- Go area and this should only be for the purposes of rehabilitation (in the event that the wetland area is damaged) or for the purpose of collecting wind-blown construction waste.
- Ensure that all construction vehicles remain within the development footprint of the access road. If turning areas are required then ensure that these are located in the terrestrial areas between the wetland area and the quarry site (note: this is subject to endorsement by the appointed terrestrial biodiversity specialist).
- Ensure that all material stockpiles and construction machinery are located/parked at least 20m from any wetland habitat.

Increased Erosion and Sedimentation

- Limit the construction phase to the dry summer months when rainfall is at its lowest;
- Minimise the time that exposed soils are potentially exposed to the elements (as far as practically possible);
- Cover all soil, sand and stone stockpiles with plastic sheeting to ensure that the stockpiles are protected from rain;
- Actively repair any erosion runnels and prevent any sediment-laden run-off from exiting the construction area through placement of sandbags or similar; and
- Immediately after construction of the buildings and associated infrastructure is complete, revegetate any exposed areas with locally occurring indigenous plant species.

Water quality impairment

- Undertake the construction of the access road during the dry summer months.
- Ensure that all construction machinery and vehicles are checked routinely for oil leaks and are in good working order before being permitted onto the development site;
- Use drip-trays at all times when operating petrochemical driven construction machinery (e.g. generators and cement mixers);
- Use drip trays and other appropriate containment methods while refuelling of vehicles and machinery;
- Demarcate an area for the refuelling of machinery and vehicles (this is recommended to be at the Municipal WWTW);
- Ensure that hazardous substances and chemicals are stored in a contained, impermeable area which has the capacity to contain at least 110% of the total volume of stored substances.
- Store cement is a secure weather-proof area (e.g. shipping container) and ensure that used cement bags are placed in plastic bin-bags prior to placement in the on-site solid waste storage area;
- All cement batching on the site must be undertaken on impermeable and bunded batching boards to ensure cement slurry is contained; and
- Any cement residues and concrete waste within the construction site must be removed at the end of every working day and disposed of as rubble.

Operational Phase Mitigation

Alteration of Flow Regime ; Erosion and Sedimentation

- Where the proposed access road is aligned through sloping terrain near wetland habitat (e.g. the first 60m of the access road after leaving Clarence Drive) install drainage control structures every 10m that direct road run-off away from the road and into the surrounding veld.

Water quality impairment and Loss of Biota

- Ensure that the conservancy tank is appropriately sized (input should be obtained from a professional civils engineer and the calculation endorsed by the municipality).
- Formalise an operational agreement between the owner/s and the Municipality/3rd party contractor that specifies the timing of tank emptying; and
- During the operational phase, monitor the site for any odorous liquids possibly being associated with a leaking sewerage system.

EAP Recommendations

- Development areas and jeep track must be clearly defined to prevent sprawl of activities overtime.
- Alien vegetation management must be implemented.
- Fire management must be implemented.
- The proposal is located within a fire driven ecosystem and therefore measures must be put in place to protect the infrastructure and allow for natural fires to take place on the remainder of the site.
- All solid waste to be removed from site and disposed of at licenced facility.
- Sewerage to be disposed of offsite at licensed facility and serviced on a regular basis by certified service provider / municipality.
- Float level alarm to be fitted to conservancy tank, to signal at 75% capacity.
- Landscaping to be kept to a minimum, only locally indigenous vegetation to be used, no invasive lawn grass must be planted
- Permeable paving if and where required
- Refuse areas must be animal, water and wind proof

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.

N/A

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

The properties are situated on the mountain foothill, and outside the built-up areas. The development in the vicinity includes the Wastewater Treatment Works which is situated more than 300m away from the project site. However, the neighbouring farms are still vacant, with only one farm that is developed with single residential dwelling, as well as the visible access route which is three properties away from the subject property.

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 risk of climate change, particularly increased flooding and erosion could influence the proposed development by amplifying runoff, sediment transport, and hydrological stress on wetlands and Fynbos vegetation. However, the specialist assessments have thoroughly considered these risks by:

- Selecting a low-sensitivity quarry site for the dwelling, avoiding wetlands and SoCC.

- Designing access road routes to minimize wetland encroachment, with the WWTW turn-off route preferred for its lower aquatic impact.

- Implementing mitigation measures which are incorporated on the EMPr.

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

N/A

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.

N/A

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

The mitigation hierarchy is a structured approach used in environmental impact assessments (EIAs) to manage and minimise the negative effects of development projects on the environment. it consists of four sequential steps: avoid, minimise, restore, and offset. This framework ensures that environmental impacts are addressed systematically, prioritizing the prevention of harm before considering compensatory measures. In the case of the proposed residential development on portion 126 of farm 599, betty's bay, and the access road to portions 125 and 126, the mitigation hierarchy has been rigorously applied to identify the best practicable environmental option alternative 3, a 250-meter jeep track from the wastewater treatment works (WWTW) turn-off. Below, is an explanation how each step of the hierarchy has been implemented:

Avoidance

The dwelling is proposed within a historic quarry (Quarry 1024 ha) on Portion 126, an area rated Medium sensitivity due to its prior disturbance and absence of Species of Conservation Concern (SoCC). This choice avoids the High sensitivity Kogelberg Sandstone Fynbos and Very High sensitivity Hangklip Sand Fynbos areas, which host rare species such as *Othonna sp. nov.* and *Ixia micrandra*. Additionally, no wetlands are directly impacted by the dwelling's placement, as they lie downslope on municipal land, away from the development footprint.

The proposed access route (Alternative 3) from the WWTW turnoff road avoids crossing Portion 126 Very High sensitivity Hangklip Sand Fynbos and the northern drainage line/wetland. In contrast, the cemetery route (Alternative 1) would impact these sensitive areas by traversing two drainage lines. While Alternative 3 passes near a hillslope seep on municipal land, it avoids direct encroachment into the wetland itself, reducing its ecological footprint.

Minimisation

Alternative 3 utilizes a narrow, unpaved jeep track, limiting vegetation clearance and avoiding the broader disturbance associated with paved infrastructure. This minimalist design reduces botanical impacts and minimizes hydrological changes, such as increased runoff, that could affect nearby aquatic systems.

SECTION J: GENERAL

1. Environmental Impact Statement

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

Terrestrial Biodiversity Impact Assessment

- Portion 126 supports two Critically Endangered vegetation types: Kogelberg Sandstone Fynbos (83% intact, 59% conserved) and Hangklip Sand Fynbos (68% intact, 17% conserved), both under pressure from urban expansion and alien invasives.
- Most of Portion 126 is rated High sensitivity due to pristine Kogelberg Sandstone Fynbos, steep slopes, and at least 11 Species of Conservation Concern (SoCC) (e.g., *Erica paucifolia* – Endangered, *Leucospermum prostratum* – Vulnerable). The Hangklip Sand Fynbos near the cemetery and a northern drainage line/wetland are Very High sensitivity due to rare species (e.g., *Othonna sp. nov., Ixia micrandra*). Two old quarries (0.24 ha and 0.05 ha) are Medium sensitivity, and lacking SoCC.
- The site is mapped as Critical Biodiversity Area 1 (CBA1) by the Western Cape Biodiversity Spatial Plan, with the last fire in 2013 indicating it is overdue for a burn.

Terrestrial Impacts

Construction Phase:

- Potential clearance of High/Very High sensitivity vegetation and disturbance of SoCC if not confined to the quarry.
- The cemetery route (Alternative 1) would result to highly sensitive loss of Hangklip Sand Fynbos that is not present elsewhere on site, and was deemed not suitable for an access road, due to the ecological sensitivity of the area.

Aquatic Biodiversity Impact Assessment

- No wetlands occur within Portions 125 or 126 at risk from the dwelling, but downslope on municipal land, a hillslope seep (0.5 ha) and a channelled valley bottom wetland (0.8 ha) were delineated, potentially affected by the access road.
- Two non-perennial drainage lines traverse northern Portion 126.
- A Hillslope Wetland was identified on the southern boundary of the property with:
    - Present Ecological State Score (PES) at Category D (largely modified) due to Clarence Drive's (R44) hydrological barrier;
    - Its Ecological Importance and Sensitivity (EIS) is Moderate, supporting rare biota in Critically Endangered Fynbos.
- Channelled Valley Bottom Wetland was also identified
    - With PES Category C (moderately modified)
    - EIS moderate, sensitive to hydrology and water quality changes.
- The proposed dwelling location is sufficiently set-back from all downslope aquatic habitat and as a result the construction of the residential dwelling would not generate any significant impacts on aquatic biodiversity.

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)

As attached

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.

Proposed Residential dwelling

Positive impacts

- Siting the dwelling in a historic quarry (0.24 ha, Medium sensitivity) leverages a previously disturbed area, avoiding direct impacts on High and Very High sensitivity Kogelberg Sandstone Fynbos and Hangklip Sand Fynbos ecosystems, as well as downslope wetlands.
- Construction and maintenance of the dwelling will create temporary jobs (e.g., builders, landscapers), supporting local employment in Betty's Bay.

Negative impacts

- Minor vegetation clearance and soil disturbance within the quarry (Medium sensitivity) could disrupt local flora (e.g., Protea repens, Leucadendron laureolum), though no Species of Conservation Concern (SoCC) are present.
- Potential fire risk from human presence increases pressure on the overdue Fynbos fire cycle, while sewerage failure (Medium (-ve) unmitigated) could impair downslope water quality, though mitigated to Very Low (-ve) with conservancy tanks.
- Incremental habitat fragmentation in a region with significant historical Fynbos loss, though negligible with mitigation.

Access road Alternatives

Alternative 1 : Cemetery Route

Positive impacts

- The route avoids direct wetland proximity, crossing only two narrow, non-perennial drainage lines. Using bridge structures to span these channels minimizes instream habitat disturbance,
- Leverages existing municipal land and cemetery proximity, reducing new disturbance in some areas.
- Enhances connectivity to Portions 125 and 126, though less efficiently than Alternative 3 due to length.

Negative impacts

- The route traverses' areas of Very High sensitivity Hangklip Sand Fynbos, particularly near the cemetery, where rare SoCC (*Othonna sp. nov., Ixia micrandra*) occur. Clearing vegetation along the 550 m route would result in High (-ve) botanical impacts, as it affects Critically Endangered habitat and SoCC that are difficult to transplant.
- Similar runoff and water quality risks as Alternative 3 but combined with greater vegetation in areas of Very highly sensitive including rare SoCC *(e.g., Othonna sp. nov., Ixia micrandra)*.
- Construction could cause erosion and sedimentation near the channelled valley bottom wetland
- The longer route (550 m) requires more vegetation clearance than Alternative 3, increasing ecological disruption in a region with high cumulative habitat loss

Alternative 2: R44 route to Portion 126

Positive impacts

- At approximately 220 m, this route is shorter than Alternative 1, reducing the overall disturbance footprint compared to the cemetery route and potentially lowering construction costs

- The route avoids the Very High sensitivity Hangklip Sand Fynbos near the cemetery, focusing on areas of High sensitivity Kogelberg Sandstone Fynbos, which is still Critically Endangered but less constrained by rare SoCC.
- Provides direct access to Portion 126 from the R44, improving connectivity for the proposed dwelling with minimal community disruption.

Negative impacts

- Clearing High sensitivity Kogelberg Sandstone Fynbos along 220 m affects Critically Endangered habitat and several SoCC
- Direct access from the R44 to Portion 126 raises road safety issues, as noted by municipal authorities and Department of Infrastructure, potentially impacting community safety if not addressed through design.

Alternative 3 (Preferred): WWTW Turn-off

Positive impacts

- The route (<250 m, <0.1 ha unpaved jeep track) minimizes vegetation clearance and hydrological impacts compared to a paved road. It avoids Very High sensitivity Hangklip Sand Fynbos and the drainage line/wetland on Portion 126,
- The route is designed to maintain at least 4m clearance from wetlands (hillslope seep).
- Starting opposite the Kleinmond Water Treatment Works (WWTW) turn-off, it provides safe, efficient access to Portions 125 and 126 via municipal land (180 m) before entering Portion 126, minimizing community disruption and supporting road safety requirements

Negative impacts

- Low (-ve) impacts include habitat disturbance, erosion, and sedimentation near the hillslope seep (0.5 ha), with Very Low (-ve) flow alteration.
- Clearing a narrow track through High sensitivity Kogelberg Sandstone Fynbos disturbs Critically Endangered habitat and some SoCC

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

Terrestrial Biodiversity Impact Assessment

Impact Management Measures

- Site any dwelling in the two old gravel quarries (Medium sensitivity, 0.24 ha and 0.05 ha) to avoid High and Very High sensitivity areas. Quarry 1 (0.24 ha) is ecologically preferred due to its prior disturbance and lack of SoCC.
- The vegetation on site is now due for a burn and should thus ideally be burnt prior to any development on the site, which will also help reduce fire hazard in the near future.
- If one starts the route from opposite the southernmost arm of the turnoff to the WWTW there is a direct route, with at least 4m clearance (for a 3m wide road) to any wetlands, straight to the house site, as shown in Figure 1. This route is about 220m long, and is also the most direct route, requiring the shortest servitude, and would disturb the fewest plant SoCC. This route is acceptable from a botanical perspective and would have no more than a Medium negative botanical impact, and is currently the preferred road access route to the proposed house site.

Aquatic Biodiversity Impact Assessment

Impact Management Measures

- Clearly demarcate the edge of the development footprint of each accommodation area using weather-proof markers for the full duration of the construction phase and declare all areas outside the development footprint as No-Go areas for the full duration of the construction phase;
- Only with written permission from the ECO may construction workers be permitted to enter the No- Go area and this should only be for the purposes of rehabilitation (in the event that the wetland area is damaged) or for the purpose of collecting wind-blown construction waste.
- Ensure that all construction vehicles remain within the development footprint of the access road. If turning areas are required then ensure that these are located in the terrestrial areas between the wetland area and the quarry site (note: this is subject to endorsement by the appointed terrestrial biodiversity specialist).
- Ensure that all material stockpiles and construction machinery are located/parked at least 20m from any wetland habitat.

Increased Erosion and Sedimentation

- Limit the construction phase to the dry summer months when rainfall is at its lowest;
- Minimise the time that exposed soils are potentially exposed to the elements (as far as practically possible);
- Cover all soil, sand and stone stockpiles with plastic sheeting to ensure that the stockpiles are protected from rain;
- Actively repair any erosion runnels and prevent any sediment-laden run-off from exiting the construction area through placement of sandbags or similar; and
- Immediately after construction of the buildings and associated infrastructure is complete, revegetate any exposed areas with locally occurring indigenous plant species.

Water quality impairment

- Undertake the construction of the access road during the dry summer months.
- Ensure that all construction machinery and vehicles are checked routinely for oil leaks and are in good working order before being permitted onto the development site;
- Use drip-trays at all times when operating petrochemical driven construction machinery (e.g. generators and cement mixers);
- Use drip trays and other appropriate containment methods while refuelling of vehicles and machinery;
- Demarcate an area for the refuelling of machinery and vehicles (this is recommended to be at the Municipal WWTW);
- Ensure that hazardous substances and chemicals are stored in a contained, impermeable area which has the capacity to contain at least 110% of the total volume of stored substances.
- Store cement is a secure weather-proof area (e.g. shipping container) and ensure that used cement bags are placed in plastic bin-bags prior to placement in the on-site solid waste storage area;
- All cement batching on the site must be undertaken on impermeable and bunded batching boards to ensure cement slurry is contained; and
- Any cement residues and concrete waste within the construction site must be removed at the end of every working day and disposed of as rubble.

Operational Phase Mitigations

Alteration of Flow Regime ; Erosion and Sedimentation

- Where the proposed access road is aligned through sloping terrain near wetland habitat (e.g. the first 60m of the access road after leaving Clarence Drive) install drainage control structures every 10m that direct road run-off away from the road and into the surrounding veld.

Water quality impairment and Loss of Biota

- Ensure that the conservancy tank is appropriately sized (input should be obtained from a professional civils engineer and the calculation endorsed by the municipality).
- Formalise an operational agreement between the owner/s and the Municipality/3rd party contractor that specifies the timing of tank emptying; and
- During the operational phase, monitor the site for any odorous liquids possibly being associated with a leaking sewerage system.

EAP Recommendations

- Development areas and jeep track must be clearly defined to prevent sprawl of activities overtime.
- Alien vegetation management must be implemented.
- Fire management must be implemented.
- The proposal is located within a fire driven ecosystem and therefore measures must be put in place to protect the infrastructure and allow for natural fires to take place on the remainder of the site.
- All solid waste to be removed from site and disposed of at licenced facility.
- Sewerage to be disposed of off-site at licensed facility and serviced on a regular basis by certified service provider / municipality.
- Float level alarm to be fitted to conservancy tank, to signal at 75% capacity.
- Landscaping to be kept to a minimum, only locally indigenous vegetation to be used, no invasive lawn grass must be planted.
- Given the small scale of the development proposal, ECO audits will be required at points in construction when major items are actions place. it is recommended that the ECO conduct a predevelopment site visit, inspection and advice during the start of construction to ensure that the road is demarcated correctly and that the area around the road is fenced off. ECO site visits can then be conducted on a monthly basis until completion. A final closure inspection is also required.
- Given the small nature of the proposal one Environmental Audit is recommended at the completion of the works.

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.

N/A

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.

It is the considered opinion of the Environmental Assessment Practitioner (EAP), that the proposed development comprising a single residential dwelling on Portion 126 of Farm 599, Betty's Bay, and an access road via municipal land to Portions 125 and 126 should be authorized. This recommendation is grounded in a thorough evaluation of specialist inputs, impact assessments, and the application of the mitigation hierarchy, as detailed in this Basic Assessment Report (BAR). The proposed activities align with the principles of sustainable development under the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), as amended, provided that specific conditions are adhered to during implementation.

The proposed dwelling is sited within a previously disturbed quarry (0.24 ha or 2,400 m^2) on Portion 126, identified by the botanical specialist as an area of Medium sensitivity (Helme, 2023). This contrasts with the majority of Portion 126, which is rated High sensitivity due to pristine Kogelberg Sandstone Fynbos and the presence of at least 11 Species of Conservation Concern (SoCC), and areas near the cemetery and northern drainage line/wetland rated Very High sensitivity due to rare

species such as *Othonna sp. nov.* and *Ixia micrandra*. The aquatic specialist confirms no wetlands within Portion 126 are at direct risk from the proposed dwelling. The development footprint is limited to 800 m² for the housing structure within the 2,400 m² quarry area, ensuring minimal vegetation clearance and avoiding SoCC. This strategic placement leverages existing disturbance, reducing ecological impacts to a negligible level when mitigated, as supported by both specialists.

The proposed access road (Alternative 3) is a jeep track extending from the R44 (Clarence Drive) opposite the WWTW turn-off, across municipal land (Remainder Farm 562), to the dwelling on Portion 126, with connectivity to Portion 125 both properties owned by the applicant. The jeep track design minimises vegetation loss by avoiding the Very High and High sensitivity areas on Portion 126, unlike Alternative 1 (cemetery route), which would traverse sensitive Hangklip Sand Fynbos and drainage lines. The aquatic assessment rates construction impacts as Low (-ve) and operational impacts as Medium (-ve) unmitigated, reducible to Very Low (-ve) with mitigation such as 20 m wetland buffers and drainage controls.

A pre-construction Search and Rescue operation for SoCC, in collaboration with local conservation groups, further mitigates botanical risks, ensuring compliance with biodiversity conservation objectives.

Conditions of Authorisation;

- Alien vegetation management must be implemented.
- General Authorisation is required.
- Fire management plan will be implemented (Part of the FBA is in the process of drafting site-specific fire management plan).
- Prior to clearance, please contact the Kogelberg Biosphere Botanical Society Gardening Circle Group who have formed the "Fight For Fynbos" group, a Search and Rescue initiative for Species of Conservation Concern. Alternatively, there are local members of the Custodians of Rare and Endangered Wildflowers (CREW) group.
    - Contact details: Galia Manicom (Fight For Fynbos) email: galia.manicom@gmail.com

  cell: 082 963 3804
  Magriet Brink (Kogelberg CREW)
  Email: magrietb@gmail.com
  Cell: 072 921 1757

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

N/A

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 holder must commence with the listed activities on site within a period of five (5) years from the date of issue of this environmental authorisation.
- The development must be concluded within ten (10) years from the date of commencement of the first listed activity.

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.

Use of rainwater, permeable paving, flow reduction devices in design

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.
Principles of water awareness must be applied at both the construction / development phase and operational phase. • Water conservation should be a priority in the design of the dwelling. • Rainwater tanks are strongly encouraged. • Optimally designed systems for grey water reuse should also be explored during the design phase to prevent the expense of retrofitting a system. • Water wise and indigenous landscaping is also encouraged, as well as permeable paving in areas where paving is required. Low flow shower and heads and dual flushing systems should be fitted. • Aerators on taps should also be fitted to reduce overall water demand. • Construction activities such as watering, mixing and cleaning should avoid water wastage. • Dry brushing and trigger spray nozzles should be used.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.
Solar energy power supply will be utilized.	

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

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

I GF FOURIE ID number 6612315185088 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.

01/05/2023

Signature of the Applicant: Date:

EMPANGENI VETERINARY HOSPITAL

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I MICHELLE NAYLOR EAPASA Registration number 2019/698 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;

28-05-2025

Signature of the EAP: Date:

LORNAY ENVIRONMENTAL CONSULTING

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

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

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

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I Nick Steytler, 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: 15.05.25

EnviroSwift Western Cape

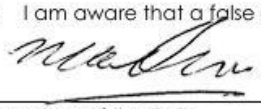
Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I NA Helme, 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.



28 May 2025

Signature of the EAP: Date:

Nick Helme Botanical Surveys

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST

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

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

Signature of the EAP: Date:

Name of company (if applicable):