



Eco Route

ENVIRONMENTAL CONSULTANCY
REGISTRATION NO. 1998/031976/23

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REVISED DRAFT BASIC ASSESSMENT REPORT

FOR

The Proposed Construction of a Residential Dwelling and Four Self-Catering Guest Cottages on Erf 2003, Wilderness, Western Cape

*In terms of the
National Environmental Management Act, 1998 (Act No. 107 of 1998),
and the Environmental Impact Assessment Regulations, 2014 (as amended).*



PREPARED FOR: WENTZEL CHRISTOFFEL COETZER
PREPARED BY: ECO ROUTE ENVIRONMENTAL CONSULTANCY
DEPARTMENT REF: 16/3/3/1/D2/55/0001/24
AUTHOR: SAMANTHA TEELUCKDHARI (EAPASA REG 2023/6443)
DATE: May 2024

ECO-ROUTE ENVIRONMENTAL CONSULTANCY



REGISTRATION NO. 1998/031976/23

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STATEMENT OF INDEPENDENCE

I, **Samantha Teeluckdhari**, of Eco Route Environmental Consultancy, in terms of section 33 of the NEMA, 1998 (Act No. 107 of 1998), as amended, hereby declare that I provide services as an independent Environmental Assessment Practitioner (EAPASA Reg: **2023/6443**) and receive remuneration for services rendered for undertaking tasks required in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended). I have no financial or other vested interest in the project.

S. Teeluckdhari

EAP SIGNATURE: _____



BASIC ASSESSMENT REPORT

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

May 2024

All amendments and inclusions appear in **green text in the document.**

(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)

Wilderness Erf 2003 (Wilderness Sky)

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, 1998 (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

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

MAPS

<p align="center">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.</p>	
<p>Locality Map:</p>	<p>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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>

	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:	<p>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:</p> <ul style="list-style-type: none"> • 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): <ul style="list-style-type: none"> ○ Watercourses / Rivers / Wetlands ○ Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable); ○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow <p>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.</p>
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	<p>GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system.</p> <p>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.</p> <p>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.</p>

ACRONYMS

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

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

ATTACHMENTS

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

The following checklist of attachments must be completed.

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

	Appendix E7:	Comment from WCG: DoA	
	Appendix E8:	Comment from WCG: DHS	
	Appendix E9:	Comment from WCG: DoH	
	Appendix E10:	Comment from DEA&DP: Pollution Management	
	Appendix E11:	Comment from DEA&DP: Waste Management	
	Appendix E12:	Comment from DEA&DP: Biodiversity	
	Appendix E13:	Comment from DEA&DP: Air Quality	N/A
	Appendix E14:	Comment from DEA&DP: Coastal Management	N/A
	Appendix E15:	Comment from the local authority	To be included in Final BAR
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	Comment from the municipality will be obtained
	Appendix E17:	Comment from the District Municipality	To be included in Final BAR
	Appendix E18:	Copy of an exemption notice	N/A
	Appendix E19:	Pre-approval for the reclamation of land	N/A
	Appendix E20:	Proof of agreement/TOR of the specialist studies conducted.	To be included in Final BAR
	Appendix E21:	Proof of land use rights	To be included in Final BAR
	Appendix E22:	Proof of public participation agreement for linear activities	N/A
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required. Newspaper advertisement and proof of notification of I&APs will be included in the Final BAR.		✓
Appendix G:	Specialist Report(s)		✓
Appendix H:	EMPr		✓

Appendix I:	Screening tool report	✓
Appendix J:	The impact and risk assessment for each alternative	✓
Appendix K:	Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline	✓
Appendix L	Any other attachments must be included as subsequent appendices Letter from attorney re HOA	✓

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: Name of contact person for Applicant/Proponent (if other): Company/ Trading name/State Department/Organ of State: Company Registration Number: Postal address: Telephone: E-mail:	Wentzel Christoffel Coetzer & Wessel Philippus Wessels		
	Wentzel Christoffel Coetzer		
	N/A		
	N/A		
	PO Box 26 Groot Marias		
			Postal code: 2850
	N/A		Cell: +26 771 306 763
	wentzel@work.co.bw		Fax: 086 402 9562
Company of EAP: EAP name: Postal address: Telephone: E-mail: Qualifications: EAPASA registration no:	Eco Route Environmental Consultancy		
	Samantha Teeluckdhari		
	PO Box 1252		
	Sedgefield		Postal code: 6573
			Cell: 072 773 5397
	samantha@ecoroute.co.za		Fax: 086 402 9562
	BSS Geography and Environmental Management		
2023/6443			
Duplicate this section where there is more than one landowner Name of landowner: Name of contact person for landowner (if other): Postal address: Telephone: E-mail:	Wessel Philippus Wessels		
	Wessel Philippus Wessels		
	PO Box 26 Groot Marias		
			Postal code: 2850
	N/A		Cell: +26 771 306 763
	wentzel@work.co.bw		Fax: N/A
Name of Person in control of the land: Name of contact person for person in control of the land: Postal address: Telephone: E-mail:	Christoffel Coetzer & Wessel Philippus Wessels		
	Wentzel Christoffel Coetzer & Wessel Philippus Wessels Wentzel		
	PO Box 26 Groot Marias		
			Postal code: 2850
	N/A		Cell: +26 771 306 763
	wentzel@work.co.bw		Fax: N/A
Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall: Contact person: Postal address: Telephone: E-mail:	George Municipality		
	Clinton Peterson		
	P. O. Box 19		
	George		Postal code: 6530
	044 801 9477		Cell:
	Cpetersen@george.gov.za		Fax: N/A

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

1.	Is the proposed development (please tick):	New	<input checked="" type="checkbox"/>	Expansion	
2.	Is the proposed site(s) a brownfield or greenfield site? Please explain.				
Greenfield as there is no existing infrastructure on site.					
3.	For Linear activities or developments This is not a linear development				
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.				m ²
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)	33°	59'	35"	
	Longitude (E)	22°	33'	44"	
	Middle point co-ordinates for all alternatives				
	Latitude (S)	33°	59'	37"	
	Longitude (E)	22°	33'	43"	
	End point co-ordinates for all alternatives				
	Latitude (S)	33°	59'	36"	
	Longitude (E)	22°	33'	45"	
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):				28135,6m ²
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):				N/A
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:				Approx. 1105m ²
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).				
Erf 2003 is currently vacant and zoned as open Space III.					
<u>Preferred Alternative:</u>					
Proposed Development: Buildings and Structures:					
➤ 1 x main dwelling house of 200 m ² with a deck of 175m ² and a 30m ² swimming pool = Total footprint 405m²					
➤ 4 x self-catering 2-storey eco-tourism tree-top pods of 98m ² each with a 42m ² deck for each unit = Total footprint 560m²					

Proposed Development: Infrastructure:

- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 8x vehicles = **Total footprint 337m²**
- From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the pods, hence no roads will be developed on the property = **Total footprint 194m²**
- Service infrastructure will be connected to walkways where possible – this will decrease the volume of earth being excavated.

Proposed Water Supply (as per the Engineering Services Report, 6 July 2022 - Appendix G)

The water demand for the development is calculated (in accordance with the Guidelines for Human Settlement Planning and Design) as follows:

WATER DEMAND						
DEVELOPMENT	Units	l/ unit/ day	Area (m ²)	l/ 100m ²	TOTAL (l/d)	TOTAL (l/s)
Main House	1	1 000			1 000	0.012
Cottages	4	800			3 200	0.037
TOTAL					4 200	0.049
Annual Average Daily Demand (AADD)		4 200 l/d 0.049 l/s				
Peak Factor		4.0				
Peak Demand		16 800 l/d 0.194 l/s				

Figure 1: Water demand taken from the Engineering Services Report

From a fire water requirement perspective, the site is classified as low risk, therefore a minimum total water flow of 15 l/s will be required for a design period of one hour.

There is an existing municipal 50mm Class 12 uPVC pipe located on the western side of Remskoek Street. Refer to Annexure B of the above-mentioned report for the position.

It is proposed that a 25mm connection is made to supply the proposed development with both domestic and fire water.

The internal water reticulation network of the proposed development must comply with the minimum specification as given in the Red Book - Guidelines for Human Settlement Planning and Design and the minimum standards of George Municipality.

Proposed Sewage Treatment Plant

Currently there is no sewer reticulation in close proximity to the site.

The applicant will not be using the system proposed by the engineer. Instead, the applicant has opted for a more environmentally friendly system which is a closed sewage treatment system referred to as the Clarus Fusion® by Re Source Water Solutions.

The process sequence promotes good nitrification, denitrification, and biological phosphate removal, with foreign solids removal at the head of the works and final disinfection available in an Ultraviolet lamp process or chlorine. Interlinked stages in the process include anaerobic sedimentation settling, anoxic secondary settling, aerobic oxidation, final clarification, and disinfection, with electrical control monitoring of the system. Recirculation and backwashed sludge return via the bio ball filter material and floating media bed re-invigorates the bacterial action by returning circulation from the clarifier to the sedimentation chamber and backwashing from the aerobic bioreactor to the primary settler (Re Source Water Solutions).

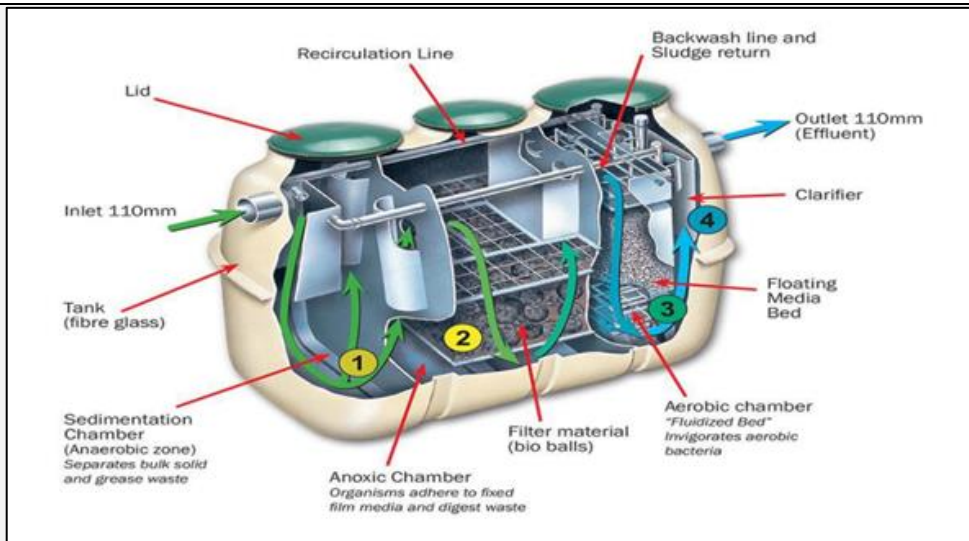


Figure 2: Diagram of the Clarus Fusion® system as per document from Re Source Water Solutions

The system provides optimised nitrification and effluent quality to a standard that meets the requirements of the South African Department of Water Affairs and sanitation (DWS) for the release of such treated effluent back into the environment to meet the General Limit Values (GLV) in terms of Section 9 of the National Water Act No. 36 of 1998 (Re Source Water Solutions).



Figure 3: Clarus Fusion® installation at De Hoop Nature Reserve

Re Source Water Solutions - Very little treated effluent water will be produced, and it will be pumped to irrigation storage and re-used. The property owner will have a sprinkler system that can disperse the water into the surrounding forest.

BOCMA have confirmed that a General Authorisation registration for Activity 21 (e) is required.

Stormwater:

According to the Engineering Services Report, 6 July 2022 (Appendix G) –

The addition of the main house and the cottages, will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

Proposed Fencing:

The proposal also entails fencing the property along the western boundary with Clear-Vu fencing for safety of tourists and the owners. No physical boundaries will be erected along the property boundaries as per requirements from George Municipality restricting the movement of natural fauna. The remainder of the property will be preserved in its natural state.

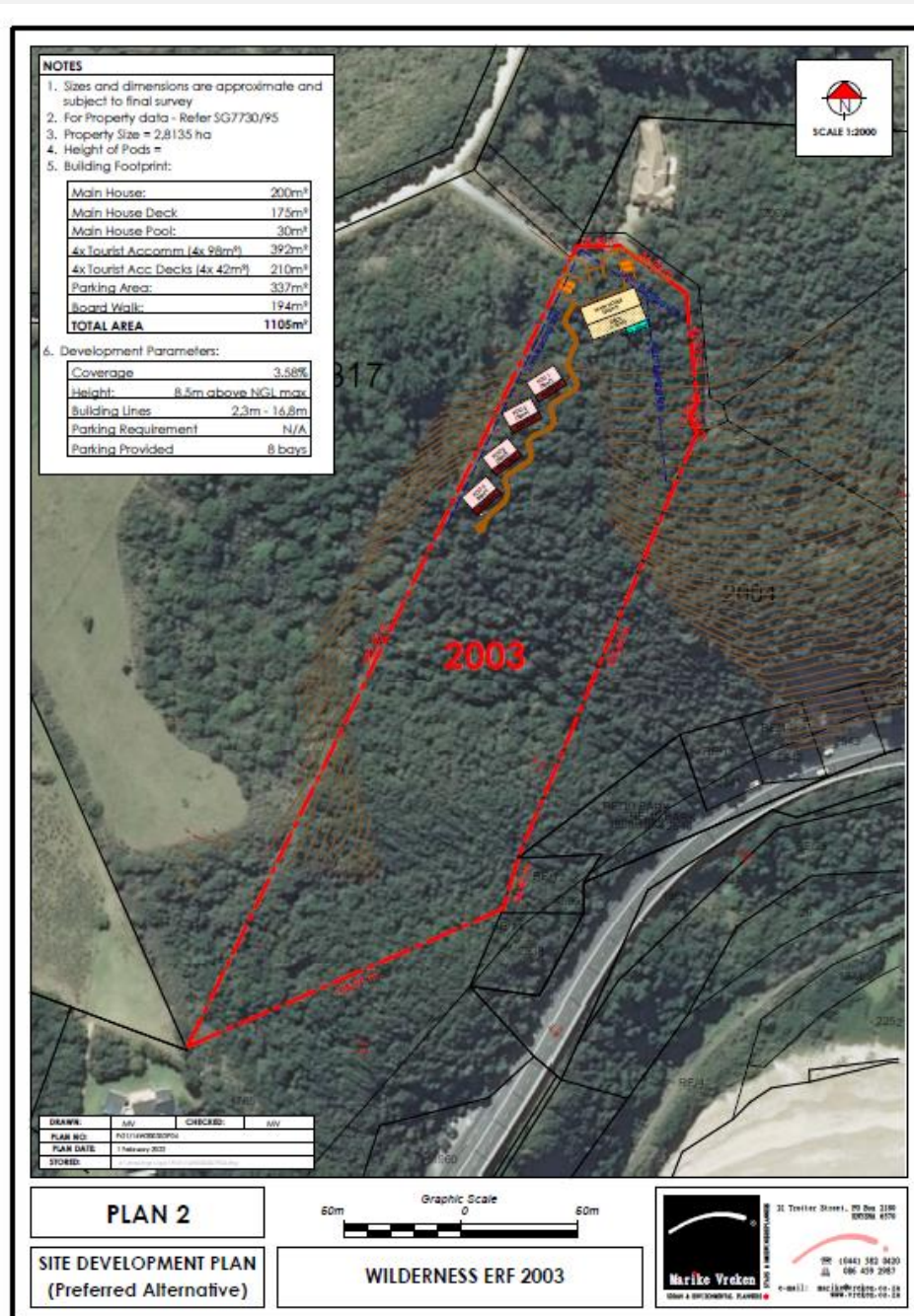


Figure 4: Preferred Alternative

Alternative 1

Proposed Development: Buildings and Structures:

- 1 x main dwelling house of 200 m² with a deck of 175m² and a 30m² swimming pool = Total footprint **405m²**
- 5 x self-catering 2-storey tree-top pods of 98m² and each with a 42m² deck = Total footprint **700m²**

Proposed Development: Infrastructure:

- There will be a designated parking area along the eastern boundary of the property that will also be accessed from the current servitude road in the northeastern corner of the property (Gate#2) and makes provision for 10x parking bays. The parking bays accessed from Gate#1 makes provision for 4x parking bays = total footprint **762m²**
- From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the pods = total footprint **322m²**

Proposed Water Supply:

The proposed will be as per the Engineering Services Report, 6 July 2022 - Appendix G.

Proposed Sewage Treatment:

The proposal will allow for a conservancy tank as no municipal sewer connection is available in the area.

As per the Engineering Services Report, 6 July 2022 (Appendix G):

Due to the topography of the site, sewerage collection trucks will be unable to access the site. It is therefore proposed that a conservancy tank with a pump system and 110mm rising main is installed. This will pump sewerage from the lower lying (secondary conservancy tank) to the primary conservancy tank, located on the property boundary along Remskoen Street.

Inline the SANS 10400 P requirements, the size of the conservancy tanks will be 5.1m³ requiring to be serviced every alternate day.

The internal sewer reticulation network of the proposed development must comply with the minimum specification as given in the Red Book - Guidelines for Human Settlement Planning and Design and the minimum standards of George Municipality.

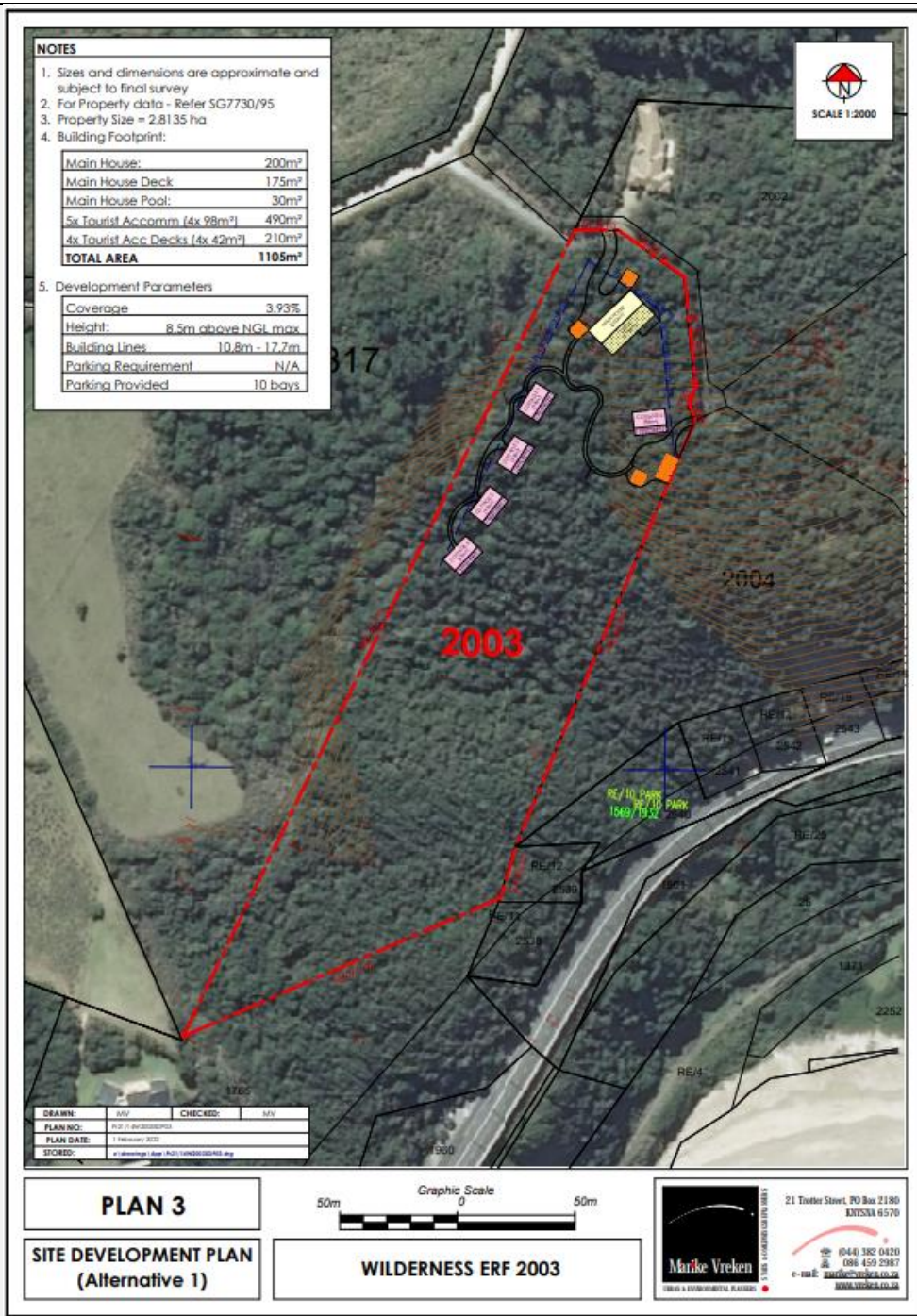


Figure 5: Alternative 1 Layout

Alternative 2 – as proposed by DFFE Forestry, SANParks, CapeNature and WALEAF (please see Comments and Response Report Appendix F):

An alternative development option may be to omit the tree-top pods and increase the disturbance footprint of the main dwelling to accommodate a single guest house.

Services proposed:

- Sewage will be accommodated by way of a conservancy tank.
- Water provision - It is proposed that a connection is made to the existing municipal pipeline located on the western side of Remskoek Street to supply the proposed development with both domestic and fire water.
- Electricity provision will be made by means of municipal connection (if available).

Infrastructure:

- Deck and a 30m² swimming pool.
- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 10x vehicles.
- The exact size of the house has not been decided upon at this stage; however, it will need to increase to accommodate the same number of guests as Alternative 1.

Impacts are assessed later in this report.

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

Access to Erf 2003 is obtained from the existing access servitude that runs over Hoekwil Erf 317 & the existing access servitude road that runs over Wilderness Erf 2002 as indicated on the SG diagram extracts below.

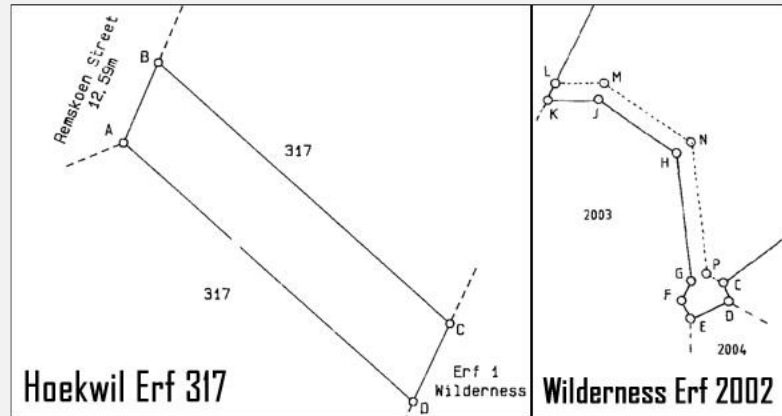


Figure 6: Existing Servitudes (Marike Vreken Planning Report, October 2023)

These access servitudes are accessed directly off the public road 'Remskoer Street' that runs along the northern boundary of Hoekwil Erf 317. This road is also the access road to the 'The Map of Africa' lookout point.

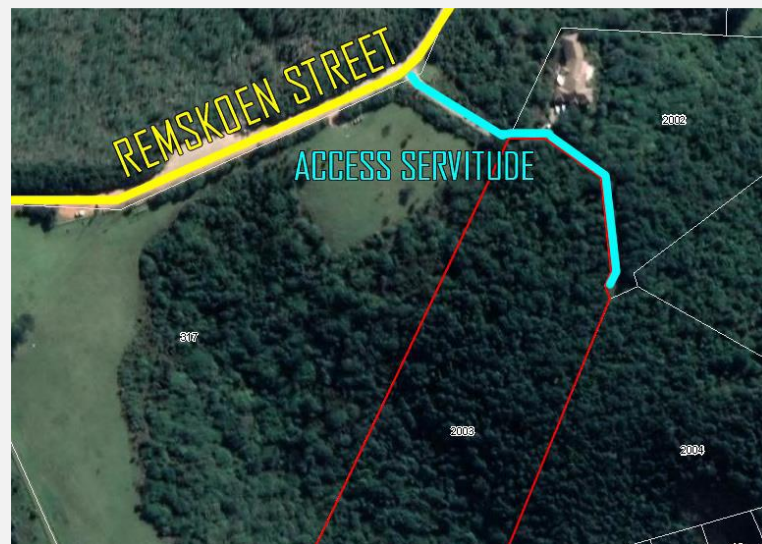


Figure 7: Current access to Wilderness Erf 2003 (Marike Vreken Planning Report, October 2023)

The main dwelling house and the 4x pods will be accessed from the current servitude road in the northern corner. There will be a designated parking areas in the northwestern section of the property that also makes provision for a total of 8x vehicles as indicated in the figure below:



Figure 8: Parking Area(Marika Vreken Planning Report, October 2023)

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	0	2	7	0	0	0	9	0	0	0	0	2	0	0	3	0	0	0	0
4.7.	Coordinates of the proposed site(s) for all alternatives: There is only 1 site																				
	Latitude (S)										33°					59'					36.52"
	Longitude (E)										22°					33'					44.74"

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

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

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
Government Notice No 19493, Outeniqua Sensitive Coastal Area Extensions (Oscac Permit)

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.	
POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
EIA guideline and information document series. Guideline on transitional arrangements March 2013	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Generic Terms of Reference for EAPS and Project Schedules	Department of Environmental Affairs, Republic of South Africa. The EAP needs to be independent and submit all required information as per the guideline, this is addressed throughout the BAR
EIA guideline and information document series. Guideline on Public Participation	Department of Environmental Affairs, Republic of South Africa. The correct public participation needs to be adhered to Addressed in the BAR
EIA guideline and information document series. Guideline on Alternatives	Department of Environmental Affairs, Republic of South Africa. Alternatives needs to be reasonable and feasible. This has been addressed in the Alternative section the BAR
EIA guideline and information document series. Guideline on Need and Desirability	Department of Environmental Affairs, Republic of South Africa. Need and desirability is addressed in the BAR
DEA&DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP)	The correct public participation needs to be adhered to Addressed in the BAR

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.	
POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
EIA guideline and information document series. Guideline on transitional arrangements March 2013	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Generic Terms of Reference for EAPS and Project Schedules	Department of Environmental Affairs, Republic of South Africa. The EAP needs to be independent and submit all required information as per the guideline, this is addressed throughout the BAR
EIA guideline and information document series. Guideline on Public Participation	Department of Environmental Affairs, Republic of South Africa. The correct public participation needs to be adhered to Addressed in the BAR
EIA guideline and information document series. Guideline on Alternatives	Department of Environmental Affairs, Republic of South Africa. Alternatives needs to be reasonable and feasible. This has been addressed in the Alternative section the BAR
EIA guideline and information document series. Guideline on Need and Desirability	Department of Environmental Affairs, Republic of South Africa.

	Need and desirability is addressed in the BAR
DEA&DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP)	The correct public participation needs to be adhered to Addressed in the BAR

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
<ol style="list-style-type: none"> 1. Visual Impact Assessment - Paul Buchholz. Attached in Appendix G. 2. Archaeological and Cultural Heritage Impact Assessment – A NID has been submitted to Heritage Western Cape/HWC. Please see input from HWC in Appendix G. 3. Palaeontology Impact Assessment – A NID has been submitted to Heritage Western Cape/HWC. Please see input from HWC in Appendix G. 4. Aquatic Biodiversity Impact Assessment – The proposed development is not in close proximity to a river/ stream, / dam. No further assessment is required. 5. Avian Impact Assessment – the proposed development is not associated with a wind farm application. No further assessment is required. 6. Socio Economic Assessment- the proposed development is a small-scale tourist facility. The Town Planning Report compiled by Marike Vreken Urban and Environmental Planners (October 2023) includes socio-economic aspects and no further assessment is required. 7. Plant Species Assessment – a SACNASP registered specialist (Dr David Hoare) has been appointed and has compiled a report which assesses plants species (Appendix G). 8. Terrestrial Biodiversity Impact Assessment- a SACNASP registered specialist (Dr David Hoare) has been appointed and has compiled a report which assesses terrestrial biodiversity (Appendix G). 9. Animal Species Assessment – a SACNASP registered specialist (Dr David Hoare) has been appointed and has compiled a report which assesses animal species of conservation concern (Appendix G). 10. Town Planning Specialist – a Town Planning Report has been compiled by Marike Vreken Urban and Environmental Planners (October 2023) 11. Geology – Outeniqua Geotechnical services 12. Agriculture – The property is currently vacant. The WCBSP map for George shows that the entire site is within a CBA1 area. This CBA1 area continues beyond the boundaries of the site. This indicates that the remaining vegetation on site is considered to be highly important for the conservation of biodiversity in the province as well as for maintaining ecological patterns in the landscape, therefore, the land is not suitable for agricultural use. No further assessments are required.

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.
N/A		
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.
6	<p>The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more.</p> <p>ii. Outside urban areas;</p> <p>(aa) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p>	The property is situated within 5km from the Garden Route National Park and the Kaaimans river Gorge Reserve.

	Or (bb) Within 5km from national parks, world heritage sites, areas identified in terms of NEMPAA or from the core area of a biosphere reserve.	
12	The clearance of an area of 300 square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. Western Cape 1. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans.	The proposed development will require the removal of approximately 1105m ² of indigenous vegetation. CFM indicates the vegetation as Garden Rote Shale Fynbos, however the Biodiversity specialist classified the vegetation on site as Goukamma Dune Thicket (A136) and Southern Afrotropical Forest (Foz1) – both groups listed as Least Concern but may be protected in terms of the National Forests Act.
Note: <ul style="list-style-type: none"> 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.
N/A		

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.
N/A		

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative. Erf 2003 is currently vacant and zoned as Open Space III. Preferred Alternative: Proposed Development: Buildings and Structures: > 1 x main dwelling house of 200 m ² with a deck of 175m ² and a 30m ² swimming pool = Total footprint 405m² > 4 x self-catering 2-storey eco-tourism tree-top pods of 98m ² each with a 42m ² deck for each unit = Total footprint 560m²
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Proposed Development: Infrastructure:

- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 8x vehicles = **Total footprint 337m²**
- From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the pods, hence no roads will be developed on the property = **Total footprint 194m²**
- **Service infrastructure will be connected to walkways where possible – this will decrease the volume of earth being excavated.**

Proposed Water Supply (as per the Engineering Services Report, 6 July 2022 - Appendix G)

The water demand for the development is calculated (in accordance with the Guidelines for Human Settlement Planning and Design) as follows:

WATER DEMAND						
DEVELOPMENT	Units	l/ unit/ day	Area (m ²)	l/ 100m ²	TOTAL (l/d)	TOTAL (l/s)
Main House	1	1 000			1 000	0.012
Cottages	4	800			3 200	0.037
TOTAL					4 200	0.049
Annual Average Daily Demand (AADD)		4 200 l/d 0.049 l/s				
Peak Factor		4.0				
Peak Demand		16 800 l/d 0.194 l/s				

From a fire water requirement perspective, the site is classified as low risk, therefore a minimum total water flow of 15 l/s will be required for a design period of one hour.

There is an existing municipal 50mm Class 12 uPVC pipe located on the western side of Remskoek Street. Refer to Annexure B of the above-mentioned report for the position.

It is proposed that a 25mm connection is made to supply the proposed development with both domestic and fire water.

The internal water reticulation network of the proposed development must comply with the minimum specification as given in the Red Book - Guidelines for Human Settlement Planning and Design and the minimum standards of George Municipality.

Proposed Sewage Treatment Plant

Currently there is no sewer reticulation in close proximity to the site. The applicant will not be using the system proposed by the engineer. Instead, the applicant has opted for a more environmentally friendly system which is a closed sewage treatment system referred to as the Clarus Fusion® by Re Source Water Solutions.

The process sequence promotes good nitrification, denitrification, and biological phosphate removal, with foreign solids removal at the head of the works and final disinfection available in an Ultraviolet lamp process or chlorine. Interlinked stages in the process include anaerobic sedimentation settling, anoxic secondary settling, aerobic oxidation, final clarification, and disinfection, with electrical control monitoring of the system. Recirculation and backwashed sludge return via the bio ball filter material and floating media bed re-invigorates the bacterial action by returning circulation from the clarifier to the sedimentation chamber and backwashing from the aerobic bioreactor to the primary settler (Re Source Water Solutions).

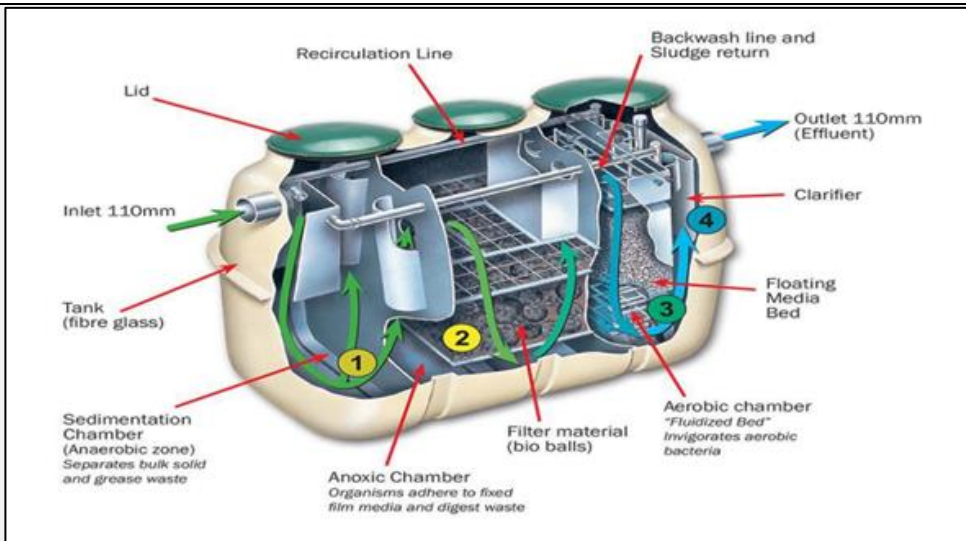


Diagram of the Clarus Fusion® system as per document from Re Source Water Solutions

The system provides optimised nitrification and effluent quality to a standard that meets the requirements of the South African Department of Water Affairs and sanitation (DWS) for the release of such treated effluent back into the environment to meet the General Limit Values (GLV) in terms of Section 9 of the National Water Act No. 36 of 1998 (Re Source Water Solutions).



Clarus Fusion® installation at De Hoop Nature Reserve

Re Source Water Solutions - Very little treated effluent water will be produced, and it will be pumped to irrigation storage and re-used. The property owner will have a sprinkler system that can disperse the water into the surrounding forest.

BOCMA have confirmed that a General Authorisation registration for Activity 21 (e) is required.

Stormwater:

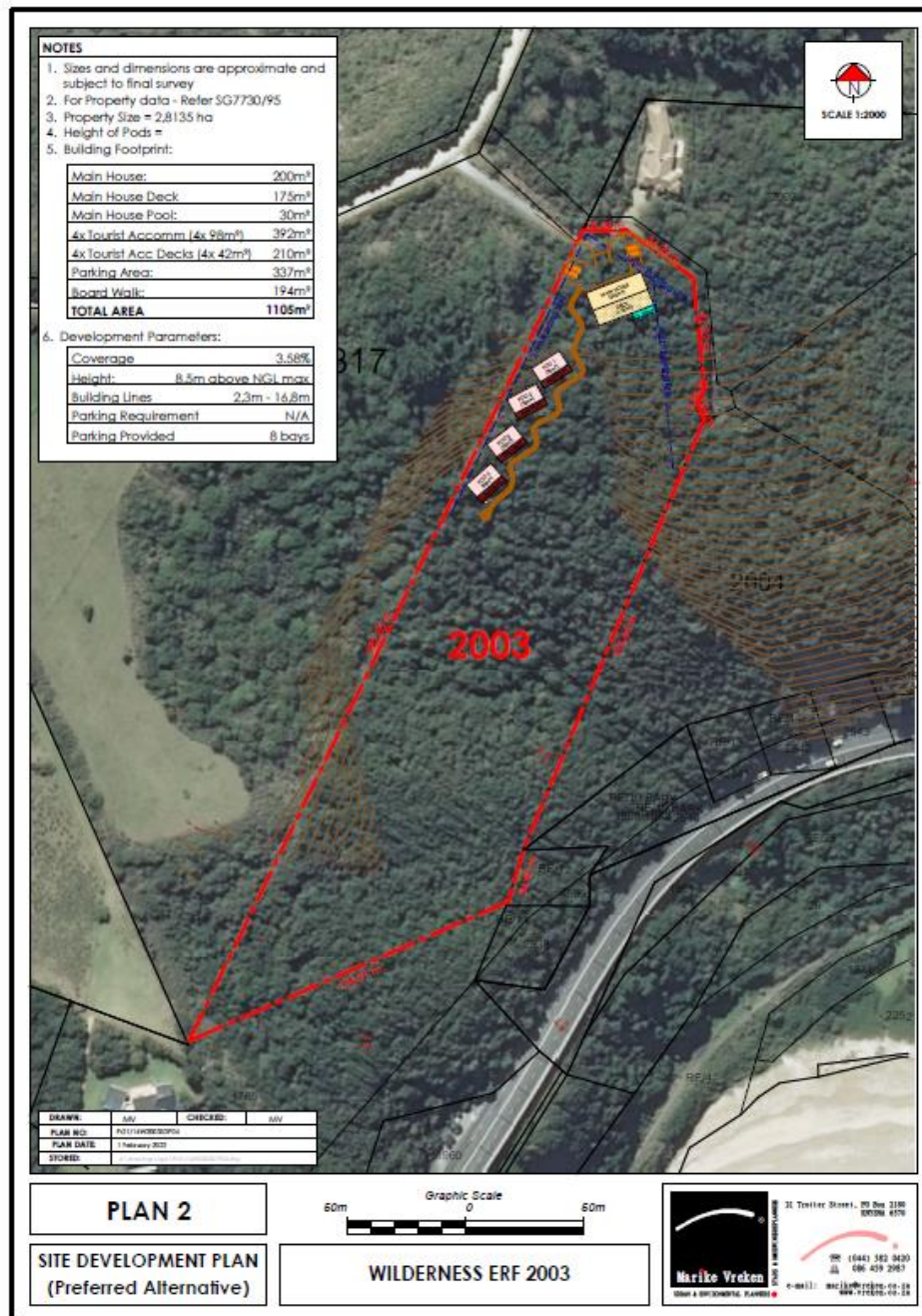
According to the Engineering Services Report, 6 July 2022 (Appendix G) –

The addition of the main house and the cottages, will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

Proposed Fencing:

The proposal also entails fencing the property along the western boundary with Clear-Vu fencing for safety of tourists and the owners. No physical boundaries will be erected along the property boundaries as per requirements from George Municipality restricting the movement of natural fauna. The remainder of the property will be preserved in its natural state.



Preferred Alternative

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.

Pre-application meeting george municipality –

The proposal was discussed by the george municipality pre-application panel at their preapplication meeting of 02 June 2021.
 The following points were made for the applicant to bear in mind when submitting the land use application:

Town planning report, october 2023:

- erf 2003, wilderness was part of erf 1 wilderness, which was subdivided in the early 1990's. The subdivision was only considered with strict development conditions and each portion was restricted to one dwelling house. Therefore, erf 2003 wilderness is restricted to one dwelling house.
- the existing subdivision and rezoning was allowed with the intention that the area be mainly for conservation purposes and therefore the restrictive condition that only one dwelling house be allowed on the subdivided portions.
- a geotechnical report was also required to determine if the land is suitable for development of a dwelling house, this report dates back to 1995 and must be updated. No rocks may be removed prior to the consultation of a geotechnical engineer, because of possible landslides.
- the position of the dwelling house must be in conjunction with the conservation body (cape nature).
- the dwelling house should also follow the profile of the property, thus "step" and must be constructed with materials of natural colours.
- no physical boundaries between the properties will be allowed, therefore the proposed fence around the dwelling house should be determined within the environmental report (movement of natural fauna may not be restricted). This will require the amendment of condition of approval.
- an environmental management/conservation plan will be required.
- the building lines and height restrictions should be determined with the main purpose of conservation.
- the old wilderness structure plan restricted dwelling houses in a conservation zone to single storey and maximum height of 5m.
- a visual impact assessment will be required.
 - the msdf, wilderness lakes and hoekwil lsdf should be addressed as well as the rural development guidelines.
- parking should be in line with the gizs.
- detailed development parameters will be determined when more information becomes available with the main purpose of conservation of the environment.
- the history of the property should be addressed and considered with the new proposal.
- an oscae (outeniqua sensitive area) permit will also be required.

Please refer to below communication received from george municipality:

"NATURE CONSERVATION AREA"

Land use description: "nature conservation area" means the use and management of land with the objective of preserving the natural biophysical characteristics of that land, such as the fauna and flora and includes:

- (a) a dwelling house on a property zoned solely Open Space Zone III; but does not include tourist facilities, tourist accommodation or agriculture.

Development parameters:

- (a) The Municipality may require an environmental conservation plan to be submitted for its approval.
- (b) The Municipality must determine the land use restrictions and the development parameters for the property based on the objectives of this zoning, the particular circumstances of the property and, where applicable, in accordance with an approved environmental management plan.
- (c) One dwelling house is allowed if no dwelling house exists on another portion of the land unit zoned for agriculture purposes or if the full extent of the land unit is zoned Open Space III.
- (d) When a consent use to provide tourist facilities in a "nature conservation area" is approved, it is subject to conditions laid down by the Municipality with regard to layout, landscaping and building design.
- (e) A site development plan must be submitted to the Municipality for its approval, clearly indicating the position of all structures, services and internal roads.

- The old wilderness structure plan restricted dwelling houses in a conservation zone to single storey and maximum height of 5m.

- A visual impact assessment will be required.
- The msdf, wilderness lakes and hoekwil lsdf should be addressed as well as the rural development guidelines.
- Parking should be in line with the gizz.
- Detailed development parameters will be determined when more information becomes available with the main purpose of conservation of the environment.
- The history of the property should be addressed and considered with the new proposal.
- An oscae (outeniqua sensitive area) permit will also be required.

Ces:

- Access restricted to remskoen road via exiting servitude over erf 2002 & 317.
- Water supply needs to be verified as the current water supply is limited to a 50 mm upvc pipe. Any cost with reference to the upgrading, as a result of the development, will be for the cost of the developer.
- Sanitation will have to be handled on site. All procurement required has to be addressed to the satisfaction department of ces
- Sanral should be requested for comments as well (02/06/2021)

Ets:

- Single point of supply allowed. All cost for the bulk supply point will be for the developer. (2021-06-02).

Information regarding the Dolphins Leap HOA and town planning laws – provided by Marike Vreken Town Planners:

The Dolphins Leap HOA is not a functional HOA nor is there a chairman acting on behalf of the homeowners Dolphins Leap, this was confirmed by George Municipality. Therefore, the landowner did not take this into consideration.

As per Clause 29 of the Land Use Planning Ordinance 15/1985 (under which regulations the HOA came into being in 1993), any governing document or regulation pertaining to land use and development must be approved by the relevant municipal authority to hold legal validity. It has come to our attention that the constitution of the Dolphins Leap HOA has not received approval from the Garden Route Eden District Municipality (George), rendering it legally non-binding, especially in matters concerning land use and development within its jurisdiction. Refer to attached legal opinion in Appendix L.

It must be noted that all the relevant spatial planning policies and the Integrated Zoning Scheme By-Law encourage these types of developments within the conservation areas, sustainably with a proper environmental management plan and minimal environmental impact. The natural features and amenities that the garden route has to offer are the main tourism attraction and access to these areas for all can be done with these types of development.

The George Integrated Zoning Scheme By-Law allows for tourist accommodation as a listed consent use and the landowners are within their rights to apply for the proposed land use (encouraged to be situated in these areas). All development applications are assessed on a case-to-case basis, and the fact that tourism accommodation is approved on one property does not mean guaranteed approval for any other land use application similar to this. The merit, desirability, the impact on surrounding landowners and the environment are some of the determining factors. This application at hand must be considered and its impact on the environment. The proposal in its current setting is encouraged, as long as it is done in a sustainable manner with minimal impact.

Tourist accommodation is not encouraged within demarcated urban areas.

"...The economy is the environment; a strategy founded on the principle that a sustainable economy in Eden District is an economy that is positioned for growth..." - Eden Spatial Development Framework (2017)

Erf 2003 is a registered Erf on its own, with its own title deed and approved SG diagram.

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.
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A Town Planner has been appointed to address the land use application – refer to point no.2 above.

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

Western Cape Provincial SDF (2014)

The Western Cape Provincial SDF was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that “communicates the provinces spatial planning agenda”.

The PSDF sets out a policy framework within which the Western Cape Government will carry out its spatial planning responsibilities. Each of the three spatial themes contributes to the achievement of the Western Capes strategic objectives. These policies are categorised into three themes, namely:

- Resources: Sustainable use of spatial assets and resources
- Space Economy: Opening up opportunities in the Space Economy
- Settlement: Developing Integrated and sustainable settlements.

The Western Cape’s agenda for spatial transformation and improved efficiencies in the use of natural resources are closely linked. The PSDF states that the paradigm that economic growth implies the ongoing depletion of the Province’s natural capital needs to be broken. This is the rationale for the PSDF embracing a transition to a Green Economy. The so called ‘decoupling’ of economic growth strived for, requires reductions/substitutions and/or replacements in the use of limited resources, while avoiding negative environmental impacts. The table below contains a summary of the key transitions promoted in the PSDF:

PSDF THEME	FROM	TO
RESOURCES	Mainly curative interventions	More preventative interventions
	Resource consumptive living	Sustainable living technologies
	Reactive protection of natural, scenic and agricultural resources	Proactive management of resources as social, economic and environmental assets
SPACE-ECONOMY	Fragmented planning and management of economic infrastructure	Spatially aligned infrastructure planning, prioritisation and investment
	Limited economic opportunities	Variety of livelihood and income opportunities
	Unbalanced rural and urban space economies	Balanced urban and rural space economies built around green and information technologies
SETTLEMENT	Suburban approaches to settlement	Urban approaches to settlement
	Emphasis on ‘greenfields’ development and low density sprawl	Emphasis on ‘brownfields’ development
	Low density sprawl	Increased densities in appropriate locations aligned with resources and space-economy
	Segregated land use activities	Integration of complementary land uses
	Car dependent neighbourhoods and private mobility focus	Public transport orientation and walkable neighbourhoods
	Poor quality public spaces	High quality public spaces
	Fragmented, isolated and inefficient community facilities	Integrated, clustered and well located community facilities
	Focus on private property rights and developer led growth	Balancing private and public property rights and increased public direction on growth
	Exclusionary land markets and top-down delivery	Inclusionary land markets and partnerships with beneficiaries in delivery
	Limited tenure options and standardised housing types	Diverse tenure options and wider range of housing typologies
	Delivering finished houses through large contracts and public finance with standard levels of service	Progressive housing improvements and incremental development through public, private and community finance with differentiated levels of service

Figure 9: Key Transitions for The PSDF (Figure 14 as per the WCPSDF 2014)

The recent shift in legislative and policy frameworks have clearly outlined the roles and responsibility of provincial and municipal spatial planning and should be integrated towards the overall spatial structuring plan for the province to create and preserve the resources of the province more effectively through sustainable urban environments for future generations. This shift in spatial planning meant that provincial inputs are in general limited to provincial scale planning.

The proposed development complements the SDF’s spatial goals that aim to take the Western Cape on a path towards:

- (1) Greater productivity, competitiveness and opportunities within the spatial economy;
- (ii) More inclusive development and strengthening the economy in rural areas; and

(iii) Strengthening resilience and sustainable development.

4.2 The Integrated Development Plan of the local municipality.

George Integrated Development Plan (2017-2022)

George Municipality's IDP covers the five-year period 2017 – 2022 and it represents the fourth generation of cyclical strategic planning in the local sphere of government. The IDP is a municipal planning instrument that drives the process to address the socioeconomic challenges as well as the service delivery and infrastructure backlogs experienced by communities in the municipality's area of jurisdiction.

The George IDP identified five strategic objectives for the Municipal Area. These agreed upon strategic objectives are:

- SO1 Develop & Grow George;
- SO2 Safe, Clean and Green;
- SO3 Affordable quality services;
- SO4 Participative Partnerships; and
- SO5 Good Governance and Human Capital.

The application area is located within Ward 4 of the George Municipality consisting of the following areas: Hoekwil, Kleinkrantz, Kleinkrantz Farms, Pine Dew, Touwsranten, Wilderness, Wilderness Heights, The Dunes, Drie Valleyen.

None of the identified ward-based needs and challenges has a direct bearing or any reference to the proposed development on the subject property

Planning Implication:

The IDP is a municipal planning tool to integrate municipal planning and allocate municipal funding to achieve strategic objectives that will contribute to the overall municipal vision. The proposal will provide new and additional economic growth prospects.

This project will start with investment into local construction companies and their workforce. All local suppliers involved. Permanent employment of staff to manage the day-to-day operations of the guest cottages. The proposal will also secure long-term investment of tourists to the area as well as temporary and permanent employment opportunities for the ward. The socio-economic impacts of the proposed development will also contribute to the municipal revenue base. The proposal can be considered to be in line with the IDP enabling an economic environment through local economic development initiatives.

4.3. The Spatial Development Framework of the local municipality.

George Spatial Development Framework (2019) The George SDF was adopted by George Municipality In 2019. This MSDF Is a review of the SDF for the George Municipality adopted in 2013, drafted under the Built Environment Support Programme and re-adopted on 31 May 2017 concurrently with the new generation IDP (2017 – 2022).

The George SDF is informed by the strategic direction taken by a municipality's integrated development plan. The George SDF articulates a clear spatial vision for a municipality's urban and rural areas and specifies objectives and strategies to be implemented to realise this vision.

The application area is located outside the urban edge of the George Municipal Area. The following policy guideline(s) applies to the application area. Policy D6: minimise the impact of developments on visual landscapes and corridors. The George Municipality's Landscape Characterisation Visual Resource Management Analysis (2009) determines visually sensitive areas in the George landscape and must be applied to manage visual impacts of development.

POLICY GUIDELINE

B) the southern slopes of the hills north of the Wilderness Lakes areas, as viewed from the current N2, should be safeguarded against development to maintain the green backdrop and 'wilderness' trademark. Only dwelling houses with restricted outbuildings should be allowed in sensitively placed areas on individual properties. Guesthouses that are run from existing dwellings can also be considered.

The SDF further outlines that at the municipal scale, the key challenge is to manage the development and growth of the urban settlements to ensure ongoing sustainability and

affordability whilst providing for the needs of the communities. Maintaining a balance between the need to deliver services and develop and grow the economy, within both the urban and the rural context, is critical.

The current settlement pattern in the municipal area is dominated by the George city area as the primary regional service centre. How the functionality of rural areas and accordingly, the wellbeing of the rural population, is supported will have a direct impact on the pressure felt by the urban areas to house people and to provide services. This MSDF aims to balance its attention between the urban and rural. At the same time, the clear concentration of most of the municipality's population in the George city area justifies a focus on this area, within the context of the municipal area as a whole.

The MSDF's implementation is supported by a series of local spatial development frameworks currently in place. The Wilderness, Lakes and Hoekwil LSDF, 2015 Structure Plan applies to the application area and compliance therefore described in the paragraph below.

PLANNING IMPLICATION: The Spatial Development Framework for the George municipal area set our broad guidelines and policies to manage urbanisation and any future developments. To summarise the findings the spatial development framework, highlight the importance to balance the attention between the urban and rural areas, to protect the rural areas from unwanted development and urbanisation into the rural areas that would impact the character of the area. The detailed structure plans specify proposals and demarcations for each area, and the applicable local SDF for the application area is the Wilderness Lakes Hoekwil Local Spatial Development Framework, 2015 as described below.

WILDERNESS LAKES HOEKWIL LOCAL SPATIAL DEVELOPMENT FRAMEWORK, 2015

Wilderness and the Lakes area, including Hoekwil and the agricultural areas to the north, have a specific and unique character that defines the area, attracts vast numbers of tourists to our area and contains very sensitive and valuable landscapes. To assist decision-makers and developers to manage the future development of this area, the George Town Council approved guidelines to ensure the sustainable use and protection of the positive landscape characteristics of this area.

According to the Wilderness Lakes Hoekwil Local Spatial Development Framework, 2015 the subject property is earmarked for "small holdings":

- Smallholdings: the main goal of the Local Spatial Development Framework as far as existing smallholding precincts are concerned is to ensure that the character and ambience of these areas are protected and to ensure that the overall landscape character of the study area is retained and improved through appropriate measures.
- Secondly, the approach is to prevent further development of smallholdings or extensive residential lifestyle properties in the rural landscape.
- No further extensions to the demarcated smallholding areas should be considered.
- This SDF states that the following uses are considered desirable for smallholdings subject to the overarching principles contained in section 4.2: riding school, plant nursery, commercial kennel, intensive animal farming, and intensive horticulture, subject to these activities not causing excessive water usage, undue noise, light pollution, effluent generation or odours. In addition to the primary rights, the smallholding area should also cater for certain tourist facilities such as second dwelling units, guest houses, bed and breakfast establishments, tourist facilities, also subject to these activities not causing excessive water usage, undue noise, light pollution, effluent generation or odours.

PLANNING IMPLICATION:

The Wilderness Lakes SDF has a strong emphasis that is to ensure that the character and ambience of these areas are protected and to prevent further development of smallholdings. However, the SDF states that in addition to the primary rights smallholdings in the area should cater for certain tourist facilities that are not harmful to the environment or the character of the area. The proposal will have minimal impact on the environment, service requirements and will aim to preserve the character of the area. The guidelines for implementation allowing for the proposed development will have to be strictly adhered to, to ensure compliance therewith whilst being in line with the character of the surrounding area.

4.4.	The Environmental Management Framework applicable to the area.
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The Garden Route EMF is applicable to the proposed development. The EMF states the following:

Specific reference to relevant factors which should be taken into account from a sustainable development perspective is then listed in section (4)(a) to include the following:

- (i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- (ii) that pollution and degradation of the environment are avoided, or, where they The Garden Route Environmental Management Framework cannot be altogether avoided, are minimised and remedied;
- (iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
- (iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;
- (v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
- (vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;
- (vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
- (viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

The BAR will address on all the points above. The focus of these planning tools is on directing development and infrastructural utility service investment in Wilderness, as well as managing and directing ongoing private sector development applications, in particular those on the edge and outside of existing urbanised areas. Employment opportunities in rural areas, FORM NO. NOI10/2019 Page 19 of 26 especially in respect of small-scale tourism development should also be considered.

5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
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Vegetation Assessment, 4 September 2021:

There are some ecological features on site that warrant consideration in assessing the biodiversity value of the site. These include the following:

1. Critical Biodiversity Areas 1: The entire site is shown as occurring within a CBA1. These areas are in a natural state on site.
2. Threatened ecosystem: The site occurs spatially within a regional vegetation type called Garden Route Shale Fynbos, which is listed as Vulnerable in The National List of Ecosystems that are Threatened and need of protection (GN1002 of 2011), published under the National Environmental Management: Biodiversity Act (Act No. 10, 2004). The floristic analysis here indicates that the vegetation on site is floristically and structurally forest, therefore not fynbos, but the spatial location within a threatened ecosystem is legally applicable.
3. Forest habitat: The vegetation on site is forest, which is protected according to the National Forest Act (Act 84 of 1998 as amended).

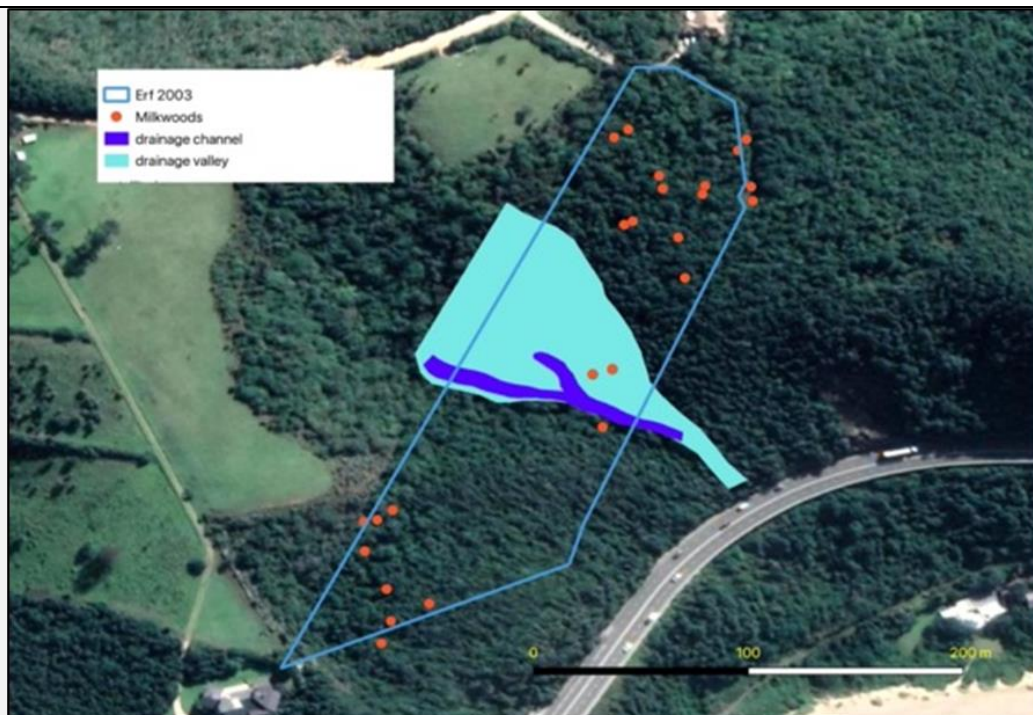


Figure 10: Drainage areas and protected milkwood trees on site (as per the biodiversity report – Appendix G)

4. Drainage areas: The central valley on site is a drainage area, complete with central channel (see Figure 9). This area represents important hydrological functions and is protected under the National Water Act.
5. Protected tree species: There are three protected tree species (National Forests Act) occurring on site, *Curtisia dentata*, *Sideroxylon inerme* and *Pittosporum viridiflorum*. The most numerous on site is *Sideroxylon inerme*, with all observed trees on site shown in Figure 9.
6. Habitat for threatened animal species: There are three listed animal species that could occur on site, The Knysna Warbler, Duthie's Golden Mole, and a small antelope.

On the basis of these factors, all remaining areas of natural habitat on site is considered to have a HIGH sensitivity. Other than the entire site being a CBA1, a threatened ecosystem, a forest, and potential habitat for threatened species, specific sensitivities are shown in Figure 9.

Proposed Infrastructure

The proposed development consists of a main dwelling, four eco-tourism pods, parking areas, and a driveway, totalling 1 105 m². These would be placed in such a way as to avoid any protected trees, as well as any trees of significant size, irrespective of status. In addition, it was suggested that the units would be built on stilts to minimize forest floor impacts.

There would be some localised loss of habitat during construction but this would recover to some degree with time, especially if no significant trees are disturbed. The impacts would be within proximity to the access road along the north-eastern boundary of the property, which would minimise fragmentation and would keep any construction together with existing nodes of development on neighbouring properties. The pods would be spaced across the western boundary, which is where the highest level of disturbance is in neighbouring properties. The remaining parts of the site would be untouched, which would ensure minimum loss of forest, CBA1, and listed ecosystem, as well as no loss of protected trees and temporary disturbance of any fauna that may occur on site. As per vegetation report compiled by Dr David Hoare attached as Appendix G.

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

Provincial C-Plan status

The Western Cape Biodiversity Spatial Plan (WCBSP) classifies the habitats of the province according to conservation value in decreasing value, as follows:

1. Protected Areas (PA);
2. Critical Biodiversity Areas 1 (CBA1);
3. Critical Biodiversity Areas 2 (CBA2);
4. Ecological Support Area 1 (ESA1);
5. Ecological Support Area 2 (ESA2);
6. Other Natural Areas (ONA).

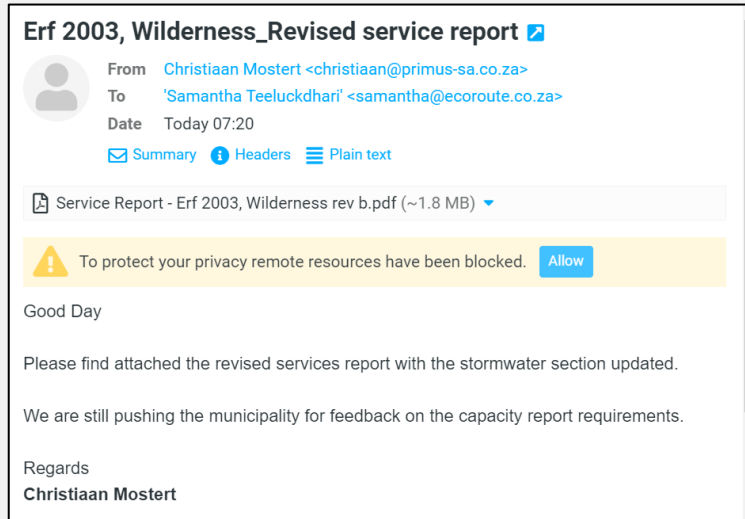
The WCBSP map for George shows that the entire site is within a CBA1 area (Figure 8). This CBA1 area continues beyond the boundaries of the site. This indicates that the remaining vegetation on site is considered to be highly important for the conservation of biodiversity in the Province as well as for maintaining ecological patterns in the landscape. There is also an Ecological Support Area running through the site that corresponds with the main drainage line. The reasons provided for the CBA1 categorisation are: Critically Endangered Vegetation variant, ecological processes, indigenous forest type, threatened SA vegetation type, threatened vertebrate, water resource protection (as per vegetation report compile by Dr David Hoare).



Figure 11: Western Cape Biodiversity Spatial Plan of the site and surrounding areas.

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
N/A	
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
Screening report has not changed.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
The property is not within the urban edge.	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
N/A	
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).
<ul style="list-style-type: none"> • There is existing water and electricity available that will be utilised and be adequate. • Electricity provision will be by means of solar power. • Water provision will be by means of rainwater harvesting. • There are no sewer connections, and a sewage treatment plant will be installed. 	

Comment from George Municipality has been sought will be sent through to the Competent Authority once received. Please see below email from the engineer as proof of attempting to get feedback from the municipality -



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 Guideline on Need and Desirability published by the Department of Environmental Affairs and Development Planning (DEADP) goes to great lengths to explain that the 'Need' for a project relates to its 'timing', where the 'Desirability' related to the 'placing' of the proposed development, i.e. is this the right time and is it the right place for locating the type of landuse/activity being proposed.

1. Need

Need, as defined by DEADP refers to the timing of the proposal, as such the question 'do we need this development now'? In answering this question, the planning and land use policy of the area must be examined. Therefore, the consistency with the existing approved Spatial Development Framework (SDF), the current Integrated Development Plan (IDP) and other municipal planning policies are important in the consideration of need.

Further considerations of need include the need of the community/area of the activity & land use – is the development "a societal priority". The need for a project also relates to the services capacity and consistency with infrastructure planning.

According to the current George SDF, the application area is outside the demarcated urban edge and highlights the importance to balance the attention between the urban and rural areas, to protect the rural areas from unwanted development and urbanisation into the rural areas that would impact the character of the area. The Western Cape SDF requires compliance with the guidelines namely Rural Development Guidelines that categorises areas and appropriate land uses within these areas and guidelines for implementation. The intended land use on the application area is in line with the objectives for the categories allowed or recommended within 'natures reserves' being, one homestead (Owner's dwelling) and accommodation for tourists. These guidelines encourage 'tourist accommodation', including resorts and nature reserves and preservation and conservation of the remainder of the property. The Eden SDF emphasises sustainable development and protecting the environment which is the economy of the unique Eden area. The G\$DF highlights the importance to balance the attention between the urban and rural areas, to protect the rural areas from unwanted development and urbanisation into the rural areas that would impact the character of the area. The local structure plan earmarks the application area as a 'smallholding' and has a strong emphasis to ensure that the character and ambience of these areas are protected and to prevent further development of smallholdings and in addition to the primary rights smallholdings in the area should cater for certain tourist facilities that are not harmful to the environment or the character of the area.

To summarise the requirements, needs and vision identified by the spatial development for the application area of each, the need for tourist opportunities is highlighted in all documents and a

strong emphasis on sustainable suitable development within the areas such as the application area, and it is of utmost importance that the environment is protected and preserved as much as possible. To balance the attention between the urban and rural areas, to protect the rural areas from unwanted development. There is therefore a need for the proposal and implementation must be in accordance with the guidelines to protect the environment.

There is a huge need for employment opportunities in the George Municipality and Tourism opportunities in South Africa as a whole. According to the Tourism, 2020 report released by Statistics South Africa, foreign arrivals dropped by 71% from just over 15,8million in 2019 to less than 5 million in 2020. It is evident that the COVID-19 pandemic impacted the tourism industry quite hard around the world and in South Africa, mainly due to the lockdown.

The proposed accommodation units and associated uses will contribute to the growth of the tourism industry and result in various new, permanent, skilled, and unskilled employment opportunities as well as temporary employment opportunities outlined below.

Permanent employment of staff to manage the day-to-day work at the cottages will be created. Temporary construction jobs will be created during the construction phase at all levels of skills.

A focusing feature of the project will be the provision of training opportunities for students and individuals researching within the application areas environments being natural forests. Additional tourists and visitors in the area will also support the existing tourism facilities and activities such as farm stalls, wine farms, eco-tourism initiatives, etc. Downstream economic opportunities as a result of this proposed new development include:

- Built Environment professionals;
- Continuous alien clearing on the protected areas;
- Maintenance of infrastructure;
- Management Services; and
- Tour guide services, etc.

The long-term investment of tourists to the area. From car hire, fuel stations, restaurants, food stores, souvenirs and adventure excursions. There is a need to create these additional, new jobs in George / Wilderness for the tourism industry.

2. Desirability

The desirability of a proposed development also relies heavily on consistency with policy documentation but has a distinctly spatial focus. The guideline on Need and Desirability specifically poses the question "Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?"

NEMA also links the desirability of development to the concept of the "best practicable environmental option"; this refers to the option that provides the most benefit and causes the least damage to the environment, at a cost acceptable to society, in the long term as well as in the short term. The consideration of alternatives is therefore closely related to this concept.

The proposal is in line with the applicable policy documentation (Western Cape Provincial SDF, Western Cape Rural Development Guidelines, Eden SDF, George SDF, Wilderness Lakes Hoekwil SDF and the George IDP) meaning that it is in line with the spatial proposal and vision for the area whilst complying to the development guidelines for the current proposal. Therefore, the approval of this application would not compromise the integrity of the applicable policy documents agreed to by the relevant authorities.

A focusing feature of the project will be the provision of training opportunities for students and individuals researching within the application areas environments being natural forests. Additional tourists and visitors in the area will also support the existing tourism facilities and activities such as farm stalls, wine farms, eco-tourism initiatives, etc.

Another defining factor when considering the desirability specifically for the proposal is in the public interest. The criteria as set out in the Relevant Considerations: Provincial Support Document covers the aspects to consider when determining whether a proposal is in the public interest or not.

CRITERIA	COMPLIANCE
The degree to which development principles & norms and standards will be promoted or prejudiced	<ul style="list-style-type: none"> • <i>The development of tourism-related uses within the rural landscape such as the proposal has not been promoted properly. A very strong approach is being taken regarding this and up to now on a local level it is being treated on a case-to-case basis, but clearly, it has been outlined that more similar developments are encouraged with sustainable and appropriate densification.</i> • <i>The proposal meets the criteria set out on the provincial and national level for densification and adheres to these principles, hence promoting these principles norms and standards.</i>
CRITERIA	COMPLIANCE
Degree of risk / potential risk	<ul style="list-style-type: none"> • <i>The applicant does not foresee any potential risk by allowing the proposal from a planning perspective. This unique portion of land with its unique locational factors can be fully utilised by allowing for the proposal.</i> • <i>The potential risk to the general public could be the impact on the surrounding area and impact on their current land use rights, privacy and degree of disturbance. However, the surrounding properties and the current land uses as indicated on Plan 4: Land Use Pla indicates that the proposal will, in fact, compliment the surrounding area.</i>
Impact on existing and surrounding land uses	<i>The surrounding properties include similar land uses and various other tourist attractions. The proposal will not impact the surrounding land uses, in fact, it will complement the area and surrounding land uses.</i>
Long term benefits (rather than short terms gains)	<i>The vision as mentioned from national to provincial spatial policies is eventually to promote additional tourism developments, in a manner that is sustainable and that would not impact the charter of the area. Providing sought after facilities and amenities. That will be beneficial for the economy of George municipal area and the Eden District as a whole. The proposal will complement the surrounding land uses.</i>

Comparison To Development in Sensitive Environments:

1. Teniqua Treetops, Sedgefield

The development proposal being assessed is an almost direct comparison to the design and functionality of the Teniqua Treetops eco-friendly resort. The following similarities can be drawn:

- Low density.
- Low impact.
- Protection of indigenous vegetation.
- Low energy usage and eco-friendly solutions.
- Developed on stilts to minimize footprint on the forest.
- Eco-friendly solution to dealing with sewage that will have minimal disturbance to the root system of the forest floor and no impact on the drainage area to the south, south-east of the development or to surrounding vegetation.
- Design that is hidden amongst the natural forest with low visual impact.

2. Daunara Camp, Botswana

Located in the Okavango Delta, the camp has been established in one of the World's most sensitive environments made up of permanent marshlands and seasonally flooded plains (UNESCO 2014). Although designed as a luxury camp, it was designed with the surrounding natural environment at the heart of its operation. The camp has been designed on stilts to have no disturbance to the permanent wetland system below.

In conclusion, the proposed development, like the ones mentioned above has the objective of sustainable eco-tourism as its main objective. Likewise, instead of having one large building, separate treetop suites and camps were developed to delicately incorporate into the natural

environment, not to be visually and environmentally intrusive; and to provide the user with an experience of being connected to nature.

The proposed eco-friendly treetop development is low density which results in low impact to the surrounding environment. The aim of the development is not to destroy the natural environment, but rather to be designed to co-exist with the natural environment and to benefit the socio-economic state of the local area.

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 Draft PPP has been included in Appendix F.

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

State Departments:

- DEA&DP
- Department of Agriculture Western Cape
- Department of Forestry (DEFF)
- Department of Economic Development and tourism Western Cape
- SANRAL

Organs of State:

- Cape Nature
- Heritage Western cape
- SANParks
- Breede-Olifants Catchment Management Agency
- SANRAL
- SCAA

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

All above State Departments and Organs of State were consulted.

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

To be completed in Final BAR.

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.

- Visual impacts.
- Negative impacts on sensitive environment (vegetation clearance, stormwater and erosion impacts)
- Preference for one larger main dwelling as the operation of a B&B and the omission of the treetop pods.

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: No borehole, will make use of municipal services.

1.1.	Was a specialist study conducted?	YES	NO
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
N/A			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
N/A			

2. Surface water: No surface water on site

2.1.	Was a specialist study conducted?	YES	NO
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.		
N/A			

3. Coastal Environment: ICMA N/A

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

4. Biodiversity

4.1.	Were specialist studies conducted?	YES	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
Dr David Hoare (SACNASP Reg No 400221/05 (Ecological Science, Botanical Science), David Hoare Consulting (Pty) Ltd			
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 SANBI VegMap (2018), National Ecosystem List, Western Cape Biodiversity Spatial Plan, and aerial imagery from Google Earth were used to determine the natural status, expected vegetation composition, conservation value, and protected status of vegetation on site. This was verified on the ground by observing that the vegetation on site is indigenous and therefore conforms with spatial planning sensitivities. Fieldwork further established vegetation condition, disturbance zones, and areas containing alien invasive species versus those parts of the site that are in good condition and therefore of high conservation value. This information was used to identify the parts of the site that were the least sensitive and closest to existing areas of disturbance so that proposed infrastructure could be located within these areas, rather than in areas of higher biodiversity value.			
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 management objectives for CBA1 areas are to maintain in a natural or near natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated and only low-impact, biodiversity-sensitive land uses are appropriate. The proposed development has been designed to avoid transformation impacts as much as possible, and to locate infrastructure along the edge of the CBA. All other habitats on site will be managed as natural areas to comply with the guidelines in the Western Cape Biodiversity Spatial Plan Handbook (2018). CBA has not been adopted by the Minister; however, we use it as a guideline to identify environmental impacts.			
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 entire site is within a CBA1 area, which extends beyond the site to the east as well as the south-west, and also extends northwards along a main drainage valley that runs through the site. The boundary of this CBA1 area runs along the north- western boundary of the site (except for the drainage line location). The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. It is not possible to build anything on the site without affecting the CBA1 area, so the footprint has been minimized and located to avoid fragmentation.			
4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.		
Not applicable – not located in a protected area.			
4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.		
Fauna of conservation concern that could possibly occur on site are associated with forest or thicket habitats. The development is planned to minimize disturbance within these areas, maintain forest canopy structure, and ensure that migration routes and other ecological linkages are retained. Most importantly, infrastructure is proposed to be placed on the margins of the property, adjacent to existing disturbance, so that fragmentation of faunal habitat is minimized and so that core areas of natural forest are not disturbed. The structures themselves are proposed to be raised so that they do not limit animal movement.			

5. Geographical Aspects

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

As per the Geotechnical Soil Test Report, 23/07/2021:

The topography of the property is quite variable and is minimized by a south- and southeast facing moderate slope which becomes steeper towards a natural drainage line in the middle of the property. The proposed development consists of 4 chalets and a main residence along the northern and north-western side of the site. At the time of the investigation, the site was covered in thick indigenous vegetation and entry onto the site was restricted to access on foot. The ground surface conditions in the proposed development area were generally dry with no signs of groundwater seepage or any significant slope stability problems.

The investigation indicates that the site is potentially suitable for development but there are some geotechnical constraints, such as difficult access, restricted construction space, steep slopes and shallow/irregular rock, which may have an impact on the engineering design and construction costs.

It must be noted that the topography of the application area (northern section) is minimized by moderately sloping topography. The chalets and residential dwelling were placed in open, less steep areas and all the recommendations from the Geotech study will be adhered to.

Drainage: The soil has a low permeability and vertical infiltration will be restricted by the presence of shallow rock and dense soils, so stormwater will tend to run off site after heavy rainfall. Effective stormwater management systems are required to collect and discharge stormwater in a controlled manner down slopes. Subsoil drains are recommended behind retaining walls as standard.

According to the Engineering Services Report, 2022 (Appendix G) –

The addition of the main house and the cottages, will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

As per the Biodiversity Report:

There would be some minimal loss of habitat during construction, but this would recover to some degree with time, especially if no significant trees are disturbed. The impacts would be within proximity to the access road along the north- eastern boundary of the property, which would minimize fragmentation and would keep any construction together with existing nodes of development on neighbouring properties. The cottages would be spaced across the western boundary, which is where the highest level of disturbance is in neighbouring properties. The remaining parts of the site would be untouched, which would ensure minimum loss of forest, CBA1, and listed ecosystem, as well as no loss of protected trees and temporary disturbance of any fauna that may occur on site.

The proposed development will result in the loss of relatively small areas of natural habitat. This is not considered to be a significant threat to the habitat or threatened plant or animal species on site or in neighbouring areas. On the basis of having a minimal impact on natural features, it is recommended that the proposed development be approved but on condition that surrounding indigenous forest is ecologically managed to enhance the biodiversity value and protected from damage.

6. Heritage Resources: A NID has been submitted to Heritage Western Cape – see Appendix G for comment from HWC

6.1.	Was a specialist study conducted?	YES	NO
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.	N/A	

7. Historical and Cultural Aspects: NID submitted to Heritage Western Cape

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.

According to the SAHRIS Paleo Map, the site is indicated to have a low paleontological sensitivity, therefore no palaeontology study is required. No Heritage GIS cases have been identified on the site or within the immediate vicinity of the site. Further to this the DFFE Screening Tool has recommended that cultural, heritage and palaeontology theme are deemed low sensitivity. No heritage resources were identified on site, however a NID was submitted to Heritage Western Cape for comment – see Appendix G for comment from HWC.

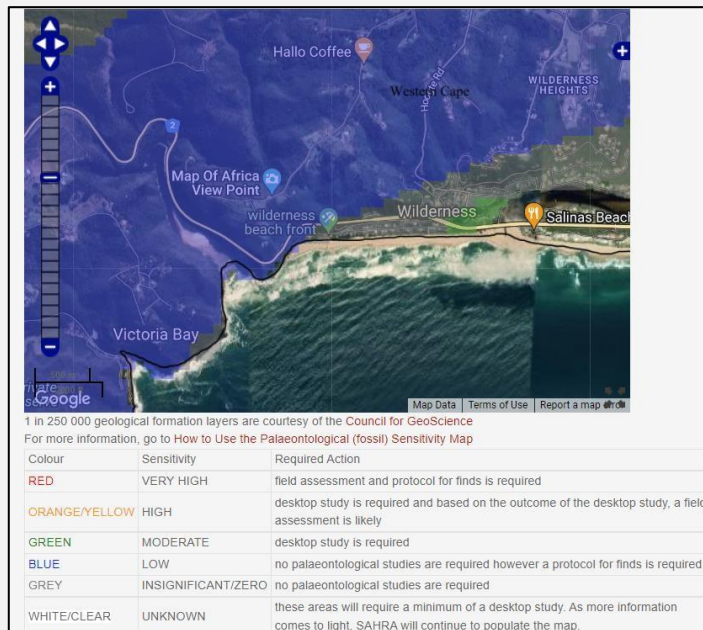


Figure 12: SAHRIS Paleo Map

8. Socio/Economic Aspects: The

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 edge; however, the surrounding properties all have rural elements and can be seen as small holding farming establishments. There is an informal settlement in close proximity to the property. The people within the informal settlement, mostly work within the area.	
8.2.	Explain the socio-economic value/contribution of the proposed development.
The socio-economic impacts of the proposed development will also contribute to the municipal revenue base. The proposal can be considered to be in line with the IDP enabling an economic environment through local economic development initiatives.	
8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
Job creation, skills development, and tourists will increase revenue within the area.	
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.
<ul style="list-style-type: none"> ➤ The proposed development will blend in with natural surroundings and will not be visible from adjacent properties or N2 with mitigation, therefore will not impact the visual character or sense of place in the area. ➤ Noise will be generated during the construction phase only, and noise impact will be addressed in the EMPr. ➤ No health impacts are foreseen. 	

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.	

There is only one property (Erf 2003) assessed in the Basic Assessment Report, therefore no site alternatives.	
Provide a description of any other property and site alternatives investigated.	
None	
Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.	
The applicant is in ownership of only one site.	
Provide a full description of the process followed to reach the preferred alternative within the site.	
<p>The EAP, town planner, biodiversity specialist, and applicant conducted a site visit in order to determine where to place the units within the site, to prevent the least impact on the receiving environment. Thereafter, the town planner had a meeting with George municipality. As a result, Outeniqua labs was appointed to conduct a Geotech study soil test to ensure the stability of placing structures on property. The Biodiversity specialist supplied a biodiversity report, in which all recommendations and guidelines were followed to develop the preferred alternative.</p> <p>As per the Vegetation Assessment, 4 September 2021:</p> <p>The entire site is within a CBA1 area, which extends beyond the site to the east as well as the south-west, and also extends northwards along a main drainage valley that runs through the site. The boundary of this CBA1 area runs along the north- western boundary of the site (except for the drainage line location). The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. It is not possible to build anything on the site without affecting the CBA1 area, so the footprint has been minimized and located to avoid fragmentation.</p>	
Provide a detailed motivation if no property and site alternatives were considered.	
<p>The owner is in ownership of only one property.</p> <p>SDP alternatives have been assessed on Erf 2003 to ensure the least impact on the receiving environment and to protect and conserve the remainder of the property which will not be developed. Therefore, a preferred alternative and alternative have been incorporated into the BAR.</p>	
List the positive and negative impacts that the property and site alternatives will have on the environment.	
There is only 1 site. Alternatives within this property were investigated.	
<p>Positives</p> <ul style="list-style-type: none"> - Development will reduce vagrants on property. Currently there are signs on the property of vagrants disturbing vegetation, making fires and posing a fire risk to area. - Alien plant clearing as per NEMBA. - Rubble is being dumped on site. This will be prevented if there are permanent residents on site. - There are no aquatic features at risk on site. - The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. - The development will provide jobs to the unskilled and semi-skilled market in terms of construction jobs. - injection of income flow into the economy for the construction phase. - Injection of income flow into the economy for the operational phase by creating job opportunities. - Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that a package plant is installed to accommodate the sewerage generated on site instead of using conservancy tanks that the municipality is not in favour of. 	<p>Negatives</p> <ul style="list-style-type: none"> - Disturbance of vegetation on the margin of the CBA 1 area. - Loss of habitat and fragmentation, however as a result of placing the units on the margin of the CBA1 area this impact is reduced. - Erosion – Storm water management must be a priority. - Noise pollution during construction phase. - Solid waste impact. - Increased resource usage i.e., water and electricity.

- Only 3.58% coverage of the property will be disturbed, the remainder of the property will remain natural.

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

Provide a description of the preferred activity alternative.

Preferred Alternative:

Proposed Development: Buildings and Structures:

- 1 x main dwelling house of 200 m² with a deck of 175m² and a 30m² swimming pool = Total footprint 405m²
- 4 x self-catering 2-storey tree-top pods of 98m² each with a 42m² deck for each unit = Total footprint 560m²

Proposed Development: Infrastructure:

- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 8x vehicles = Total footprint 337m²
- From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the pods, hence no roads will be developed on the property = Total footprint 194m²

Proposed Development: Water Supply (as per the Engineering Services report- Appendix G)

The water demand for the development is calculated (in accordance with the Guidelines for Human Settlement Planning and Design) as follows:

WATER DEMAND						
DEVELOPMENT	Units	l/ unit/ day	Area (m ²)	l/ 100m ²	TOTAL (l/d)	TOTAL (l/s)
Main House	1	1 000			1 000	0.012
Cottages	4	800			3 200	0.037
TOTAL					4 200	0.049
Annual Average Daily Demand (AADD)		4 200 l/d 0.049 l/s				
Peak Factor		4.0				
Peak Demand		16 800 l/d 0.194 l/s				

From a fire water requirement perspective, the site is classified as low risk, therefore a minimum total water flow of 15 l/s will be required for a design period of one hour.

There is an existing municipal 50mm Class 12 uPVC pipe located on the western side of Remskoek Street. Refer to Annexure B of the above-mentioned report for the position.

It is proposed that a 25mm connection is made to supply the proposed development with both domestic and fire water.

The internal water reticulation network of the proposed development must comply with the minimum specification as given in the Red Book - Guidelines for Human Settlement Planning and Design and the minimum standards of George Municipality.

Proposed Development: Sewage Treatment

The applicant has opted for a more environmentally friendly system which is a closed sewage treatment system referred to as the Clarus Fusion® by Re Source Water Solutions.

The process sequence promotes good nitrification, denitrification, and biological phosphate removal, with foreign solids removal at the head of the works and final disinfection available in an Ultraviolet lamp process or chlorine. Interlinked stages in the process include anaerobic sedimentation settling, anoxic secondary settling, aerobic oxidation, final clarification, and disinfection, with electrical control monitoring of the system. Recirculation and backwashed sludge return via the bio ball filter material and floating media bed re-invigorates the bacterial action by returning circulation from the clarifier to the sedimentation chamber and backwashing from the aerobic bioreactor to the primary settler (Re Source Water Solutions).

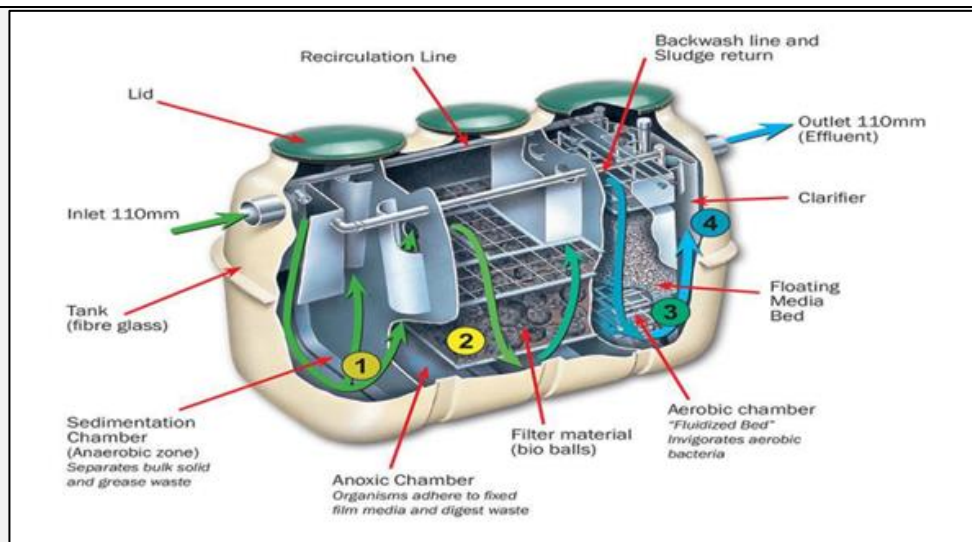


Diagram of the Clarus Fusion® system as per document from Re Source Water Solutions

The system provides optimised nitrification and effluent quality to a standard that meets the requirements of the South African Department of Water Affairs and sanitation (DWS) for the release of such treated effluent back into the environment to meet the General Limit Values (GLV) in terms of Section 9 of the National Water Act No. 36 of 1998 (Re Source Water Solutions).

Very little treated effluent water will be produced, and it will be pumped to irrigation storage and re-used. The property owner will have a sprinkler system that can disperse the water into the surrounding forest. BOCMA have confirmed that a General Authorisation registration for Activity 21 (e) is required.

Stormwater:

According to the Engineering Services Report, 2022 (Appendix G) –

The addition of the main house and the cottages will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

Proposed Fencing:

The proposal also entails fencing the property along the western boundary with clear-vue fencing for safety for tourists and the owners. No physical boundaries will be erected along the property boundaries as per requirements from George Municipality restricting the movement of natural fauna. The remainder of the property will be preserved in its natural state.

Provide a description of any other activity alternatives investigated.

Alternative 1

Proposed Development: Buildings and Structures:

- 1 x main dwelling house of 200 m² with a deck of 175m² and a 30m² swimming pool = Total footprint **405m²**
- 5 x self-catering 2-storey tree-top pods of 98m² and each with a 42m² deck = Total footprint **700m²**

Proposed Development: Infrastructure:

- There will be a designated parking area along the eastern boundary of the property that will also be accessed from the current servitude road in the northeastern corner of the property (Gate#2) and makes provision for 10x parking bays. The parking bays accessed from Gate#1 makes provision for 4x parking bays = total footprint **762m²**
- From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the pods = total footprint **322m²**

Proposed Development: Sewage

The proposal will allow for a conservancy tank as no municipal sewer connection is available in the area.

Alternative 2 – as proposed by DFFE Forestry, SANParks, CapeNature and WALEAF (please see Comments and Response Report Appendix F):

An alternative development option may be to omit the tree-top pods and increase the disturbance footprint of the main dwelling to accommodate a single guest house.

Services proposed:

- Sewage will be accommodated by way of a conservancy tank.
- Water provision - It is proposed that a connection is made to the existing municipal pipeline located on the western side of Remskoek Street to supply the proposed development with both domestic and fire water.
- Electricity provision will be made by means of municipal connection (if available).

Infrastructure:

- Deck and a 30m² swimming pool.
- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 10x vehicles.
- The exact size of the house has not been decided upon at this stage; however, it will need to increase to accommodate the same number of guests as Alternative 1.

Provide a motivation for the preferred activity alternative.

The Preferred Alternative will have less disturbance on the receiving environment as it is one unit less, thus a smaller footprint and less operating resources will be required.

Preferred alternative coverage = 3.58%. Total coverage approx. 1105m²

Alternative 1 coverage 3.93%. Total disturbance 1784m²

Alternative 2 coverage - The exact size of the house has not been decided upon at this stage; however, it will need to increase to accommodate the same number of guests as Alternative 1.

The alternatives were focused on the need and desirability.

As per IAIA INTEGRATED ENVIRONMENTAL MANAGEMENT GUIDELINE | GUIDELINE ON NEED AND DESIRABILITY March 31, 2017:

Need and desirability is based on the principle of sustainability, set out in the Constitution and in NEMA, and provided for in various policies and plans, including the National Development Plan 2030 (NDP). Addressing the need and desirability of a development is a way of ensuring sustainable development – in other words, that a development is ecologically sustainable and socially and economically justifiable – and ensuring the simultaneous achievement of the triple bottom-line.

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.

Preferred Alternative	
Positives	Negatives
<ul style="list-style-type: none"> - Development will reduce vagrants on property. Currently there are signs on property of vagrants disturbing vegetation, making fires and posing a fire risk to area. - Alien Clearing as per NEMBA. - Rubble is being dumped on site. This will be prevented if there are permanent residents on site. - There are no aquatic features at risk on site. 	<ul style="list-style-type: none"> - Disturbance of vegetation on the margin of the CBA 1 area - Loss of habitat and fragmentation, however as a result of placing the units on the margin of the CBA1 area this impact is reduced. - Erosion – Storm water management must be a priority. - Noise pollution during construction phase. - Solid waste impact.

<ul style="list-style-type: none"> - The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. - The development will provide jobs to the unskilled and semi-skilled market in terms of construction jobs. - injection of income flow into the economy for the construction phase - Injection of income flow into the economy for the operational phase by creating job opportunities - Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that a package plant is installed to accommodate the sewerage generated on site. The system to be installed is the Clarus Fusion as specified previously, instead of using conservancy tanks that the municipality is not in favour of. - Only 3.58% coverage of the property will be disturbed, the remainder of the property will remain natural. 	<ul style="list-style-type: none"> - Increased resource usage like water and electricity.
Alternative 1	
Positives	Negatives
<ul style="list-style-type: none"> - Development will reduce vagrants on property. Currently there are signs on property of vagrants disturbing vegetation, making fires and posing a fire risk to area. - Alien Clearing as per NEMBA. - Rubble is being dumped on site. This will be prevented if there are permanent residents on site. - There are no aquatic features at risk on site. - The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. - The development will provide jobs to the unskilled and semi-skilled market in terms of construction jobs. - injection of income flow into the economy for the construction phase - Injection of income flow into the economy for the operational phase by creating job opportunities - Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that a package plant is installed to accommodate the sewerage generated on site. The BEPAC 5C is a system installed partially above ground, while the Kingspan Klargester Biodisc is installed below ground, instead of using conservancy tanks that the municipality is not in favour of. - 7,8% coverage of the property will be disturbed, the remainder of the property will remain natural. 	<ul style="list-style-type: none"> - Disturbance of vegetation - Loss of habitat on the margins of the CBA1 area - Erosion - Storm water management must be a priority - Noise pollution during construction - Solid waste impact - Increased resource usage like water and electricity - This alternative has a 1784m² footprint, where preferred alternative has a 1105m², thus more vegetation and habitat loss - Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that conservancy tanks be installed, this might be difficult for the municipality to access due to the steepness of the access road. - Noise pollution during construction phase.
Alternative 2	

Positives	Negatives
<ul style="list-style-type: none"> - Development will reduce vagrants on property. Currently there are signs on property of vagrants disturbing vegetation, making fires and posing a fire risk to area. - Alien Clearing as per NEMBA. - Rubble is being dumped on site. This will be prevented if there are permanent residents on site. - There are no aquatic features at risk on site. - The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. - The development will provide jobs to the unskilled and semi-skilled market in terms of construction jobs. - injection of income flow into the economy for the construction phase - Injection of income flow into the economy for the operational phase by creating job opportunities - Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that a package plant is installed to accommodate the sewerage generated on site. The BEPAC 5C is a system installed partially above ground, while the Kingspan Klargester Biodisc is installed below ground, instead of using septic tanks that the municipality is not in favour of. - Reduced coverage on the property will be disturbed. - Least visually intrusive. 	<ul style="list-style-type: none"> - Disturbance of vegetation. - Loss of habitat of the CBA1 area. - Increased destruction of natural vegetation, particularly protected trees and trees with large root systems as there will not be much space to manoeuvre the dwelling around sensitive vegetation. - Erosion - Storm water management must be a priority. - Noise pollution during construction. - Solid waste impact. - Increased resource usage like water and electricity. - Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that conservancy tanks be installed, this might be difficult for the municipality to access due to the steepness of the access road. - No connection to the surrounding environment for tourists. - Not eco-friendly in design and function. - Alternative does not align with recommendations of the biodiversity specialist. - Large parking area to accommodate guests.
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.	
<p><u>Preferred Alternative:</u></p> <p>Proposed Development: Buildings and Structures:</p> <ul style="list-style-type: none"> ➤ 1 x main dwelling house of 200 m² with a deck of 175m² and a 30m² swimming pool = Total footprint 405m² ➤ 4 x self-catering 2-storey tree-top pods of 98m² each with a 42m² deck for each unit = Total footprint 560m² 	

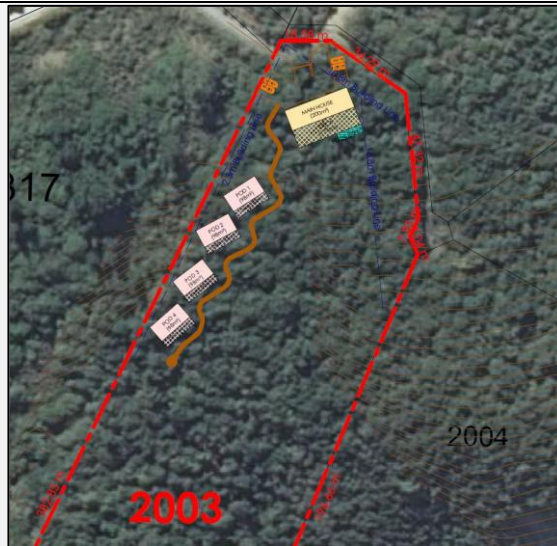


Figure 13: Preferred Layout

Proposed Development: Infrastructure:

- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 8x vehicles = **Total footprint 337m²**
- From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the pods, hence no roads will be developed on the property = **Total footprint 194m²**
- The central co-ordinates for the 4x pods and the main dwelling house was pointed out by the appointed botanical specialist, which is the most suitable location for the proposed units that will require the least disturbance.
- The ground floor of the proposed pods will consist of 2x ensuite bedrooms and a small bath deck. The first floor will consist of a lounge, bathroom, open deck, hammock net, kitchenette and a dining room.
- The 4x cottages will be of steel, glass, wood and be constructed on stilts about 4-5m above ground levels to be very light on the environment and have views of the ocean.
- The style of the cottages and main house will be modern but light to fit in with the natural environment.
- The maximum height for the proposed dwelling will be ±8m above NGL or as determined by the Municipality.



Figure 14: Architectural 3D representation

Proposed Development: Water Supply (as per the engineer's service report- Appendix G)

There is an existing municipal 50mm Class 12 uPVC pipe located on the western side of Remskoek Street. It is proposed that a 25mm connection is made to supply the proposed development with both domestic and fire water.

The addition of the main house and the cottages, will have a minimal impact (less than 4%) on the stormwater runoff generated from site.

It is proposed that where possible, that roof water is gathered and stored in tanks. From the tanks outlets will be provided onto a stone pitched base (1 m x 1 m x 0.2m thick), before stormwater is dissipated into the forest.

Proposed Development: Sewage

The applicant has opted for a closed sewage treatment system referred to as the Clarus Fusion® by Re Source Water Solutions.

The process sequence promotes good nitrification, denitrification, and biological phosphate removal, with foreign solids removal at the head of the works and final disinfection available in an Ultraviolet lamp process or chlorine. Interlinked stages in the process include anaerobic sedimentation settling, anoxic secondary settling, aerobic oxidation, final clarification, and disinfection, with electrical control monitoring of the system. Recirculation and backwashed sludge return via the bio ball filter material and floating media bed re-invigorates the bacterial action by returning circulation from the clarifier to the sedimentation chamber and backwashing from the aerobic bioreactor to the primary settler (Re Source Water Solutions).

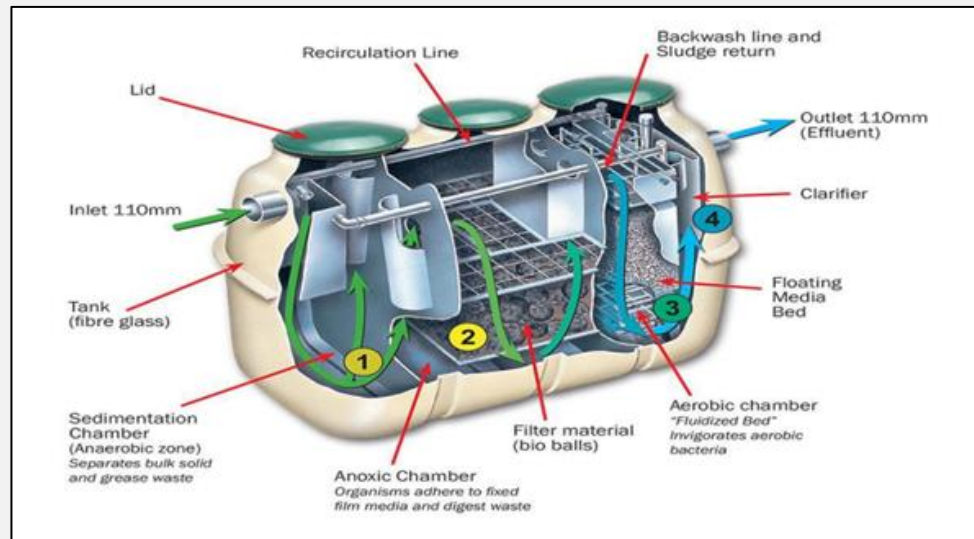


Diagram of the Clarus Fusion® system as per document from Re Source Water Solutions

The system provides optimised nitrification and effluent quality to a standard that meets the requirements of the South African Department of Water Affairs and sanitation (DWS) for the release of such treated effluent back into the environment to meet the General Limit Values (GLV) in terms of Section 9 of the National Water Act No. 36 of 1998 (Re Source Water Solutions).

Very little treated effluent water will be produced, and it will be pumped to irrigation storage and re-used. The property owner will have a sprinkler system that can disperse the water into the surrounding forest. BOCMA have confirmed that a General Authorisation registration for Activity 21(e) is required.

Stormwater:

According to the Engineering Services Report, 2022 (Appendix G) –

The addition of the main house and the cottages will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

Proposed Fencing:

The proposal also entails fencing the property along the western boundary with clear-vue fencing for safety for tourists and the owners. No physical boundaries will be erected along the property boundaries as per requirements from George Municipality restricting the movement of natural fauna. The remainder of the property will be preserved in its natural state.

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

Alternative 1:

The main dwelling will be accessed from the current servitude road in the north western corner of the property as indicated on the Site Development Plan (Gate #1). can be accommodated on-site adjacent to the main dwelling house. The sizes of the units will be as follows, and shown in the figure below:

- New Main House (200m² + 175m² deck + 30m² pool) = 405m² total
- 5x cottages of 98m² and each with a 42m² deck = 700m² total
- Parking Area = 359m² total

There will be a designated parking area along the eastern boundary of the property that will also be accessed from the current servitude road in the north eastern corner of the property (Gate#2) and makes provision for 6x parking bays.

From the parking areas and the main dwelling house, there will be wooden decking walkways 1.5m above the forest floor meandering through the trees to the cottages. The ground floor of the proposed cottages will consist of 2x ensuite bedrooms and a small bath deck. The first floor will consist of a lounge, bathroom, open deck, hammock net, kitchenette, and a dining room.

Currently there is no sewer reticulation in close proximity to the site. In light of this for this alternative it is proposed that a conservancy tank system is be used.

Alternative 2 – as proposed by DFFE Forestry, SANParks, CapeNature and WALEAF (please see Comments and Response Report Appendix F):

An alternative development option may be to omit the tree-top pods and increase the disturbance footprint of the main dwelling to accommodate a single guest house.

Services proposed:

- Sewage will be accommodated by way of a conservancy tank.
- Water provision - It is proposed that a connection is made to the existing municipal pipeline located on the western side of Remskoek Street to supply the proposed development with both domestic and fire water.
- Electricity provision will be made by means of municipal connection (if available).

Infrastructure:

- Deck and a 30m² swimming pool.
- There will be designated parking areas in the northwestern section of the property that also makes provision for a total of 10x vehicles.
- The exact size of the house has not been decided upon at this stage; however, it will need to increase to accommodate the same number of guests as Alternative 1.

Provide a motivation for the preferred design or layout alternative.

The Preferred Alternative and Alternative 1 designs were done to mitigate the disturbance of the receiving environment. Areas were chosen that are more open with less vegetation to disturb on the margins of the CBA1 area. That said, the preferred alternative will have less disturbance on the receiving environment as it is one unit less, thus a smaller footprint and less operating resources will be required.

Comparison of the 3 alternatives parameters and disturbance area are indicated in the table below:

Disturbance	Preferred Alternative	Alternative 1	Alternative 2
Coverage:	3.585	3.93%	Unknown at this stage – will need to be suitable to accommodate the same number of guests as Alternative 1
Number of parking bays:	8	10	10
No. of units:	4x treehouse pods and 1x main dwelling	5x treehouse pods and 1x main dwelling	1x main dwelling
Main dwelling and pods total disturbance:	965m ²	1105m ²	Unknown at this stage – will need to be suitable to accommodate the

			same number of guests as Alternative 1
Raised boardwalks:	194m ²	322m ²	Approx. 322m ²
Parking area disturbance:	337m ²	762m ²	762m ²
Sewage:	Clarus Fusion sewage treatment plant	Conservancy tank	Conservancy tank
Provide a detailed motivation if no design or layout alternatives exist.			
N/A			
List the positive and negative impacts that the design alternatives will have on the environment.			

Preferred Alternative		Alternative 1		Alternative 2	
Positive	Negative	Positive	Negative	Positive	Negative
Less disturbance of natural environment	Disturbance of vegetation is minimal as a result of placing the footprints on the margin of the CBA1 area in open areas only 1105m ² coverage with the remainder of the property to remain natural	More tourist accommodation provided, slight increase in disturbance of natural vegetation	Disturbance of vegetation is minimal as a result of placing the footprints on the margin of the CBA1 area in open areas only 1784m ² coverage with the remainder of the property to remain natural	Less disturbance of natural environment than other two alternatives	No protection of sensitive flora as structure will not follow specialist recommendations.
Less use of natural resources (water, electricity), rain water tanks will be installed.	Loss of habitat, is minimal as a result of placing the footprints on the margin of the CBA1 area in open areas only 1105m ² coverage with the remainder of the property to remain natural	Slight increase in use of natural resources (water, electricity) as the result of the additional unit, rain water tanks will be installed.	Loss of habitat, is minimal as a result of placing the footprints on the margin of the CBA1 area in open areas only 1784m ² coverage with the remainder of the property to remain natural	Rainwater tanks will be installed.	Slight increase in use of natural resources (water, electricity) as opposed to the Preferred Alternative in order to accommodate the same number of guests as Alternative.
Preferred alternative has a 1105m ² coverage, with the remainder of the property to remain natural	Fragmentation of ecological corridors, however the placement of the units on the margin of CBA1 area has reduced this impact.	Alternative 1 has 1784m ² coverage, with the remainder of the property to remain natural	Fragmentation of ecological corridors, however the placement of the units on the margin of CBA1 area has reduced this impact.	Reduced coverage compared to the other two alternatives.	Fragmentation of ecological corridors, however the placement of the unit on the margin of CBA1 area has reduced this impact.
Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that a closed sewage treatment plant referred to as the Clarus Fusion® will be installed on the site. Some benefits of the Fusion sewage treatment plant are: <ul style="list-style-type: none"> Superior performance as evidenced in widespread usage in Japan, USA etc. 			Currently there is no sewer reticulation in close proximity to the site. In light of this for this alternative it is proposed that a conservancy tank system is be used. This might pose a problem to the municipality as the access road is very steep and we are uncertain if the Honeysucker will be able to access the site. Furthermore, even though low, it will impact on the municipalities wastewater treatment system with increased		Currently there is no sewer reticulation in close proximity to the site. In light of this for this alternative it is proposed that a conservancy tank system is be used. This might pose a problem to the municipality as the access road is very steep and we are uncertain if the Honeysucker will be able to access the site. Furthermore, even though low, it will impact on the municipalities wastewater treatment system with increased

<ul style="list-style-type: none"> • Factory assembled and delivered to site for direct installation with no site assembly. • Installed underground integrating magnificently into the environment. • Compact and space efficient with minimal civil works required. • Fully enclosed slow and quiet process which minimises unpleasant odours. • Plentiful supply of oxygenation despite low power consumption • Low running costs. 			wastewater needing to be processed.		wastewater needing to be processed.
Less resource usage as a result of only 4 self-catering chalets.			Increased resource usage like water and electricity as a result of an additional unit		Increased resource usage like water and electricity as a result of accommodating the same number of guests as Alternative 1
This alternative has a 1105m ² footprint			This alternative has a 1784m ² footprint	Unknown footprint area at this stage	
<p>The 4x cottages will be of steel, glass, wood and be constructed on stilts about 4-5m above ground levels to be very light on the environment.</p> <p>The maximum height for the proposed dwelling will be ±8m above NGL or as determined by the Municipality.</p> <p>From the parking areas and the main dwelling house, there will</p>	The development visual intensity will be low.	<p>The 5x cottages will be of steel, glass, wood and be constructed on stilts about 4-5m above ground levels to be very light on the environment.</p> <p>The maximum height for the proposed dwelling will be ±8m above NGL or as determined by the Municipality.</p> <p>From the parking areas and the main dwelling house, there will</p>	The development visual intensity will be medium - low.	<p>The maximum height for the proposed dwelling will be ±8m above NGL or as determined by the Municipality.</p> <p>From the parking areas and the main dwelling house, there will be wooden decking walkways and a swimming pool.</p> <p>The development visual intensity will be very low.</p>	Parking area will be constructed from an impermeable material – additional stormwater management will be required.

<p>be wooden decking walkways 0.5m above the forest floor meandering through the trees to the cottages. Please note that this is a raised boardwalk on stilts.</p> <p>The raised structures will ensure that vegetation on the forest floor is encouraged to re-establish during rehabilitation underneath the units.</p>	<p>be wooden decking walkways 0.5m above the forest floor meandering through the trees to the cottages. Please note that this is a raised boardwalk on stilts.</p> <p>The raised structures will ensure that vegetation on the forest floor is encouraged to re-establish during rehabilitation underneath the units.</p>			
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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:	
<ul style="list-style-type: none"> ➤ Solar energy ➤ Energy efficient lights ➤ Rainwater tanks ➤ Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that the Clarus Fusion sewage treatment plant or similar system is installed. 	
Provide a description of any other technology alternatives investigated.	
<p>Solar energy is to be utilised, but due to forest canopy, it may not be feasible as an only energy option. Therefore, alternative energy options are to be determined during operational phase.</p> <p>In addition, with regards to sewage management, the first option was to place conservancy tanks on site, however due to the probability that the Municipal Honeysucker will not be able to service the site as a result of the steep access road it was decided that a closed sewage treatment plant will be installed.</p>	
Provide a motivation for the preferred technology alternative.	
This will reduce the impact on our natural resources.	
Provide a detailed motivation if no alternatives exist.	
N/A	
List the positive and negative impacts that the technology alternatives will have on the environment.	
Positives	Negatives
<ul style="list-style-type: none"> - Storm water harvested, reduced/no erosion - Less pressure on George Municipality services and George dam to provide water. - Less pressure on ESKOM, as reduced energy services required. 	<ul style="list-style-type: none"> - None
1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred operational alternative.	
The property will operate as one permanent residential unit and 4 tourist accommodation units, with a package plant.	
Provide a description of any other operational alternatives investigated.	
<p>1. Alternative 1 - The property will operate as one permanent residential unit and 5 tourist accommodation units if viable with conservancy tanks for storage of black water.</p> <p>2. Alternative 2 – The property will operate as a residential dwelling and guest house in one.</p>	
Provide a motivation for the preferred operational alternative.	
<p>After assessing the specialist studies, and on-site verification it was recommended to decrease the number of units from 5 to 4 to have a lesser impact on the receiving environment. It was also recommended to look at alternative methods to deal with sewage on site.</p>	

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.	
Positives	Negatives
<ul style="list-style-type: none"> - Development will reduce vagrants on property. Currently there are signs on property of vagrants disturbing vegetation, making fires and posing a fire risk to area. - Alien Clearing as per NEMBA - Increased revenue in the Garden Route area/tourism - Skills development - Job creation 	<ul style="list-style-type: none"> - The project was designed to minimize impact on the receiving environment during operational phase. - Increased amount of solid waste - Increased use of natural resources- water/electricity
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.	
<p>The property will remain as is. Alien clearing will continue as per NEMBA. Vagrants may in all probability frequent the site, illegally clearing indigenous protected trees, erecting informal settlements, and posing a fire risk by making use of illegal fires.</p> <p>While the No-Go Alternative will in all probability result in less degradation of the receiving terrestrial ecosystem on site, it will not result in any positive socio-economic impacts associated with the construction and operational phase.</p> <p>Notwithstanding the negative impacts which could be avoided by the selection of the No-Go Alternative, this is not the preferred alternative.</p>	
1.7.	Provide an 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.
<p style="color: green;">A third Alternative has been included in this assessment as per the recommendations received from several organs of state.</p> <p>The Preferred Alternative:</p> <p>The EAP, town planner, biodiversity specialist, and applicant conducted a site visit in order to determine where to place the units within the site, to prevent the least impact on the receiving environment. Thereafter the town planner had a meeting with George municipality, as a result, Outeniqua labs were appointed to conduct a Geotech study soil test, to ensure the stability of placing structures on property. The Biodiversity specialist supplied a biodiversity report, in which all recommendations and guidelines were followed to develop the preferred alternative. As per the Biodiversity Specialist:</p> <p><i>The entire site is within a CBA1 area, which extends beyond the site to the east as well as the south-west, and also extends northwards along a main drainage valley that runs through the site. The boundary of this CBA1 area runs along the north-western boundary of the site (except for the drainage line location). The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. It is not possible to build anything on the site without affecting the CBA1 area, so the footprint has been minimised and located to avoid fragmentation.</i></p> <p>The following Criteria was used in formulating the Preferred Alternative, Alternative 1 and Alternative 2: NEMA Act 107 of 1998 as amended Chapter 1 Section 2 Principals.</p> <p>(4) (a) Sustainable development requires the consideration of all relevant factors including the following:</p> <p>(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;</p> <p>The entire site is within a CBA1 area, which extends beyond the site to the east as well as the south-west, and also extends northwards along a main drainage valley that runs through the site. The boundary of this CBA1 area runs along the north- western boundary of the site (except for the drainage line location). The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. It is not possible to build anything on the site without affecting the CBA1 area, so the footprint has been minimised and located to avoid fragmentation.</p>	

In the Preferred Alternative and Alternative 1 the cottages will be of steel, glass, wood and be constructed on stilts about 4-5m above ground levels to be very light on the environment.

The maximum height for the proposed dwelling will be ± 8 m above NGL or as determined by the Municipality.

From the parking areas and the main dwelling house, there will be wooden decking walkways 0.5m above the forest floor meandering through the trees to the cottages. Please note that this is a raised boardwalk on the stilts.

The raised structures will ensure that vegetation on the forest floor is encouraged to re-establish during rehabilitation underneath the units and boardwalk.

Wildlife within the area will still be able to pass under these structures. The remainder of the site approximately 96% of the site to remain natural with no fences on the boundaries.

Alternative 2:

The development will still be within CBA1; however, will include a single large structure. The structure will not be raised above the ground; however, the maximum height will be determined by local municipal bylaws. There will be a parking area for at least 10 vehicles and will need to include raised boardwalks around the forest to provide guests the ability to walk around and experience the natural environment.

Although the size of the single structure is unknown at this stage, it will need to be large enough to accommodate at least the same number of guests as Alternative 1 to be economically viable. The development will most likely result in the destruction of several protected trees as the design of a single large building is stagnant and cannot accommodate the necessary protection of sensitive vegetation.

(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

The entire site is within a CBA1 area, which extends beyond the site to the east as well as the south-west, and also extends northwards along a main drainage valley that runs through the site. The boundary of this CBA1 area runs along the north- western boundary of the site (except for the drainage line location). The proposed development has been located to be as close as possible to the margin of the CBA1 area to avoid any fragmentation, as well as avoiding the drainage valley completely. It is not possible to build anything on the site without affecting the CBA1 area, so the footprint has been minimised and located to avoid fragmentation.

The preferred Alternative is to include a package plant (sewer) to mitigate the need to use municipal services and prevent pollution. The fact that $\pm 96\%$ of the site will remain in its natural state minimised impacts on the receiving environment. Lifting all structures off the forest floor minimizes fragmentation for wildlife and forest floor vegetation.

(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

A NID has been submitted to Western Cape Heritage Department for comment – refer to Appendix G for HWCs comment.

According to the SAHRIS Paleo Map, the site is indicated to have a low paleontological sensitivity, therefore no palaeontology study is required. No Heritage GIS cases have been identified on the site or within immediate vicinity of the site. Further to this the DFFE Screening Tool has recommended that cultural, heritage and palaeontology theme are deemed low sensitivity. No heritage resources were identified on site.

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;

During construction and operational phase, the waste hierarchy will be followed, please refer to the EMPr. [Compost bins and recycling bins can be provided to reduce waste going to landfill sites.](#)

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

- Limited Solar energy
- Energy efficient lights
- Rainwater tanks

- Currently there is no sewer reticulation in close proximity to the site. In light of this it is proposed that a package plant is installed to accommodate the sewerage generated on site.

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

Approximately 96% of the property will not be disturbed therefore the integrity of the environment will also not be jeopardised, Placing the footprints in natural open spaces and on the margin of the CBA1 area also reduces the risk.

The use of renewable resources is as follow:

- Limited Solar energy
- Energy efficient lights
- Rainwater tanks

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

The negative impacts assessed and mitigation measures to be implemented were derived from specialist reports.

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

The negative impacts assessed and mitigation measures to be implemented were derived from specialist reports. A public participation is in process to ensure peoples environmental rights have been taken into consideration.

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

The final preferred alternative and alternative 1 was only conceptualised after onsite meetings, referring to all specialist reports and taking Section 2 of NEMA principles into account.

The applicant purchased the property to construct a residential dwelling with self-catering tourist accommodation on site. There are no other suitable alternatives for the applicant; however, as per the recommendations received from several organs of state a third alternative has been included in the assessment.

The SDP's were designed to ensure that the footprints remain on the margins of the CBA1 ecosystem to avoid fragmentation of the environment, open spots within the forest were identified to reduce the negative impact on the surrounding forest trees.

The units are raised to about 4-5 meters above the forest floor this will ensure vegetation growth is encouraged beneath each unit. The boardwalk is raised 0.5 meters off the forest floor, meandering around large tree species in order to ensure the least amount of vegetation will be removed.

There is no SDP for alternative 2 as this alternative is not supported by the applicant and does not take into account all specialists' recommendations – this alternative does not align with the recommendations of the biodiversity specialist.

Of importance is that approximately 96% of the property will remain natural. The proposal also entails fencing the property along the western boundary with Clear-Vu fencing for safety for tourists and the owners. No physical boundaries will be erected along the property boundaries as per requirements from George Municipality restricting the movement of natural fauna.

NEED

Needs and vision identified by the spatial development for the application area of each, the need for tourist opportunities is highlighted in all documents and a strong emphasis on sustainable suitable development within the areas such as the application area, and it is of utmost importance that the environment is protected and preserved as much as possible. To balance the attention between the urban and rural areas, to protect the rural areas from unwanted development. There is therefore a need for the proposal and implementation must be in accordance with the guidelines to protect the environment.

There is a huge need for employment opportunities in the George Municipality and Tourism opportunities in South Africa as a whole. According to the Tourism, 2020 report released by Statistics South Africa, foreign arrivals dropped by 71% from just over 15,8million in 2019 to less than 5 million in 2020. It is evident that the COVID-19 pandemic impacted the tourism industry quite hard around the world and in South Africa, mainly due to the lockdown.

The proposed accommodation units and associated uses will contribute to the growth of the tourism industry and result in various new, permanent, skilled, and unskilled employment opportunities as well as temporary employment opportunities outlined below.

Permanent employment of staff to manage the day-to-day work at the cottages will be created. Temporary construction jobs will be created during the construction phase at all levels of skills.

A focusing feature of the project will be the provision of training opportunities for students and individuals researching within the application areas environments being natural forests. Additional tourists and visitors in the area will also support the existing tourism facilities and activities such as farm stalls, wine farms, eco-tourism initiatives, etc. Downstream economic opportunities as a result of this proposed new development include:

- Built Environment professionals;
- Continuous alien clearing on the protected areas;
- Maintenance of infrastructure;
- Management Services; and
- Tour guide services, etc.

The long-term investment of tourists to the area. From car hire, fuel stations, restaurants, food stores, souvenirs and adventure excursions. There is a need to create these additional, new jobs in George / Wilderness for the tourism industry.

Desirability

NEMA also links the desirability of development to the concept of the "best practicable environmental option"; this refers to the option that provides the most benefit and causes the least damage to the environment, at a cost acceptable to society, in the long term as well as in the short term. The consideration of alternatives is therefore closely related to this concept. The proposal is in line with the applicable policy documentation (Western Cape Provincial SDF, Western Cape Rural Development Guidelines, Eden SDF, George SDF, Wilderness Lakes Hoekwil SDF and the George IDP) meaning that it is in line with the spatial proposal and vision for the area whilst complying to the development guidelines for the current proposal. Therefore, the approval of the preferred alternative would not compromise the integrity of the applicable policy documents agreed to by the relevant authorities.

Information provided by Marike Vreken Town Planners:

Western Cape Rural Development Guidelines (2019) – (all areas other than urban areas are considered rural areas, therefore compliance with these guidelines are triggered) that encourages accommodation for tourists within these areas such as the application area.

The approach to Conservation is to formally protect priority conservation areas, establish ecological linkages across the rural landscape, and mainstream a conservation ethic into all rural activities. We are of the opinion that the proposal compared to a large guest house or hotel, will easier achieve this objective.

The objectives and the guidelines for implementation of tourist accommodation within this setting applicable to this development:

OBJECTIVES:

- To offer more people access to unique tourism and recreational resources in sought-after natural areas, where it would not otherwise have been possible.
- To contribute towards the sustainability and well-being of the relevant areas where tourist accommodation is considered.
- To provide accommodation in proclaimed nature reserves.

GUIDANCE FOR IMPLEMENTATION:

- Large scale tourist accommodation should preferably be provided in or close to urban areas (the proposed development is considered small scale and least impact).
- Tourist accommodation in the rural landscape could be allowed if, of an appropriate scale and form.
- Tourist accommodation in the rural landscape should cater exclusively for the temporary accommodation for in transit visitors.

- Units in resorts should primarily be allowed to facilitate access to the conservation areas, coastal resources or leisure facilities of the Province on the basis of temporary or short term accommodation.
- Buildings should include appropriate buffers, landscaping and screening to reduce their visual impact on the rural landscape (compare a large building to smaller units well hidden within the forest)
- Tourist accommodation should preferably make use of existing buildings or new buildings on disturbed footprints, and these should take the natural and heritage significance of the site into consideration (Our approach of smaller units on stilts counters the effects of new larger disturbance areas of larger dwellings).

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).

No-go area is situated on the Southern part of the property.

The southern portion of the property has very steep slopes and was not surveyed as this portion is not suitable for development. The average slope percentage for this portion of the land is within the 30%+ category which is NOT suitable for further development.

The no-go areas have been demarcated in red in diagram below. This are forms part of the 96% of the erven that will remain in a natural state.

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.

There are mainly three categories of environmental impacts:

Direct Impacts: These impacts are caused by the development itself for example the clearing of vegetation for a development.

Indirect Impacts: These impacts are usually linked closely with the project and may have more profound results than the direct impacts for example the degradation of surface water due to soil erosion emanating from the site where vegetation clearance has taken place.

Cumulative Impacts: These impacts can be defined as the ability of natural and social environments to incorporate cumulative stresses placed on them and the likelihood of negative synergistic effects. Cumulative impacts also arise when existing future development rights set a precedent in an area. The process of cumulative impacts may arise from any of the following four events:

- A single larger event
- Multiple interrelated events
- Sudden or catastrophic events
- Incremental change

Definition of key terminology:

Nature of the Impact – A description of positive or negative impacts of the project on the affected environment. This description should include who or what would be affected and how.

Extent – the impact could:

- Be-site specific
- Be limited to the site and its immediate surroundings
- Have an impact on the region
- Have an impact on a national scale
- Have an impact across international borders

Duration – It is important to indicate whether or not the lifetime of the impact will be:

- Short term (e.g. during construction)
- Medium term (e.g. during part or all of the operational phase)
- Long term (e.g. beyond the operational phase, but not permanently)

- Permanent (where the impact is for all intents and purposes irreversible. An irreversible negative impact may also result in irreplaceable loss of natural capital or biodiversity, if it were to result in extinction or loss of species or ecosystem); or

Intensity or Magnitude - The size of the impact (if positive) or its severity (if negative):

- Low, where biodiversity is negligibly affected or where the impact is so low that remedial action is not required.
- Medium, where biodiversity pattern, process and/or ecosystem services are altered, but not severely affected, and the impact can be remedied successfully; and
- High, where, pattern, process and/or ecosystem services would substantially be affected. If a negative impact, could lead to irreplaceable loss of biodiversity and/or unacceptable consequences for human wellbeing.

Probability – Should describe the likelihood of the impact actually occurring indicated as:

- Improbable, where the possibility of the impact is very low either because of design or historic experience
- Probable, where there is a distinct possibility that the impact will occur.
- Highly probable, where it is most likely that the impact will occur, or
- Definite, where the impact will occur regardless of any prevention measures.

Significance – The significance of impacts can be determined through a synthesis of the assessment criteria. Significance can be described as:

- Low, where it would have negligible effect on biodiversity, and on the decision.
- Medium, where it would have a moderate effect on biodiversity, and should influence the decision.
- High, where it would have, or there would be a high risk of, a large effect on biodiversity. These impacts should have a major influence on the decision.
- Very high, where it would have, or there would be a high risk of, an irreversible negative impact on biodiversity and irreplaceable loss of natural capital or a major positive effect. Impacts of very high significance should be a central factor in decision making.

Confidence – The level of confidence in predicting the impact can be described as:

- Low, where there is little confidence in the prediction, due to inherent uncertainty about the likely specialists. However, co-operation between these specialists and the biodiversity specialist is recommended, as biodiversity values are often overlooked by specialists in these other disciplines.
- Medium, where there is a moderate level of confidence in the prediction; or
- High, where the impact can be predicted with a high level of confidence.

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

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

Alternative:	Preferred
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	
Potential impacts on geographical and physical aspects:	
Nature of impact:	Soil compaction as a result of the construction. Please note all buildings are on stilts so this impact is minimal. However, the units, residential dwelling and boardwalk will result in a hard surface than a natural environment.
Extent and duration of impact:	Throughout the lifespan of the project
Consequence of impact or risk:	Possible erosion from water runoff if not managed properly
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources anticipated
Cumulative impact prior to mitigation:	Storm Water runoff resulting in erosion
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which impact can be managed:	High
Degree to which the impact can be mitigated:	High
	Typical sustainable drainage systems, often referred to as SuDS, and the associated stormwater infrastructure and management thereof take the following key principles into account:




Proposed mitigation:	<p>Storing runoff and releasing it slowly (attenuation) Harvesting and using the rainwater Allowing water to soak into the ground (infiltration) Slowly transporting (conveying) water on the surface Allowing sediments to settle out by controlling the flow of the water</p> <p>Each of the above and how they are accommodated/included in the proposed stormwater system are discussed below:</p> <p>Storing runoff: This will be achieved in two ways. Firstly, all runoff from the roofs on the development will be harvested and stored in rainwater tanks next to each unit.</p> <p>Secondly, the remaining surface water from grassed areas, parkings, etc. will be discharged into surrounding vegetation.</p> <p>Harvesting and using the rain close to where it falls: As discussed above, all runoff from the roofs will be harvested by collecting and storing in rain water tanks. Some developments also encourage infiltration within the parking areas through the use of permeable paving, etc.</p> <p>Filtering out pollutants: All rainwater from the roofs is to be harvested. This water will be treated on-site prior to use as a potable water. This treatment would remove any pollutants in this water. Water discharging from the remaining surface areas, namely grassed and parking areas, etc., will be discharged onto the vegetation.</p> <p>Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;</p>
Residual impacts	No impact is expected after mitigation measures are set in place to redirect water runoff
Cumulative impact post mitigation:	No impact is expected after mitigation measures are set in place to redirect water runoff
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impact on biological aspects:	
Nature of impact:	Disturbance and removal of trees within the natural forest. Loss of vegetation.
Extent and duration of impact:	Throughout the lifespan of the project
Consequence of impact or risk:	Reduced habitat and ecological corridors impact on fauna and flora
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Loss of fauna and flora due to habitat loss
Cumulative impact prior to mitigation:	Disturbance of natural habitat of birds and small mammals . Loss of ecological corridors
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which impact can be avoided;	Medium
Degree to which impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium

Proposed mitigation:	<p>Empty pockets within the forest were identified with the assistance of the biodiversity specialist. All units were placed during the planning phase to mitigated disturbance and removal of large trees. The SDP placed all units along the margin of the CBA1 area.</p> <p>All units and the board walk are placed on stilts above the forest floor encouraging vegetation growth and animal movement beneath these structures.</p> <p>It is imperative that impacts on the continuity of ecological processes and corridors be taken into consideration irrespective of the type of land use proposed or envisaged in the region as a whole.</p> <p>An onsite nursery needs to be established and a plant rescue needs to be carried out prior to any construction activities occurring on site.</p> <p>Suitable forest floor vegetation, including tree recruits in the form of nursery-grown or rescued seedlings, from the same undisturbed forest type environment in the vicinity, should be established on the forest floor, especially in the canopy gaps. (This will be augmented by natural seed dispersal processes.)</p>
Residual impacts:	Loss of trees in the forest
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impact on biological aspects:	
Nature of impact:	Positive impact – Installation of a closed sewage treatment plant
Extent and duration of impact:	During the lifespan of the project
Consequence of impact or risk:	Low
Probability of occurrence:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Disturbance of forest floor vegetation
Cumulative impact prior to mitigation:	Pollution of the receiving environment if system is not maintained regularly.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which impact can be avoided;	High
Degree to which impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	The sewage treatment plant must be assembled off-site and installed by the company supplying the product. Service of the treatment plant must occur every six (6) months and must be undertaken by a trained and accredited dealer to ensure the system is operating sufficiently to prevent pollution of the receiving environment due to failure.
Residual impacts:	Loss of forest floor vegetation
Cumulative impact post mitigation:	None

Potential impact on biological aspects:	
Nature of impact:	Impact on forest tree roots using pad foundations
Extent and duration of impact:	During the construction phase
Consequence of impact or risk:	Damaging tree roots of trees not to be removed may have a negative impact on forest trees when installing services, and foundations
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	High
Indirect impacts:	Health and stability of the forest trees can be impacted
Cumulative impact prior to mitigation:	Disturbance of natural forest vegetation not earmarked for removal

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which impact can be avoided;	Medium some damage may occur
Degree to which impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>To minimize disturbance of tree roots during installing utilities for development alternatives are explored outside of root zone first. If not possible, tunnelling is done by hand. (Figure 1) This method requires patience where care is taken to keep roots intact, and not cut them. Tunnelling is preferably done by hand or smaller hand tools to prevent roots being severed by mechanical equipment. This is done on cooler days, to avoid exposing root during hot, dry weather. Trenches are backfilled with soil as soon as possible to reduce exposure and soaked with water on the same day. If trench is kept open for a longer period, roots are wrapped in hessian until trench is backfilled. If roots need to be cut, no roots larger than 2,5cm are cut.</p> <p>Pad foundations are used instead of strip or raft foundation, to allow for Pad to be moved around tree roots when necessary and reduce the potential impact on the root system. (Figure 12 and 13).</p> <p>No heavy machinery allowed on site, all work to be carried out by hand.</p> <p>When installing services this can be done as per the picture below to protect tree roots.</p>
	 <p>Figure 15</p>  <p>Figure 16 Pad foundations</p>  <p>Figure 17 Tree roots were protected by pad foundations.</p>
Residual impacts:	Loss of trees in the forest
Cumulative impact post mitigation:	Loss of trees in the forest
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential noise impacts:	
Nature of impact:	Impacts associated with general building construction noise
Extent and duration of impact:	Only during construction phase
Probability of occurrence:	High
Degree to which the impact can be reversed:	None
Degree to which the impact may cause irreplaceable loss of resources:	None
Degree to which the impact can be avoided:	None
Degree to which impact can be managed:	Only operate during construction hours
Cumulative impact prior to mitigation:	No cumulative impact foreseen
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Construction work and noise generation only allowed during weekday working hours
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impacts on socio-economic aspects:	
Nature of impact:	Creation of temporary employment opportunities through construction
Extent and duration of impact:	Throughout the construction and operational phase of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

OPERATIONAL PHASE

Potential impact and risk:	
Potential impacts on socio-economic aspects:	
Nature of impact:	Job creation, Increase of revenue in area- Positive Impact. No negative impacts on the socio-economic aspects are foreseen as the proposed construction will create work opportunities during construction and operational phases.
Extent and duration of impact:	During the lifespan of the project
Consequence of impact risk:	No risk. More employment in area.
Probability of occurrence:	High
Degree to which the impact can be reversed:	Not a negative impact on socio-economic aspects
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable
Cumulative impact prior to mitigation:	Not applicable
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Not applicable
Degree to which impact can be managed:	High
Degree to which the impact can be mitigated:	Not applicable
Proposed mitigation:	Not applicable
Cumulative impact post mitigation:	Not applicable

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable
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Potential noise impacts:	
Nature of impact:	Noise impacts associated with accommodation and tourism
Extent and duration of impact:	During the life Span of the proposed development
Probability of occurrence:	High
Degree to which the impact can be reversed:	None
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	No cumulative impact foreseen
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Notifications for guest to adhere to no noise and loud music after a certain time at night.
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential visual impacts:	
Nature of impact:	Visual impact of development
Extent and duration of impact:	Short term (construction phase) Medium term (operation phase)
Probability of occurrence:	Possible (the impact may occur - between a 25% to 50% chance of occurrence)
Degree to which the impact can be reversed:	Partly reversible
Degree to which the impact may cause irreplaceable loss of resources:	Marginal
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	<p>On-site treatments might include:</p> <ul style="list-style-type: none"> • Visual and ecological planting patterns of indigenous vegetation to achieve landscape patterns that emulate in part existing mixes of tree and grass cover in the surrounding landscape. • Minimising exposure of work areas to sensitive receptors. • Preparing an internal landscape plan for rehabilitation areas. <p>At viewer location treatments include:</p> <ul style="list-style-type: none"> • Landscape design and plantings for affected locations. This will require an appropriately qualified person to visit the affected locations and develop a landscape plan to screen or filter views of the project areas. <p>Design fundamentals are general design principles that can be used for all forms of activity or development, regardless of the resource value being addressed. Applying the following three fundamentals will assist with mitigation measures:</p> <ul style="list-style-type: none"> • Proper siting or location. • Reducing unnecessary disturbance. • Repeating the elements of form, line, colour and texture of the surrounding landscape. <p>Design strategies are more specific activities that can be applied to address visual design problems. The following strategies will not necessarily apply to every proposed activity or project:</p> <ul style="list-style-type: none"> • Colour selection • Earthwork • Vegetative manipulation • Structures • Reclamation/Restoration • Linear alignment design considerations
Cumulative impact post mitigation:	Low after mitigation.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-Low

Potential traffic impacts:	
Nature of impact:	<p>Traffic impacts on area and existing roads.</p> <p>Access to the application area is obtained via an access servitude road that runs over Wilderness Erf 2002. These access servitudes are accessed directly off the public road 'Remskoer Street' that runs along the northern boundary of Hoekwil Erf 317. This road is also the access road to the 'The Map of Africa' lookout point.</p>
	<p>Figure 18: Existing Servitudes – SG Diagram Extract</p>
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	<p>Existing Traffic: The current traffic consists of property owners of neighbouring properties, people accessing Remskoer street and tourists visiting the Map of Africa.</p> <p>The dwelling and 4 accommodation units will not create a substantial increase on traffic and the establishment will not be at full capacity all the time.</p> <p>No mitigation needed.</p>
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Cumulative Impacts of the Preferred Alternative and Alternative 1:

While the impacts of these alternatives are considered low **with mitigation**, the development on this property due to steeper gradients and geological impacts may result in additional engineering requirements to negate soil erosion and high velocity stormwater runoff during periods of high rainfall. Bank stabilisation is inevitable due to the slope of the property. The preferred development layout option provides a slight advantage over the alternative 1 development layout options due to its lower density (five structures).

Alternative:	Alternative 2
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	
Potential impacts on geographical and physical aspects:	
Nature of impact:	Soil compaction as a result of the construction of the guest house
Extent and duration of impact:	Throughout the lifespan of the project
Consequence of impact or risk:	Possible erosion from water runoff if not managed properly
Probability of occurrence:	High
Degree to which the impact can be reversed:	High

Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources anticipated
Cumulative impact prior to mitigation:	Storm Water runoff resulting in erosion
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	<p>Typical sustainable drainage systems, often referred to as SuDS, and the associated stormwater infrastructure and management thereof take the following key principles into account:</p> <ul style="list-style-type: none"> Storing runoff and releasing it slowly (attenuation) Harvesting and using the rainwater Allowing water to soak into the ground (infiltration) Slowly transporting (conveying) water on the surface Allowing sediments to settle out by controlling the flow of the water <p>Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils;</p>
Residual impacts	Low soil erosion impact is expected after mitigation measures are set in place to redirect water runoff. However, due to this alternative not being on stilts there may be increased risk of runoff velocity and an increased need for engineered stormwater drainage systems.
Cumulative impact post mitigation:	Soil erosion may still occur during high rainfall periods.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - Medium

Potential impact on biological aspects:	
Nature of impact:	Disturbance and removal of trees within the natural forest. Loss of vegetation.
Extent and duration of impact:	Throughout the lifespan of the project
Consequence of impact or risk:	Reduced habitat and ecological corridors impact on fauna and flora
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	Loss of fauna and flora due to habitat loss
Cumulative impact prior to mitigation:	Disturbance of natural habitat of birds and small mammals. Loss of ecological corridors
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which impact can be avoided;	Low - Medium
Degree to which impact can be managed:	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	This impact is difficult to mitigate for this alternative as a single large structure is proposed. This makes it difficult to cordon off protected trees and keep the development within identified "empty pockets" of the forest.
Residual impacts:	There may be an increased loss of protected trees and faunal habitat due to the above.
Cumulative impact post mitigation:	Habitat fragmentation and loss of a minor portion of ecological corridor.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - Medium

Potential impact on biological aspects:	
Nature of impact:	Use of a conservancy tank for sewage
Extent and duration of impact:	During the lifespan of the project

Consequence of impact or risk:	Medium
Probability of occurrence:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	With mitigation this impact can be low
Indirect impacts:	Disturbance of forest floor vegetation Access issues for the municipality due to the steep access road.
Cumulative impact prior to mitigation:	Pollution of the receiving environment if system is not maintained regularly. The conservancy tank may not be emptied regularly due to access issues, leading to ground pollution.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - Medium
Degree to which impact can be avoided;	High
Degree to which impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Service of the conservancy tank must occur every six (6) months and must be undertaken by a trained and accredited dealer to ensure the system is operating sufficiently to prevent pollution of the receiving environment due to failure. Increased construction to ensure a pump system is installed to pump sewage to the conservancy tank in Remskoek Road.
Residual impacts:	Increased loss of forest floor vegetation than originally desired.
Cumulative impact post mitigation:	Loss of protected vegetation and faunal habitat

Potential noise impacts:	
Nature of impact:	Impacts associated with general building construction noise
Extent and duration of impact:	Only during construction phase
Probability of occurrence:	High
Degree to which the impact can be reversed:	None
Degree to which the impact may cause irreplaceable loss of resources:	None
Degree to which the impact can be avoided:	None
Degree to which impact can be managed:	Only operate during construction hours
Cumulative impact prior to mitigation:	No cumulative impact foreseen
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Construction work and noise generation only allowed during weekday working hours
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impacts on socio-economic aspects:	
Nature of impact:	Creation of temporary employment opportunities through construction
Extent and duration of impact:	Throughout the construction and operational phase of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Potential impacts on visual impact aspects:	
Nature of impact:	Visual Impact
Extent and duration of impact:	Short term (construction phase) short term (operational phase)
Probability of occurrence:	Improbable (the chance of the impact occurring is extremely low - less than a 25% chance of occurrence)
Degree to which the impact can be reversed:	Partly reversible
Degree to which the impact may cause irreplaceable loss of resources:	Marginal
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	<p>On-site treatments might include:</p> <ul style="list-style-type: none"> • Visual and ecological planting patterns of indigenous vegetation to achieve landscape patterns that emulate in part existing mixes of tree and grass cover in the surrounding landscape. • Minimising exposure of work areas to sensitive receptors. • Preparing an internal landscape plan for rehabilitation areas. <p>At viewer location treatments include:</p> <ul style="list-style-type: none"> • Landscape design and plantings for affected locations. This will require an appropriately qualified person to visit the affected locations and develop a landscape plan to screen or filter views of the project areas. <p>Design fundamentals are general design principles that can be used for all forms of activity or development, regardless of the resource value being addressed. Applying the following three fundamentals will assist with mitigation measures:</p> <ul style="list-style-type: none"> • Proper siting or location. • Reducing unnecessary disturbance. • Repeating the elements of form, line, colour and texture of the surrounding landscape. <p>Design strategies are more specific activities that can be applied to address visual design problems. The following strategies will not necessarily apply to every proposed activity or project:</p> <ul style="list-style-type: none"> • Colour selection • Earthwork • Vegetative manipulation • Structures • Reclamation/Restoration • Linear alignment design considerations
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Very low

Cumulative impacts for Alternative 2:

The footprint of development is decreased as a result of this alternative. However, design constraints hinder protection of the natural forest whereby several protected trees may need to be removed, extensive stormwater control is required due to hard structures and sewage management. Although, this alternative is smaller in footprint to the other two alternatives, it does still require quite a bit of engineering to ensure that negative impacts are reduced.

No-Go Alternative:

The property will remain as is. Alien clearing will continue as per NEMBA. Vagrants may in all probability frequent the site, illegally clearing indigenous protected trees, erecting informal settlements, and posing a fire risk by making use of illegal fires.

While the No-Go Alternative will in all probability result in less degradation of the receiving terrestrial ecosystem on site, it will not result in any positive socio-economic impacts associated with the construction and operational phase.

Notwithstanding the negative impacts which could be avoided by the selection of the No-Go Alternative, this is not the applicants preferred option.

DECOMMISSIONING AND CLOSURE PHASE

NOT APPLICABLE

Potential impact and risk:	
Nature of impact:	None
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
No-Go Alternative Impact Summary	
The site will remain as is derelict. As per NEM:BA alien vegetation removal will be on going. Access to the site will be prohibited to try and ensure no informal settlement or vagrants occupy the site, as this can pose a health and fire risk to area.	

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	<p>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.</p> <p>(Iain Paton Consulting Geotechnical Engineers and Engineering Geologists) Soil specialist:</p> <p>Recommendations: Earthworks & materials: The site is moderately sloping, becoming steep towards the west, and access/vegetation clearing will be challenging unless and minimal footprint area is adopted. Earthworks required to create level platforms (if any) may encounter shallow rock, mainly on the western side of the proposed development. Shallow excavations for the proposed development are unlikely to have any significant effect on the general stability of the site, but excavations should be assessed by a competent person as excavations progress. Excavations shallower than 1.5m are likely to be fairly stable at near-vertical angles for short periods (temporary works). Insitu granular soils (sandy/gravelly soils, not clay), less any large rock fragments >150mm diameter, obtained from excavations may be suitable for reuse as bulk filling material under floors and behind retaining walls but should be approved by the engineer before placement. Any unsuitable soil obtained from excavations should be spoiled in suitable location on site (e.g. as landscaping fill). Allowance should be made for imported high quality materials (e.g. G5) for final selected fill layers under concrete surface beds. Imported free-draining fill material (coarse sand/crusher run/stone) will be required for drainage medium behind retaining walls (if any).</p> <p>All structures will be on stilts therefore no deep excavations are expected.</p> <p>Foundations & floors: The recommended foundation type for single or double storey masonry or timber structures is reinforced strip and/or pad foundations placed on dense/stiff soil horizons or preferably bedrock at minimum nominal depth of 0.8m below NGL. The recommended maximum bearing pressure for foundations is 125kPa. Structures founded at the correct levels on suitable bedrock or stiff/dense soil horizons are unlikely to induce or become susceptible to slope instability. Competent supervision in this regard is important. All foundations should be inspected by the engineer before placing reinforcement.</p> <p>An Engineer will be appointed during construction phase. However it is advised to rather use Pad foundations as the impact on tree roots will be mitigated.</p> <p>Driveway & parking areas: The proposed driveway onto the site with parking area will be a challenge due to the dense indigenous vegetation, which may be environmentally sensitive. Construction of the driveway may involve minor cutting and filling to achieve the correct line and levels. The insitu soils are generally poor quality in terms of road-building and it is recommended that an allowance is made for the importation of SSG gravel material to improve access during construction, in addition to the final subbase and paving layerworks.</p> <p>The EAP agrees, it must be noted that stormwater must be redirected off hardened surfaces onto natural vegetation to ensure no erosion on site.</p>
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Drainage: The soil has a low permeability and vertical infiltration will be restricted by the presence of shallow rock and dense soils, so stormwater will tend run off site after heavy rainfall. Effective stormwater management systems are required to collect and discharge stormwater in controlled manner down slopes. Subsoil drains are recommended behind retaining walls as standard.

The SUDS principles to be adhered too. Rainwater tanks will be placed next to each unit for re-use.

According to the Engineering Services Report, 2022 (Appendix G) –

The addition of the main house and the cottages, will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

The investigation indicates that the site is potentially suitable for development but there are some geotechnical constraints, such as difficult access, restricted construction space, steep slopes and shallow/irregular rock, which may have an impact on the engineering design and construction costs. Some recommendations are offered for consideration by the structural engineer.

(Dr David Hoare - David Hoare Consulting (Pty) Ltd) Biodiversity specialist

Based on the botanical assessment, this section of the report provides recommendations for the project. The following recommendations are made:

- The proposed development will result in loss of relatively small areas of natural habitat. This is not considered to be a significant threat to the habitat or threatened plant or animal species on site or in neighbouring areas. On the basis of having a minimal impact on natural features, it is recommended that the proposed development be approved but on condition that surrounding indigenous forest is ecologically managed to enhance the biodiversity value and protected from damage.
- 96% of the site has been designated as a no-go area and to remain natural. Only alien vegetation clearing will be permitted within this area.
- Remaining areas of thicket in surrounding areas is dominated by the protected tree, *Sideroxylon inerme*, and also contains individuals of the protected tree, *Pittosporum viridiflorum* and *Curtisia dentata*. In the event that there are any impacts on individuals of any of these species, it would require a permit in terms of the National Forests Act.
- Department of Forestry has been asked to provide comments during the PPP process, as this is seen as natural protected forest a Forestry licence to disturb indigenous trees within the National Forest will be obtained prior to construction commencing.
- If possible, no significant trees must be damaged by the proposed development. The proposal to raise units above the forest floor is supported, especially if these footprint areas are allowed to return to forest understorey. It would be preferable if no formal gardens are developed around the proposed units, but that the indigenous forest vegetation is retained as a feature of the development.
- All structures to be raised above ground the Cottages at ± 4 to 5 meters above natural ground level and the wooden boardwalk at 1.5 meters above natural ground level.
- The drainage area (as mapped here), as well as a buffer of 30 m, should not be impacted upon.



Figure 20- Drainage areas and protected milkwood trees on site

- This area is marked in the no-go area
- It is recommended that pre-emptive control of alien invasive species is undertaken using registered control methods and that an Alien Invasive Management Plan is implemented to control potential invasions on site and in neighbouring areas, especially within areas of remaining natural habitat.
- Alien management as per NEMBA will be implemented.

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

(Iain Paton Consulting Geotechnical Engineers and Engineering Geologists) Soil specialist

- Excavations should be assessed by a competent person as excavations progress. Excavations shallower than 1.5m are likely to be fairly stable at near-vertical angles for short periods (temporary works)
- Insitu granular soils (sandy/gravelly soils, not clay), less any large rock fragments >150mm diameter, obtained from excavations may be suitable for reuse as bulk filling material under floors and behind retaining walls but should be approved by the engineer before placement.
- Any unsuitable soil obtained from excavations should be spoiled in suitable location on site (e.g. as landscaping fill).
- Competent supervision is important. All foundations should be inspected by the engineer before placing reinforcement
- Construction of the driveway may involve minor cutting and filling to achieve the correct line and levels. The insitu soils are generally poor quality in terms of road-building and it is recommended that an allowance is made for the importation of SSG gravel material to improve access during construction, in addition to the final subbase and paving layerworks.
- Effective stormwater management systems are required to collect and discharge stormwater in controlled manner down slopes. Subsoil drains are recommended behind retaining walls as standard.

According to the Engineering Services Report, 2022 (Appendix G) –

The addition of the main house and the cottages, will have a minimal impact in terms of additional hard areas (less than 4%) and the stormwater runoff generated from site.

It proposed that as far as possible, roof water is gathered and stored in Jo-Jo Tanks at each of the cottages and the main house. From these tanks overflows will be provided onto a stone pitched base (1m x 1m x 0.2m thick), acting as energy breaker, before the stormwater dissipates into the surrounding forest.

(Dr David Hoare - David Hoare Consulting (Pty) Ltd) Biodiversity specialist

- surrounding indigenous forest is ecologically managed to enhance the biodiversity value and protected from damage.
- In the event that there are any impacts on individuals of any of these species, it would require a permit in terms of the National Forests Act.
- The proposal to raise units above the forest floor is supported, especially if these footprint areas are allowed to return to forest understorey. It would be preferable if no formal gardens are developed around the proposed units, but that the indigenous forest vegetation is retained as a feature of the development.

	- It is recommended that pre-emptive control of alien invasive species is undertaken using registered control methods and that an Alien Invasive Management Plan is implemented to control potential invasions on site and in neighbouring areas, especially within areas of remaining natural habitat.
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.
	The engineer suggested strip or pad foundations. The EAP is of the opinion the Pad foundations will protect the existing forest tree roots in the proposed footprints where the cottages, boardwalk and residential dwelling will be constructed. The engineer's proposed sewage package plant is not supported and it is suggested that the underground Clarus Fusion® system is utilised instead to ensure less disturbance of the natural forest floor vegetation and tree roots and to provide a closed system which meets the General Limit Values in terms of Section 9 of the National Water Act No. 36 of 1998 (Re Source Water Solutions).
4.	Explain how the proposed development will impact the surrounding communities.
	The proposed accommodation units and associated uses will contribute to the growth of the tourism industry and result in various new, permanent, skilled, and unskilled employment opportunities as well as temporary employment opportunities outlined below. Permanent employment of staff to manage the day-to-day work at the cottages will be created. Temporary construction jobs will be created during the construction phase at all levels of skills. A focusing feature of the project will be the provision of training opportunities for students and individuals researching within the application areas environments being natural forests. Additional tourists and visitors in the area will also support the existing tourism facilities and activities such as farm stalls, wine farms, eco-tourism initiatives, etc. Downstream economic opportunities as a result of this proposed new development include: <ul style="list-style-type: none"> ▪ Built Environment professionals; ▪ Continuous alien clearing on the protected areas; ▪ Maintenance of infrastructure; ▪ Management Services; and ▪ Tour guide services, etc. The long-term investment of tourists to the area. From car hire, fuel stations, restaurants, food stores, souvenirs and adventure excursions. There is a need to create these additional, new jobs in George / Wilderness for the tourism industry. Direct area will be safer as vagrants will not be able to occupy area and create a fire risk.
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.
	Climate change can lead to longer and dryer seasons, which could affect the water availability in area. In addition, more severe storms can be experienced in area due to Climate change. The above can directly affect the proposed activity. Water will be used sparingly during operational phase and tourist visiting will be encouraged to do the same through signs in designated areas. Construction of the dwelling and units will consider the impacts of possible severe storms and will be addressed through the assistance of engineers during the planning and construction phase.
6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.
	No conflicting recommendations.
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.
	- Design was done with the input from Dr. Hoare during a site visit, where open pockets of forest were chosen as location of cabins, to minimize impact on receiving environment. - All units and boardwalks will be raised and on stilts. - SUDs have been taken into consideration and implemented by re-directing surface flow of water into rainwater tanks and natural vegetation. Allowing the understorey of vegetation to develop under structures will assist in preventing soil erosion. - If possible, no significant trees must be damaged by the proposed development. The proposal to raise units above the forest floor is supported, especially if these footprint areas are allowed to return to forest understorey.
8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

The hierarchy follows avoidance, minimization, restoration and offsets in order to reduce development impacts and control any negative effects on the environment.

96% of the property to remain in natural condition (offset) and conserved. The preferred alternative is a residential dwelling unit and 4 self-catering cottages (minimization). Raising all structures above natural ground level will allow the understorey of forest vegetation to re-establish under footprints (restoration). Vegetation within the footprints needs to be rescued and replanted on site for use in rehabilitation phase.

SECTION J: GENERAL

1. Environmental Impact Statement

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

The site is in a property that is within an area of coastal thicket / forest. The entire site is currently in a natural state, although there are localised disturbances on site (under the vegetation canopy) that are not visible from aerial imagery. The proposal is to construct a small number of units within the forest canopy in such a way as to disturb the minimum amount of existing habitat. There would be some localised loss of habitat during construction, but this would recover to some degree with time, especially if no significant trees are disturbed. The impacts would be within proximity to the access road along the north- eastern boundary of the property, which would minimise fragmentation and would keep any construction together with existing nodes of development on neighbouring properties.

The proposal is to put the units onto stilts so that the forest floor is also left mostly intact. The units are proposed to be located as close as possible to the access road coming into the site along the northern boundary (on the margins of the CBA1 area). These would be placed in such a way as to avoid any protected trees, as well as any trees of significant size, irrespective of status.

The proposed development of the 4 self-catering chalets, residential dwelling and boardwalk will impact less than 4% of the property. The remaining 96% will be conserved with only fencing on the western boundary still allowing for ecological corridors to be maintained.

The EAP is of the opinion that the proposed development will have very little impact on the receiving environment if all mitigation measures of possible negative impacts are adhered too and if all work is carried out by hand. It is proposed that the applicant enters into a stewardship programme with SANParks for the conservation of the remaining 96% of the property.

As the Afro-temperate Forest on site is protected it is very important to involve the Department of Forestry in the planning and construction phase. A permit from this Department will need to be obtained for the removal or clearance of forest vegetation prior to construction commencing.

A big regional threat to biodiversity is invasion by alien invasive plant species. There is currently no invasion by alien plants on site but the invasive species, *Acacia mearnsii*, *Acacia melanoxylon*, and *Acacia cyclops* occur in nearby areas and have the potential to rapidly colonise disturbed areas and to then displace indigenous vegetation. Management of alien invasive plants is the biggest positive impact that could occur on site and the most important way in which biodiversity on site and in surrounding areas can be protected.

There is a well-defined drainage valley on site in which a clear drainage channel exists. This is a natural feature and is an important component of the hydrological functioning of the site. No impacts are expected on these areas due to the current proposal.

It is recommended that pre-emptive control of alien invasive species is undertaken using registered control methods and that an Alien Invasive Management Plan is implemented to control potential invasions on site and in neighbouring areas, especially within areas of remaining natural habitat.

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)				
See Appendix B2					
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.				
	<table border="1"> <thead> <tr> <th>Positive Impacts</th> <th>Negative Impacts</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> - Job creation - Skills development - Increased revenue in the area - Reduced vagrant activity (fire risk) - Alien clearing and management </td> <td> <ul style="list-style-type: none"> - Loss of habitat and impact on natural forest - Loss of fauna and flora in proposed footprint areas however placing the units on stilts will encourage forest undergrowth to be promoted and rehabilitated. - Fragmentation of ecosystems (only about 4% of entire property and in close vicinity to the road and neighbouring properties. - Erosion during construction and operational phase - Increased use of resources (Water and electricity) - Increased solid waste impact </td> </tr> </tbody> </table>	Positive Impacts	Negative Impacts	<ul style="list-style-type: none"> - Job creation - Skills development - Increased revenue in the area - Reduced vagrant activity (fire risk) - Alien clearing and management 	<ul style="list-style-type: none"> - Loss of habitat and impact on natural forest - Loss of fauna and flora in proposed footprint areas however placing the units on stilts will encourage forest undergrowth to be promoted and rehabilitated. - Fragmentation of ecosystems (only about 4% of entire property and in close vicinity to the road and neighbouring properties. - Erosion during construction and operational phase - Increased use of resources (Water and electricity) - Increased solid waste impact
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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
	<ul style="list-style-type: none"> • No heavy machinery allowed on site, all materials to be hand carried in, it is proposed to construct the boardwalk first in order for construction materials to be transported to site on foot on the boardwalk. This will ensure very little disturbance of vegetation outside of the proposed footprints. • Pad foundations will have a lesser impact on the forest tree roots than strip foundations. • An ECO must be appointed as per the EMPr and weekly site visits are recommended. • Care to be taken when installing services as per the mitigation measures suggested in the Draft BAR, where possible it will be highly recommended that the service lines be placed underneath the boardwalk (hanging beneath. • A surveyor to be appointed to mark out the proposed self-catering cottages, residential dwelling and boardwalk to ensure all large trees removal is prevented. • An onsite nursery to be established to ensure that plant rescue prior to construction takes place for use in rehabilitation after construction phase. • The package plant to be monitored regularly to ensure no pollution of the receiving environment occurs. • As per NEM:BA an alien clearing plan is proposed. • The applicant to sign a Stewardship agreement with CapeNature to conserve the remaining 96% of the property. • SUDs to be implemented to prevent soil erosion from stormwater. • The applicant must seek the advice of the Southern Cape Fire Protection Agency with regards to dealing with potential fires.
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.
	As per the Biodiversity Specialist:

- The proposed development will result in loss of relatively small areas of natural habitat. This is not considered to be a significant threat to the habitat or threatened plant or animal species on site or in neighbouring areas. On the basis of having a minimal impact on natural features, it is recommended that the proposed development be approved but on condition that surrounding indigenous forest is ecologically managed to enhance the biodiversity value and protected from damage.
- Remaining areas of thicket in surrounding areas is dominated by the protected tree, *Sideroxylon inerme*, and also contains individuals of the protected tree, *Pittosporum viridiflorum* and *Curtisia dentata*. In the event that there are any impacts on individuals of any of these species, it would require a permit in terms of the National Forests Act.
- If possible, no significant trees must be damaged by the proposed development. The proposal to raise units above the forest floor is supported, especially if these footprint areas are allowed to return to forest understorey. It would be preferable if no formal gardens are developed around the proposed units, but that the indigenous forest vegetation is retained as a feature of the development.
- The drainage area, as well as a buffer of 30 m, should not be impacted upon.
- It is recommended that pre-emptive control of alien invasive species is undertaken using registered control methods and that an Alien Invasive Management Plan is implemented to control potential invasions on site and in neighbouring areas, especially within areas of remaining natural habitat.

As per the EAP:

- No heavy machinery allowed on site, all materials to be hand carried in, it is proposed to construct the boardwalk first in order for construction materials to be transported to site on foot on the boardwalk. This will ensure very little disturbance of vegetation outside of the proposed footprints.
- Pad foundations will have a lesser impact on the forest tree roots than strip foundations.
- An ECO must be appointed as per the EMPr and weekly site visits are recommended.
- Care to be taken when installing services as per the mitigation measures suggested in the Draft BAR, where possible it will be highly recommended that the service lines be placed underneath the boardwalk (hanging beneath).
- A surveyor to be appointed to mark out the proposed self-catering cottages, residential dwelling and boardwalk to ensure all large trees removal is prevented.
- An onsite nursery to be established to ensure that plant rescue prior to construction takes place for use in rehabilitation after construction phase.
- The package plant to be monitored regularly to ensure no pollution of the receiving environment occurs.
- As per NEM:BA an alien clearing plan is proposed.
- The applicant to sign a Stewardship agreement with SANParks to conserve the remaining 96% of the property.
- SUDs to be implemented to prevent soil erosion from stormwater. It is strongly recommended that grass blocks are used for the parking area to assist with stormwater management.

SANParks Recommendations:

	<ul style="list-style-type: none"> • During construction of the main dwelling, care should be exercised to: • Ensure minimal disturbance of the adjacent indigenous forest; • Use low impact earthmoving machinery; • Adhere to George Municipality approved sewerage system requirements; • Adhere to George Municipality Fencing by-law; • Minimise stormwater surface runoff; • Mitigate against the risk of slope failure, particularly as the site is in proximity to the N2, and so as to avoid damage to the forest; • Adhere to all geotechnical engineer requirements; • Minimise the visual impact of the dwelling, by reducing night light pollution, and by painting the dwelling in earth tone colours.
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.
To be completed in Final BAR.	
2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.
All specialist information presented is assumed to be independent, and science-based knowledge.	
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.
To be completed in Final BAR.	

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.
Rainwater tanks will be installed to harvest rainwater. Guest will also be made aware of water restrictions through signs in designated areas and will be given options on how to reduce their consumption.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.
Waste will be sorted according to the waste hierarchy and be disposed of in the appropriate manner. Compost bins and recycling bins should be made available to guests to utilise throughout their stay.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.
Due to forest canopy, solar is not a feasible option as an only source of energy. But will be utilised as much as possible. All lights installed will be LED to reduce energy consumption.	

SECTION K: DECLARATIONS - attached

DECLARATION OF THE APPLICANT

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

I....., ID numberin my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

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

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

Signature of the Applicant:

Date:

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I Samantha Teeluckdhari , EAPASA Registration number 2023/6443 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;

S. Teeluckdhari

09/11/2023

Signature of the EAP:

Date:

Eco Route Environmental Consultancy

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP N/A

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 IN SPECIALIST REPORT TO BE ATTACHED IN FBAR

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

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

- In terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
 - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP: _____ Date: _____

Name of company (if applicable): _____

DECLARATION OF THE REVIEW SPECIALIST N/A

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):