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PRE-APPLICATION BASIC ASSESSMENT REPORT

for the

PROPOSED DEVELOPMENT OF A RETIREMENT COMPLEX AND MUSEUM OF MANKIND WITH ASSOCIATED TOURISM FACILITIES ON PORTIONS 59, 62 AND 63 OF FARM BRAKKLOOF 443, PLETTENBERG BAY, BITOU MUNICIPALITY, WESTERN CAPE

PREPARED FOR:	Star Gate Innovations (Pty) Ltd Mr Neil Hellmann
PREPARED BY:	Eco Route Environmental Consultancy
ENVIRONMENTAL ASSESSMENT PRACTITIONER:	Vanessa Marais (EAPASA Registration no: 2019/1627)
DATE:	16/04/2026
SUBMITTED TO:	Interested and Affected Parties including Organs of State and State Departments

ECO-ROUTE
ENVIRONMENTAL
CONSULTANCY

REGISTRATION NO. 1998/031976/23

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STATEMENT OF INDEPENDENCE

I, **Vanessa Marais**, 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: **2019/1627**) 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.

EAP SIGNATURE: _____

Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

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

APRIL 2024

BASIC ASSESSMENT REPORT

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

APRIL 2024

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

GENERAL PROJECT DESCRIPTION

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

Proposed development of a Retirement village and Museum of Mankind with associated tourism facilities on Portions 59, 62 and 63 of Farm Brakkloof 443, Plettenberg Bay, Bitou Municipality.

The proposal includes a **Retirement Complex**, comprising approximately **120 residential units** with unit sizes ranging between **200 m² and 300 m²** on Portion 59 and a Museum of Mankind on Portion 62, supported by compatible tourist-oriented facilities for education, conferencing and accommodation components. The remainder of Portions 62 and 63 will be included in the Robberg Coastal Corridor (RCC).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry

Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

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

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

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

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

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

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

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

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

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

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

ATTACHMENTS

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

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	✓
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	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 and Environmental Sensitivity map including heritage**		✓
Appendix E: This section will be populated after the Public participation phase	**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 (Letter requesting HIA)**	✓
	Appendix E2:	**Copy of comment from Cape Nature (Preliminary discussions)**	✓
	Appendix E3:	**Final Comment from the DWS Pre-enquire No: WU49745**	
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	
	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**	

	Appendix E14:	**Comment from DEA&DP: Coastal Management**	
	Appendix E15:	**Comment from the local authority (Minutes of Pre-application Townplanning meeting)**	✓
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management) TBD**	
	Appendix E17:	**Comment from the District Municipality**	
	Appendix E18:	**Copy of an exemption notice**	X
	Appendix E19	**Pre-approval for the reclamation of land**	X
	Appendix E20:	**Proof of agreement/TOR of the specialist studies conducted (this will be provided in Draft BAR)**	
	Appendix E21:	**Proof of land use rights (Rezoning application in process)**	
	Appendix E22:	**Proof of public participation agreement for linear activities**	X
Appendix F: This section will be populated after the Public participation phase	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		
Appendix G:	**Specialist Report(s):** **Appendix G1 – Flora Report – to be updated for the Draft BAR** **Appendix G2 – Faunal Report** **Appendix G3 – Aquatic Report** **Appendix G4 – Geohydrological report** **Appendix G5 – Archaeological report (J Kaplan 2010)** **Appendix G6 – Heritage Impact Assessment (Aikman, 2012)** **Appendix G7 – Reconnaissance report on archaeological (Archer & Pether (2012)** **Appendix G8 – Townplanning Report** **Appendix G9 – Engineering services Report** **Appendix G10 – Geotechnical report** **Appendix G11 – Agricultural Potential report (to be submitted in Draft BAR)** **Appendix G12 – Visual impact Assessment (to be submitted in Draft BAR)** **Appendix G13 – Heritage Impact Assessment 2026 (to be submitted in Draft BAR)**	✓
Appendix H:	**EMPr - This report will be compiled for the Draft Basic Assessment Phase when alternatives and specialist studies have been finalized**	
Appendix I (1): **Appendix I (2):**	**Screening tool report** **Site Sensitivity Verification Report**	✓
Appendix J:	**The impact and risk assessment for each alternative (Will be conducted during the Draft BAR)**	
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 (Will be finalised when all the specialist studies and Engineering reports have been finalised for the Draft BAR)**	✓
Appendix…..	**Any other attachments must be included as subsequent appendices**	

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		**GEORGE OFFICE: BEGION 3**
	(City of Cape Town, West Coast District	(Cape Winelands District & Overberg District)	**(Central Karoo District & Garden Route District)**

Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Star Gate Innovations (Pty) Ltd	
Name of contact person for Applicant/Proponent (if other):	Neil Christopher Hellmann	
Company/ Trading name/State Department/Organ of State:	Star Gate Innovations (Pty) Ltd	
Company Registration Number:	2014/284339/07	
Postal address:	6 Steens Way, Llandudno	
		Postal code: 7806
Telephone:	( )	Cell: 083 445 5554
E-mail:	Neil.hellmann@gmail.com	Fax: ( )
Company of EAP:	Eco Route Environmental Consultancy	
EAP name:	Vanessa Marais	
Postal address:	P.O. Box 1252, Sedgefield	
		Postal code: 6573
Telephone:	( )	Cell: 082 322 5688
E-mail:	vanessa@ecoroute.co.za	Fax: ( )
Qualifications:	BL Landscape Architecture	
EAP registration no:	2019/1627	
Duplicate this section where there is more than one landowner Name of landowner:	The NCH Trust (IT 596/2012)	
Name of contact person for landowner (if other):	Neil Christopher Hellmann (Trustee)	
Postal address:	6 Steens Way, Llandudno	
		Postal code: 7806
Telephone:	( )	Cell: 083 445 5554
E-mail:	Neil.hellmann@gmail.com	Fax: ( )
Name of Person in control of the land:	Same as Landowner	
Name of contact person for person in control of the land:		
Postal address:		
		Postal code:
Telephone:	( )	Cell:
E-mail:		Fax: ( )

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Bitou Municipality	
Contact person:	Anjé Minne (Environmental)	
Postal address:		
		Postal code:
Telephone	( )	Cell:
E-mail:	aminne@plett.gov.za	Fax: ( )

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

1.	Is the proposed development (please tick):	New	✓	Expansion	
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				
Greenfield – Portions 59 and 62 are vacant and undeveloped - Zoned as Agriculture 1. Portion 63 has one dwelling and a shed that will be excluded from the proposed development.					
~~3.~~	**~~For Linear activities or developments~~**				
~~3.1.~~	~~Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:~~				
~~3.2.~~	~~Development footprint of the proposed development for all alternatives.~~				~~131900m²~~
~~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)~~	~~º~~	~~‘~~	~~“~~	
	~~Longitude (E)~~	~~º~~	~~‘~~	~~“~~	
	~~Middle-point co-ordinates for all alternatives~~				
	~~Latitude (S)~~	~~º~~	~~‘~~	~~“~~	
	~~Longitude (E)~~	~~º~~	~~‘~~	~~“~~	
	~~End point co-ordinates for all alternatives~~				
	~~Latitude (S)~~	~~º~~	~~‘~~	~~“~~	
	~~Longitude (E)~~	~~º~~	~~‘~~	~~“~~	
~~Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.~~					
4.	**Other developments**				
4.1.	Property size(s) of all proposed site(s): Portion 59, 62 and 63 in total measures				557796m²
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:				±8105m²
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).				

Retirement Complex:

It is proposed to develop Portion 59 as an upmarket life-rights retirement complex comprising approximately 121 residential units (200–300 m²), together with the necessary internal roads, services, and communal facilities (club house included). The development is confined to Portion 59, as specialist studies indicate this area has comparatively lower ecological and archaeological sensitivity and includes previously disturbed land (former agricultural fields), making it more suitable for higher density development than the southern portions. Portion 59 will be rezoned to “General Residential Zone I”.

Museum of Mankind and Conservation areas:

Portions 62 and 63 are proposed to be rezoned from Agriculture I to Open Space III (Nature Conservation) and incorporated into the Robberg Coastal Corridor, thereby supporting long-term conservation, ecological connectivity, and landscape protection. Within Portion 62, a cultural and tourism node is proposed, centred on a world-class Museum of Mankind, with associated education, conferencing, and limited accommodation facilities. The development footprint will comprise a series of small, dispersed structures covering approximately 12,000 m².

The museum is envisaged as an interactive facility focused on the origins and evolution of humankind, including exhibition spaces, theatres, and support facilities. Ancillary uses include a restaurant and deli with outdoor terraces overlooking the Robberg Nature Reserve, tourist retail, administrative and reception areas, public amenities, and a conference or wedding venue. The site also lends itself to a grassed amphitheatre for occasional events. Limited short-term accommodation (±20 clustered self-catering units with shared recreational facilities) is proposed to support the tourism function. Parking will be accommodated within landscaped, grassed areas on previously disturbed land adjacent to Whale Rock Drive. Overall, the proposal seeks to balance cultural, tourism, and conservation objectives, aligning with municipal goals for appropriate rural development while maintaining the landscape character.

A **Sewage Package plant** is proposed to service the Portion 59 and Portion 62 development and will be located south of the proposed Amphitheatre. Detention ponds and stormwater infrastructure will also be provided to ensure safe disposal of stormwater on site.

Concept for the Museum of Mankind:
Heritage assessments (Aikman Associates, 2012; Pether and Archer, 2012) found no significant built heritage on the property but identified archaeological sensitivity associated with Early Stone Age (ESAA) artefacts, particularly concentrated in a high-significance area in the south-western section of Portion 63, which is to be retained as a no-go conservation area with appropriate buffers. While these artefacts may occur more broadly, it is often obscured and of lower significance outside this core area. Subsequent investigations confirmed that the previously disturbed areas, including Portion 59 and the eastern section of Portion 62, are of low archaeological sensitivity and largely free of artefacts, making them suitable for development. The Museum of Mankind is therefore appropriately located within these disturbed, low-sensitivity areas, ensuring the protection of significant archaeological resources on the rest of Portions 62 and 63.

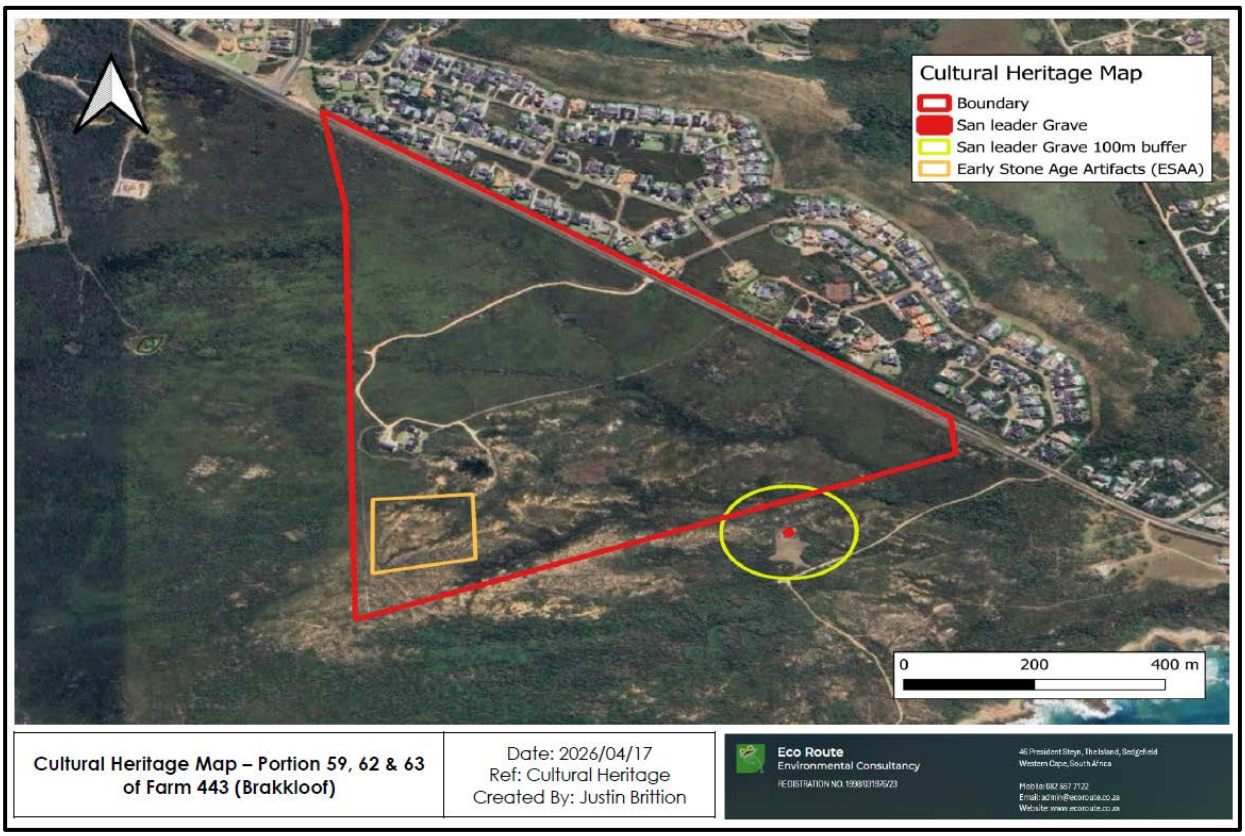

Figure 1: Map showing the Archaeological sensitive area that will be conserved on site

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

The proposed development areas will be accessed with two separate entrances from Whale Rock Drive which traverses the northern boundaries of the properties.

	Portion 59																				
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	o	3	9	0	0	0	0	0	0	0	0	0	4	4	3	0	0	0	5	9
4.7.	Coordinates of the proposed site(s) for all alternatives:																					
	Latitude (S)							34º					5‘					34.11“				
	Longitude (E)							23º					21‘					56.04“				
	Portion 62																				
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	o	3	9	0	0	0	0	0	0	0	0	0	4	4	3	0	0	0	6	2
4.7.	Coordinates of the proposed site(s) for all alternatives:																					
	Latitude (S)							34º					5‘					48.6“				
	Longitude (E)							23º					21‘					56.04“				
	Portion 63																				
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	o	3	9	0	0	0	0	0	0	0	0	0	4	4	3	0	0	0	6	3
4.7.	Coordinates of the proposed site(s) for all alternatives:																					
	Latitude (S)							34º					5‘					45.76“				
	Longitude (E)							23º					21‘					34.12“				

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

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

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

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

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) (“ICMA”). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 (will be appended when received) and the pre-approval for the reclamation of land as Appendix E19 N/A.	**YES**	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (“NHRA”). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	**YES**	NO
The National Water Act, 1998 (Act No. 36 of 1998) (“NWA”). If yes, attach a copy of the comment from the DWS as Appendix E3. DWS Pre-enquiry no: WU49745	**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”). The properties are located within the Garden Route National Park buffer zone	**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. The development areas are historically transformed, not considered virgin soil in terms of CARA and the slopes are below thresholds	YES	**NO**

3. Other legislation

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

Rezoning in terms of Section 15 (2)a of the said Bylaw: The properties are currently zoned "Agricultural I" in terms of the Plettenberg Bay Zoning Scheme applicable to the area. To facilitate the development of a Retirement village on Portion 59, the property will have to be rezoned to General Residential I and for the Museum of Humankind Portions 62 and 63 will have to be rezoned to Open Space III, with consent use.

Outeniqua Sensitive Coastal Area Extension Regulations promulgated under Environment Conservation Act (Act No. 73 of 1989): A permit in terms of the Outeniqua Sensitive Coastal Area Extension Regulations will be applied for when the final site plans for the development is submitted to Bitou Municipality. An OSCAE permit was received for Portion 59 from the Bitou Municipality in 2015 during the proposed development proposal initiated by the previous landowners, that was never taken further – See Appendix L.

NATIONAL LEGISLATION	**RELEVANT YES / NO**	**ADMINISTERING AUTHORITY**	**TYPE** **Permit/ license/ authorization/comment / relevant consideration** (e.g. rezoning or consent use, building plan approval)	**DATE (if already obtained):**
Constitution of Southern Africa Act No. 108 Of 1996	No	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.	Relevant Consideration	None
Environmental Conservation Act (Act No. 73 of 1989) Outeniqua Sensitive Coastal Area Extension Regulations	Yes	Local Authorities that have been identified as relevant Competent Authorities.	Relevant Consideration	On submission of site plan to municipality for each dwelling and development area to be disturbed.
National Environmental Management Act (Act 107 of 1998)	YES	DEA&DP	Authorization	Pending
National Environmental Management Amendment Act (Act 62 of 2008)	YES	DEA&DP	Authorization / comment	Pending
National Veld and Forest Fire Act (Act 101 of 1998)	YES	DFFE / SCFPA	Relevant Consideration	Member of the SCFPA
Water Services Act (Act 108 of 1997)	NO	Department of Water & Sanitation	Relevant Consideration	None
Conservation of Agricultural Resources Act (Act 43 of 1983)	YES	Department of Agriculture	Comment	Pending
Subdivision of Agricultural Land Act (Act 70 of 1970)	No	Department of Agriculture	Relevant Consideration	None
National Health Act (Act 61 of 2003)	YES	Department of Health and Wellness	Comment/ Relevant Consideration	None

National Road Traffic Act (Act No 93 of 1996)	YES	Western Cape Roads Department	Comment/ Relevant Consideration	
Spatial Planning & Land Use Management Act, 2013 (SPLUMA)	YES	Bitou Municipality	Authorization Rezoning / Consent Use Application / Building Plan Application	Pending
PROVINCIAL LEGISLATION WESTERN CAPE	**RELEVANT YES / NO**	**ADMINISTERING AUTHORITY**	**TYPE** **Permit/ license/ authorization/comment / relevant consideration (e.g. rezoning or consent use, building plan approval)**	**DATE (if already obtained):**
Western Cape Nature Conservation Laws Amendment Act (Act 3 of 2000)	NO	CapeNature	Comment	Comment pending
Western Cape Nature Conservation Board Act (Act 15 of 1998)	NO	CapeNature	Comment	Comment pending
Western Cape Land Use Planning Act (Act 3 of 2014) (LUPA)	YES	Bitou Municipality	Authorization	Pending – Land Use Application

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.		
POLICIES	**ADMINISTERING AUTHORITY**	**APPLICABILITY**
Western Cape Provincial Spatial Development Framework (PSDF)	DEA&DP	The PSDF sets out the provincial government's spatial vision, objectives, and policies for guiding development. The site is located within a transitional peri-urban landscape in Plettenberg Bay where residential, conservation, tourism, and service-related land uses already coexist, rather than within an isolated natural area. The proposed retirement estate is consistent with the low-density, high-value character of the nearby Whale Rock Estate and is designed to maintain a low visual profile with substantial open space, ensuring minimal visual intrusion. Surrounding areas, including the Robberg Nature Reserve and the broader Robberg Coastal Corridor, are strongly conservation-oriented, and the proposed Museum of Mankind is intended to complement these by enhancing the educational and heritage tourism offering. To the west, existing mixed-use and infrastructure activities further reinforce the established diversity of land uses typical of an urban edge. Importantly, the development is positioned between existing uses and includes the incorporation of additional land into the conservation corridor, thereby reinforcing a defined settlement edge and preventing further uncontrolled expansion.

Western Cape Biodiversity Spatial Plan (WCBSP)	CapeNature	CBA objectives and appropriate land use is proposed. The specialist flora study determined that the proposed development areas mapped as CBA areas on site was historically ploughed or disturbed by quarrying activities and intensive alien species invasion and not seen as CBA areas. The rest of the properties that is CBA sensitive areas will be excluded from the proposed development. **See the Flora report in Appendix G1.**
Bitou Spatial Development Framework (BSDF)(2022).	Bitou Municipality	A portion of Portion 59 is included in the urban Edge of Plettenberg Bay, but earmarked for conservation purposes, while the rest of Portion 59 is outside the urban edge and earmarked for agricultural purposes. Portions 63 and 62 are outside of the urban edge and earmarked for conservation purposes. The proposed development is however in line with the old Knysna Plett Wilderness Guide plan as well as the 2005 Plettenberg Bay Structure plan that included all three portions as land for urban development. All three properties have also been included in the service Master Plan for Bitou. The Bitou Municipality SDF strategies and policies, with all the relevant considerations are discussed in the land use planning report (**See the Townplanning Report in Appendix G8**).
The Garden Route Environmental Management Framework	Garden Route District Municipality	**No conflict.** The EMF will overlap and include all mitigatory measures as highlighted in the Environmental Management Programme (EMPr) and any other pertinent conditions sated in the Environmental Authorisation.

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.	
Guidelines	**Explain how they have influenced the development proposal:**
Western Cape Land Use Planning Guidelines: Rural Areas, 2019.	**No conflict.** The site is located within a transitional peri-urban landscape in Plettenberg Bay where residential, conservation, tourism, and service-related land uses already coexist, rather than within an isolated natural area. The proposed retirement estate is consistent with the low-density, high-value character of the nearby Whale Rock Estate and is designed to maintain a low visual profile with substantial open space, ensuring minimal visual intrusion. Surrounding areas, including the Robberg Nature Reserve and the broader Robberg Coastal Corridor, are strongly conservation-oriented, and the proposed Museum of Mankind is intended to complement these by enhancing the educational and heritage tourism offering. To the west, existing mixed-use and infrastructure activities further reinforce the established diversity of land uses typical of an urban edge. Importantly, the development is positioned between existing uses and includes the incorporation of additional land into the conservation corridor, thereby reinforcing a defined settlement edge and preventing further uncontrolled expansion.
Circular EADP 0028/2014: One Environmental Management System.	A WULA will be required as the proposed development falls within the 500m Regulated area and a Sewage Treatment plant will be built on site that will discharge into the aquatic ecosystem on site. Synchronization in terms of this circular will be required.
Guideline on Need and Desirability (March 2013).	Need & Desirability were determined and discussed as per these regulations and will be included in Appendix K of the Draft Basic Assessment Report.

Guideline on generic terms of Reference for EAPs and Project Schedules (March 2013)	Project timeline and process was informed by these guidelines. Informs the EAP on important aspects within the process.
Guideline for determining the scope of specialist involvement in EIA processes (June 2005)	These guidelines were considered together with the GN320 Protocols for Biodiversity Assessments in the appointment of specialists.
Guideline for review of specialist input in the EIA process (June 2005)	Specialist involvement in the process was informed by these guidelines.
Guideline for involving visual and aesthetic specialists in the EIA process (June 2005)	Specialist involvement in the process must be informed by these guidelines.
Guideline for involving heritage specialists in the EIA process (June 2005)	NID submitted to HWC to determine the outcome of required specialist studies.
Guideline for involving social assessment specialists in the EIA process (February 2007)	Social aspects were determined and discussed as per these guidelines and will be included in Appendix K of the Draft Basic Assessment Report.
Guideline for Environmental Management Plans (June 2005).	An EMPr has been drafted and included with the Basic Assessment Report. The EMPr complies with Appendix 4 of Regulation 982 of the 2014 EIA Regulations and section 24N of the Act.
Guideline on Alternatives (March 2013).	These guidelines have been used in consideration of feasible and reasonable alternatives.
Guideline for Public Participation (2013)	The PPP will be undertaken in accordance with the guidelines and applicable regulations.

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.

An Environmental Screening Tool Report was generated (Appendix I1), and a Site Sensitivity Verification Report compiled (Appendix I2). Specialist assessments were compiled in terms of the minimum report content requirements for Environmental Impacts with regards to specialist themes. The following protocols were applicable:

No	Identified Specialist assessments	EAP Response on applicability
1	Visual Impact Assessment	A Visual impact assessment will be commissioned from Paul Buchholz**.**
2	Archaeological and Cultural Heritage Impact Assessment	The screening report indicates that the receiving environment has a HIGH Relative Archaeological & Cultural Heritage Sensitivity. A Notice of Intent to Develop (NID) under Section 38(1) and (8) of the NHR Act was submitted to Heritage Western Cape. They requested a Heritage Impact Assessment (HIA) that evaluates the proposed development. The HIA will be included in the Draft Basic Assessment Report.
3	Palaeontological Impact Assessment	The screening report indicates that the receiving environment has a Low Relative Palaeontological Sensitivity. A Notice of Intent to Develop (NID) under Section 38(1) and (8) of the NHR Act was submitted to Heritage Western Cape. They requested a Heritage Impact Assessment (HIA) that evaluates the proposed development. The HIA will be included in the Draft Basic Assessment Report.
4	Terrestrial Biodiversity Impact Assessment	Terrestrial Biodiversity Impact Assessment or Compliance Statement is required as the property falls within a Critical biodiversity area. **This assessment will be dealt with in the Fauna and Flora assessments.**

		The classification of "Very high" is disputed by the Fauna and Flora specialist reports. See Appendices G1 and 2.
5	Aquatic Biodiversity Impact Assessment	The screening report indicates that Aquatic resources have a **Very High Sensitivity** on the site. The Screening tool highlighted that only a very small section of the site falls within the Outeniqua Strategic Water Source Area – which has very high rating. An Aquatic Biodiversity Impact Assessment was done and determined that there are non-perennial rivers mapped on site, but the Outeniqua SWSA will not be impacted as the mapping is inaccurate.
6	Socio-Economic Assessment	The properties are situated outside the urban edge of Plettenberg Bay, but directly south of built-up areas. Rezoning applications will be submitted to the Bitou Municipality. The Socio-Economic assessment can be dealt with in the Town planning report. **Disputed**
7	Plant species assessment	**Inaccurately depicted**. A Compliance Statement is required for "medium" sensitivity. **Jan Vlok** conducted a specialist study and mapped areas with modified vegetation that is suitable for the proposed development and classified these areas as of "Low" sensitivity. **See Appendix G1.** **Disputed**
8	Animal species assessment	**Inaccurately depicted** according to the Fauna specialist for the proposed development areas. Dr Jaco Visser classified the fauna sensitivity on the proposed development areas as "low" and impacts related to the proposed development can be mitigated through the footprint placement and other measures. **See Appendix G2.** **Disputed**
9	Agricultural Potential	An Agricultural Potential study will be compiled by SoilZA to verify the sensitivity in terms of Agriculture for the site and included in the Draft Basic Assessment Report.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
27	The clearance of an area of 1 ha or more, but less than 20ha of Indigenous vegetation.	The proposed development footprint will be approximately 13.19ha and therefore triggers this activity.
28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (a) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (b) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;	Portion 59 is zoned Agriculture I and was previously used for agriculture. This portion will now be developed into a Retirement complex that exceeds 1 ha.

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.
4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. **Western Cape** i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas; (aa) **Areas containing indigenous vegetation**; (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or iii. Inside urban areas: (aa) Areas zoned for **conservation use**; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority	The roads within the proposed retirement complex on Portion 59 will be 5-5.5m wide. The Road on Portion 62 for the Museum of Mankind will also include parking and will be wider than 4m.
12	**Activity 12:** The clearance of an area of 300 square metres or more of indigenous vegetation. **a. Western Cape** **i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;** ii. Within critical biodiversity areas identified in bioregional plans; iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.	Most of the site is mapped as Knysna Sand Fynbos described as having a threat status of Critically Endangered. The clearance of more than 300 square meters of indigenous vegetation is required for the proposed development.
6	The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more.	Most of the proposed development site falls with Critical Biodiversity areas 1 and 2 and the Museum and tourism

	a. Western Cape i. Inside a protected area identified in terms of NEMPAA; ii. Outside urban areas; (aa) **Critical biodiversity areas** as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; 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; -	complex will have facilities that sleeps more than 15 people.

Note:

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

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the **preferred alternative**. The following section is as per the Townplanning Report as seen in Appendix G8.

It is proposed to developed Portion 59 as an upmarket life-rights **Retirement Complex**, comprising approximately **120 residential units** with unit sizes ranging between **200 m² and 300 m²**, together with the associated internal road network, services, and communal facilities required to support the needs of retired residents. The retirement component is intentionally confined to Portion 59 as specialist studies confirmed that this portion has comparatively lower ecological and archaeological sensitivity and contains previously disturbed areas (historical agricultural ploughed field) that are more suitable for development than the southern portions of the property. Portion 59 will be rezoned to General Residential Zone I.

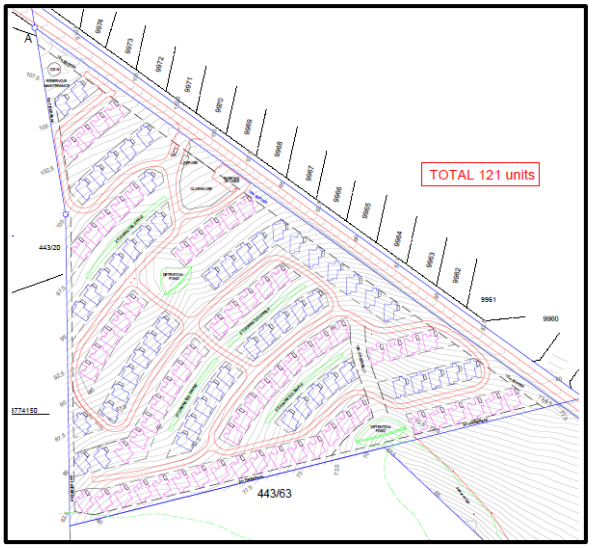

Figure 2: Plan showing the SDP for Portion 59 – Retirement complex

Portions 62 and 63 are proposed to be rezoned from **Agriculture I** to **Open Space III (Nature Conservation)** and are in the process of being incorporated into the **Robberg Coastal Corridor**, thereby reinforcing long-term conservation, ecological connectivity, and landscape protection objectives. Within Portion 62, a **Cultural and tourism node** is proposed, centred around the establishment of a world-class **Museum of Mankind**, supported by compatible tourist-oriented facilities for education, conferencing, and accommodation components. The overall development footprint is envisaged to comprise a series of smaller, dispersed building elements which will span over an area of approximately 12,000 m².

The Museum of mankind is envisaged as an interactive, experiential museum focusing on the origins and evolution of humankind, incorporating exhibition halls, theatres, and associated support facilities. Ancillary uses include a restaurant and deli with outdoor terraces overlooking the Robberg Nature reserve, a tourist retail component, administrative and reception areas, public amenities, and a conference or wedding venue.

The landscape also lend itself to a grassed **amphitheatre** overlooking the bay where occasional concerts can be hosted. Limited short-term visitor **accommodation**, in the form of about 20 clustered self-catering units with shared recreational facilities, is proposed to support the cultural and tourism function of the precinct. Parking is largely accommodated through landscaped grassed areas located within previously disturbed portions of the site next to Whale Rock Drive. Overall, the development seeks to balance cultural enrichment, tourism, and environmental stewardship, aligning with the municipality's objectives of enabling appropriate rural investment while conserving the broader landscape character. **See Appendix B1 for the Preferred alternative.**

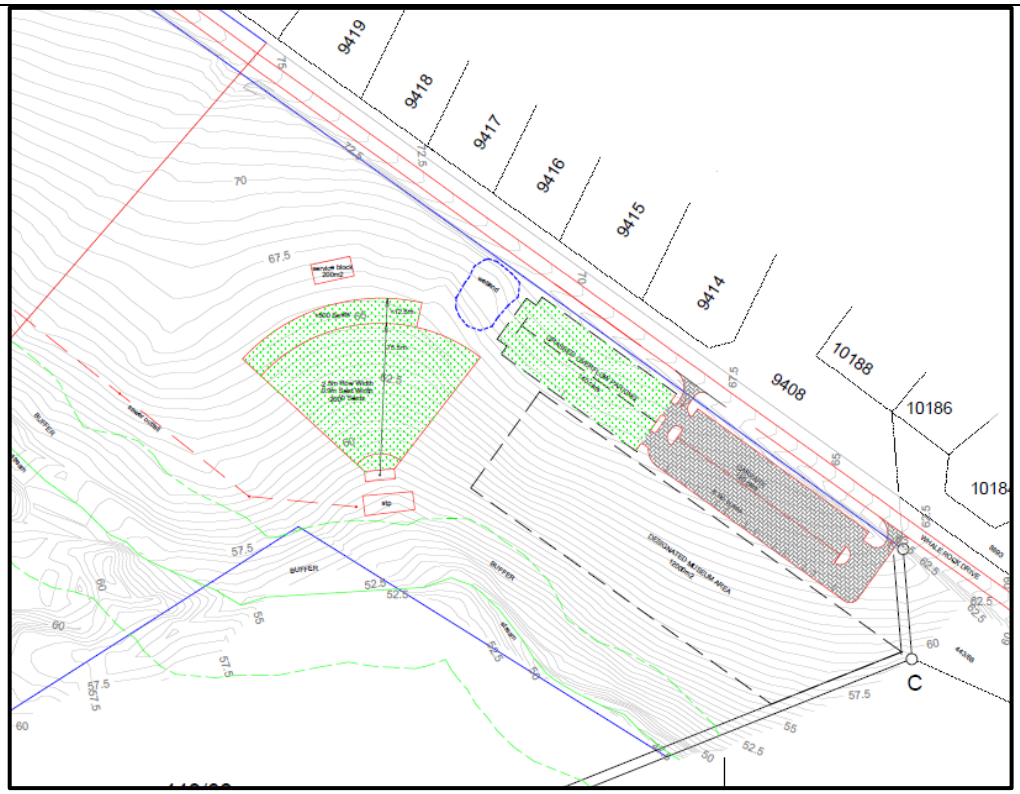

Figure 3: 1st Draft for the Museum of Mankind and amphitheatre on Portion 62

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.

All three the farm portions are currently zoned "Agriculture I".
The rezoning will be from Agriculture I to General Residential Zone I (Portion 59) and Open space Zone III (Portions 62 and 63). The application for rezoning is pending.

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.

In order to implement the proposed development, the following rezoning is required:

- Portion 59 will be rezoned to "General Residential Zone I"
- Portions 62 & 63 will be rezoned to "Open Space Zone III"

Each proposed zoning is discussed below in terms of purpose, permitted uses, definitions and development parameters as contained in the Bitou Zoning Scheme By-law, 2023:

Proposed Rezoning and Land Use Framework

The proposed development includes rezoning to **General Residential Zone I** to accommodate a **retirement complex** in the form of a coordinated group housing development. The objective of this zone is to promote medium-density residential development with an integrated and aesthetically cohesive layout, where architectural design and the relationship between units and shared spaces are carefully considered.

The primary land use, **Group/Town Housing**, comprises a series of individual dwelling units designed as a unified architectural entity. These units are integrated with communal open spaces, internal roads, and parking areas, and may include associated facilities that support the residential development. The proposed retirement resort aligns with this definition and will function as a single, well-planned group housing site.

In addition, the zoning provides for **consent use** as a *Home for the Aged*, allowing for accommodation of retirees, including associated facilities such as a frail care component. This supports the intended function

of the development as a retirement complex, while remaining consistent with the broader residential character of the zone.

Overall, the rezoning facilitates a structured and integrated residential development that caters specifically to retirees, ensuring compatibility with the surrounding area and adherence to the municipality's planning and design objectives.

<table>
<tr><th colspan="2">DEVELOPMENT PARAMETERS FOR THE GROUP HOUSING ZONE (Retirement Complex)</th></tr>
<tr><td>Development Parameter</td><td>Compliance</td></tr>
<tr><td>(a) Design principles
All buildings and structures must be planned, designed and built as a harmonious architectural entity, and special attention must be given to aesthetics, architectural coordination, urban design and landscaping.</td><td>It is the intention that all the units will be constructed by the developer and will be in a similar architectural style.</td></tr>
<tr><td>(b) Density
The maximum gross density in any zone is 35 dwelling units per hectare</td><td>Portion 59 measures ±13,27ha and ±121 units are proposed. This calculates to a development density of 9.2units per ha.</td></tr>
<tr><td>(c) Height
(i) The height of dwelling units may not exceed 8,5 metres;
(ii) The general provisions regarding earth banks and retaining structures in this By-law apply.

Unless the prior approval of the Municipality has been obtained—
(a) No earth bank or retaining structure used for holding back earth or loose rock, whether associated with a building or not, may be constructed to a height of more than 2m above natural ground level; and
(b) No series of earth banks or retaining structures may be constructed to a cumulative height of more than 2,5 metres above natural ground level, unless an approximately level area of at least 2 metres wide is incorporated between successive.</td><td>To protect view lines, dwelling height will be limited to ±5m above natural ground level (to be advised by architectural design and visual impact assessment).

The gentle slope of the land will not require earth banks of this nature on Portion 59. Steeper slopes in the vicinity of the Museum of mankind need to be considered in the design of the building and amphitheatre</td></tr>
<tr><td>(d) Open space
Outdoor space must be provided to the satisfaction of the Municipality</td><td>The conceptual design envisages a large tract of natural vegetation between the homes.</td></tr>
<tr><td>(e) Building lines along the perimeter of a group/town housing site
(i) a street boundary building line of 5 metres applies.
(ii) side and rear boundary building lines are 3 metres.</td><td>Currently, the layout allows for a building setback of at least 10m from the proposed Whale Rock Drive, which will allow a landscape buffer between the development and the road.

Side building lines of at least 5m will be observed, which will also function as fire breaks.</td></tr>
<tr><td>(f) Building lines within a group/town housing site
(i) street boundary building lines on internal roads are 0 metres.
(ii) side and rear boundary building lines within the group housing site are 0 metres…</td><td>The development will not contain any internal cadastral boundaries as the ownership concept is based on the life rights principle.</td></tr>
<tr><td>(g) Parking and access
Parking and access must be provided in accordance with the requirements of this By-law.
<table>
<tr><th colspan="2">PARKING RATIO FOR RETIREMENT RESORTS</th></tr>
<tr><td>Dwelling unit</td><td>2bays/du + 0.25 bays/unit for Visitors</td></tr>
<tr><td>Home for the aged</td><td rowspan="2">0,5 bays per bedroom</td></tr>
<tr><td>Frail Care</td></tr>
</table></td><td>Each unit will have a double garage. There will be space for guests to park in front of the garages as well as parking at the main building.</td></tr>
<tr><td>(h) Site development plan
A site development plan shall be submitted to the Municipality for approval.</td><td>A conceptual site development plan is available, and a final Site Development plan will be submitted for approval once all authorisations have been obtained and final designs are available.</td></tr>
<tr><td>(i) Service yard
Service yard(s) must be provided.</td><td>Each unit must include a dedicated, screened service yard for washing lines, water tanks, gas bottles and other visually intrusive utilities. These</td></tr>
</table>

	areas must be integrated into the architectural design to prevent visibility from streets, communal spaces and neighbouring units, ensuring a neat and consistent appearance while providing functional service space.
(j) Refuse room A refuse room must be provided.	A central refuse collection area will be provided near the main entrance, from where waste can be accessed and collected by the municipality. The estate will collect private waste from individual homes on waste collection days.

Open Space III: Museum of Mankind and associated tourism facilities:
Portions 62 and 63 are proposed to be rezoned to **Open Space III (Nature Conservation Area)** to ensure long-term protection of the natural landscape and biodiversity. This zoning provides for non-statutory conservation aimed at preserving the site's biophysical characteristics, including indigenous flora and fauna. The landowner is also in the process of incorporating these portions into the Robberg Coastal Corridor, further strengthening the conservation objective.

The primary land use within this zone is conservation; however, a limited range of **consent uses** is permitted to support low-impact tourism and environmental education. The proposed *Museum of Mankind* development will be accommodated through consent uses, specifically **Environmental Facilities**, **Tourist Facilities**, and **Holiday Accommodation**. These uses collectively allow for the inclusion of a boutique hotel, restaurant, grassed amphitheatre, and associated tourism infrastructure, provided they remain compatible with the conservation objectives.

Development within the zone will be strictly controlled by the Municipality through the determination of site-specific development parameters, informed by the zoning objectives and, where required, an approved Environmental Management Plan (EMP). A **Site Development Plan (SDP)** will be mandatory prior to any development approval and will define layout, design, landscaping, and development constraints.

Overall, the proposed rezoning enables a balance between conservation and carefully managed tourism development, ensuring that the natural environment is protected while allowing for appropriate, low-impact land uses.

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

The Western Cape Government Spatial Development Framework (PSDF), prepared in terms of the Western Cape Land Use Planning Act, remains the applicable provincial spatial policy, as the updated framework has not yet been adopted. The PSDF promotes a balance between economic development and the protection of environmental assets, particularly along the Garden Route where tourism and natural landscapes are key economic drivers.

The proposed development is consistent with these objectives, as it focuses on previously disturbed areas while enabling the conservation of significant portions of the site through integration into the Robberg Coastal Corridor. This approach supports the strengthening of ecological networks alongside sustainable development, in line with provincial spatial planning principles.

4.2	The **Integrated Development Plan** of the local municipality.

The site is located within a transitional peri-urban landscape where residential, conservation, tourism and service-related land uses already coexist. To the northeast, Whale Rock Estate represents a high-value, low-density residential area forming the current urban edge. The proposed retirement resort is aligned with this established character, maintaining a low-density, high-end estate form with a limited visual profile and substantial open space, ensuring compatibility with the surrounding context.

To the south and east, land is largely undeveloped and conservation-oriented, forming part of the Robberg Coastal Corridor, with the Robberg Nature Reserve located nearby as a key tourism asset. The proposed

Museum of Mankind complements this setting by enhancing the educational and cultural tourism offering, strengthening the link between conservation, heritage and local economic activity.

To the west, land uses transition toward infrastructure and mixed rural activities, including the Plettenberg Bay Airport and surrounding smallholdings characterised by tourism, light industrial and service-related uses. The site is therefore not isolated, but forms part of an established mixed-use corridor.

Overall, the proposal integrates with existing land uses rather than extending development into undisturbed areas. The inclusion of Portions 62 and 63 into the Robberg Coastal Corridor will establish a permanent conservation buffer, reinforcing a defined settlement edge and supporting long-term spatial planning objectives.

4.3.	The **Spatial Development Framework** of the local municipality.

The protection of natural resources is central to the **Bitou Local Municipality** economy, as both tourism and agriculture are resource-based sectors. The Bitou Spatial Development Framework (SDF) establishes an urban edge to manage urban sprawl. While a portion of Portion 59 falls within this edge (though earmarked for conservation), the remainder of Portion 59, as well as Portions 62 and 63, lie outside the edge and are designated for agricultural or conservation purposes. However, the SDF's infrastructure master planning identifies these properties as future urban areas.

The SDF further notes that the urban edge is a conceptual growth management tool rather than a fixed statutory boundary, and that development adjacent to it may be considered consistent if the land has historically been identified for urban use. In this case, previous planning frameworks and municipal service master plans have included all three portions for urban development, supporting the view that the proposed development aligns with the SDF.

In addition, although a portion of Portion 59 falls within an airport noise contour, the area is simultaneously identified as a priority residential growth zone (Strategic Development Area 13). This reflects a deliberate municipal approach to accommodate urban expansion near the airport, with the noise contour acting as a compatibility indicator rather than a constraint, requiring appropriate mitigation and disclosure rather than prohibiting development.

4.4.	The **Environmental Management Framework** applicable to the area.

The **Garden Route Environmental Management Framework** (EMF) provides a strategic, spatially explicit tool to guide sustainable development by identifying environmental sensitivities, constraints and opportunities across the region. It supports informed decision-making by indicating areas of higher ecological importance where development should be avoided or carefully managed, as well as areas where development may be more appropriate subject to mitigation.

In the context of the proposed development, the EMF reinforces the importance of protecting ecological corridors and sensitive coastal systems, particularly within the Garden Route. The proposal is aligned with these objectives by concentrating development within previously disturbed areas and incorporating Portions 62 and 63 into the Robberg Coastal Corridor, thereby strengthening ecological connectivity and securing long-term conservation outcomes.

Furthermore, the EMF recognises the need to balance environmental protection with socio-economic development in areas already influenced by urban, tourism and service-related activities. Given the site's location within a mixed-use peri-urban corridor, and the integration of appropriate mitigation and specialist input, the proposed development can be considered consistent with the EMF's objective of promoting sustainable, context-sensitive development while maintaining critical environmental infrastructure.

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

Specialist ecological assessments, including work by Jan Vlok, confirm that Portions 59, 62 and 63 comprise a combination of historically transformed areas and remaining natural habitat. The proposed development responds by directing the residential component and museum infrastructure to previously disturbed, low-sensitivity areas on Portion 59 and Portion 62, while retaining and protecting ecologically important areas. Final development footprints will be refined through updated ecological verification prior to submission of the Final BAR.

Geotechnical investigations indicate that the site is generally suitable for low-rise development, with stable residual soils derived from weathered sandstone underlying most of the property. Only a central low-lying basin associated with historical disturbance and poor drainage is unsuitable for development, while the remainder can be developed using standard engineering practices. Soils vary across the site and, although some areas were historically cultivated, no formal agricultural capability assessment has been undertaken and may still be required.

Archaeological studies by John Pether and Arthur Archer, 2012 identified the broader landscape as part of a significant Early Stone Age context. However, artefacts within the proposed development areas are sparse, disturbed and of low integrity, and no mitigation is required. The development avoids high-sensitivity heritage areas and instead aims to complement and interpret the cultural landscape, with final placement to be confirmed through an updated Heritage Impact Assessment.

In terms of services, no municipal bulk water supply is available from the Bitou Local Municipality, necessitating a self-sufficient on-site water solution. Hydrogeological investigations confirm that the site is underlain by a productive fractured quartzite aquifer capable of supporting groundwater abstraction. While the existing borehole yield is insufficient on its own, additional boreholes are expected to provide adequate supply to meet the projected demand of approximately 5 400 litres per hour, supported by favourable regional groundwater conditions.

Aquatic assessments indicate that no perennial rivers or wetlands occur on the site. Instead, a network of non-perennial drainage lines conveys episodic stormwater during rainfall events and functions primarily as ecological corridors. Development is considered feasible provided that these features are protected through appropriate buffer zones and stormwater management measures, ensuring that hydrological and ecological processes are maintained.

All of the above were considered when the proposed site development plan was compiled.

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

The Western Cape Biodiversity Spatial Plan (2023) identifies Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) as key spatial priorities to safeguard ecological functioning and biodiversity. While the plan serves as a decision-support tool and does not confer or remove development rights, CBA designation highlights the need for careful consideration of biodiversity impacts and guides environmental assessments toward avoidance, mitigation or compensation in sensitive areas.

Although portions of Portion 59 and most of Portions 62 and 63 are mapped as CBAs, historical aerial imagery and specialist assessments indicate that these areas are already transformed. A site-specific ecological assessment therefore refined the CBA boundaries and informed the proposed development areas. This approach is consistent with the intent of the biodiversity plan, which emphasises the interpretation of provincial mapping alongside current on-site conditions when evaluating development proposals.

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

Most of Portion 59 falls outside the Coastal Protection zone as determined by ICMA as 1000m for sites outside the urban edge. Most of Portions 62 and 63 falls within the **Coastal Protections Zone** (CPZ) and care will be taken that stormwater released into the drainage lines will not cause any erosion of the Coastal zone.

The proposed development is not within the Coastal management area or 100 meters from the high-water mark of the sea, which falls within the CPZ (**See Appendix A2**).

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.

No Changes, as this is only the Pre-application phase. **See Appendix I1 for the Screening Tool Report and Appendix I2 for the Site Sensitivity Verification report.**

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

N/A

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

No municipal water supply is currently available to the site and the proposed development will have to make use of groundwater.

No municipal sewer connection is available at present. Sewerage will therefore be treated via an on-site package sewage treatment plant designed to meet Department of Water and Sanitation general discharge standards.

The existing dwelling on Portion 63 is connected to Eskom power and it is the intention to connect to Eskom Powe as a back-up, but the development has been planned to operate largely off-grid, with the intention that approximately 90% of its electrical demand will be met through on-site renewable energy generation.

11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity.

(Confirmation of all services will be included in Appendix E16 of the Draft Basic Assessment Report).

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 Bitou Local Municipality Spatial Development Framework (2022) indicates a growing and ageing population, with approximately 4,881 residents aged 65 and older in 2023 and an annual population growth rate of 3.8%. Current formal retirement accommodation in Plettenberg Bay provides for only about 14% of this age group, highlighting a clear gap between existing supply and demand.

By 2040, the retirement-age population is projected to reach around 9,200 people, creating demand for approximately 920 retirement units based on current uptake trends. Existing and planned supply, including the proposed 121 units, remains well below this level. In addition, ongoing semigration to Plettenberg Bay as a coastal lifestyle destination is likely to further increase demand. The proposed development therefore represents a necessary and proportionate response to demonstrated need, supporting long-term planning objectives without resulting in oversupply.

In addition, the site forms part of a regionally significant early stone age landscape, yet Plettenberg bay currently lacks a dedicated facility to interpret and showcase this heritage. The proposed museum of mankind addresses this gap by introducing a permanent cultural and educational attraction that diversifies the tourism offering, supports year-round economic activity, and strengthens the town's position within the garden route as a destination for heritage and knowledge-based tourism.

Appendix K will be appended in the Draft BAR.

SECTION F: PUBLIC PARTICIPATION – This section will be filled in after the Public participation period has lapsed.

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.~~

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

   See the I&AP list in Appendix F – they will be notified of the Pre-application process.

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

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

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.

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	**YES**	NO
1.2.	Provide the name and or company who conducted the specialist study.		
Groundwater investigation and borehole siting by GlobiWell, November 2025 (Mr. R. van Jaarsveld, Hydrogeologist).			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
The study area comprises three main geological formations, namely the Peninsula, Enon and Wankoe Formations. Hydrogeological investigations identified two primary aquifers: a low-yield, brackish aquifer associated with the Enon Formation, and a more productive, good-quality aquifer within the fractured quartzites of the Peninsula Formation. Due to its higher yield and better water quality, the **Peninsula Formation aquifer** has been identified as the preferred source to support the proposed development's water requirements (See **Appendix G4**).			

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.
To be included in the Draft BAR after further studies that must be finalised.	

2. Surface water

2.1.	Was a specialist study conducted?	**YES**	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
Aquatic Site Sensitivity and Baseline Verification report of 21 January 2026 and Aquatic biodiversity impact assessment of 1 March 2026 by **Debbie and Colin Fordham** from **Upstream Consulting.**			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development. See **Appendix G3** for the Aquatic Reports.		

The Aquatic Ecosystem study found that the broader property contains several **non-perennial drainage lines and seepage features**, which form part of the greater coastal catchment system west of Robberg Nature Reserve.

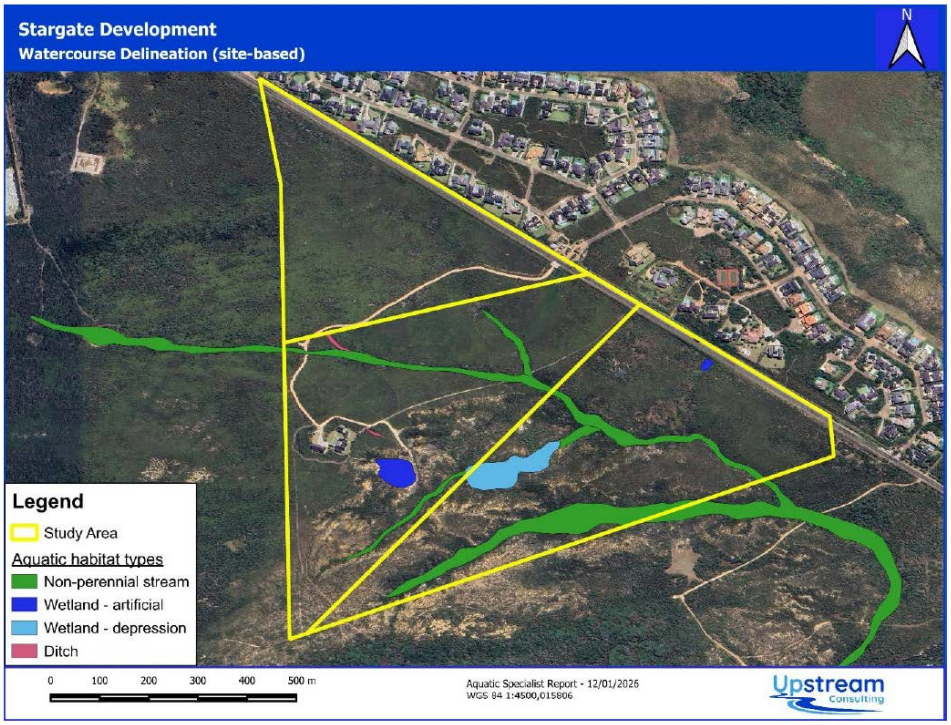

Figure 4: Map showing the Aquatic resources on the 3 portions

Aquatic features identified on site include:

- Ephemeral drainage lines;
- Channelled valley-bottom features;
- Seepage areas associated with sandy soils;
- Disturbed historical drainage modifications linked to past land use.

Buffers were determined for the Non-perennial Stream and artificial wetland that will be near the proposed development and care was taken during the design phase to exclude these aquatic resources and buffers from the proposed development.

For **Alternative 1** the calculated 26m and 29m buffers were adhered to, but for the **Preferred alternative** the regulated 32m buffer zones were excluded from the proposed development, especially as it relates to the sewage treatment package plant and sewage network on site.

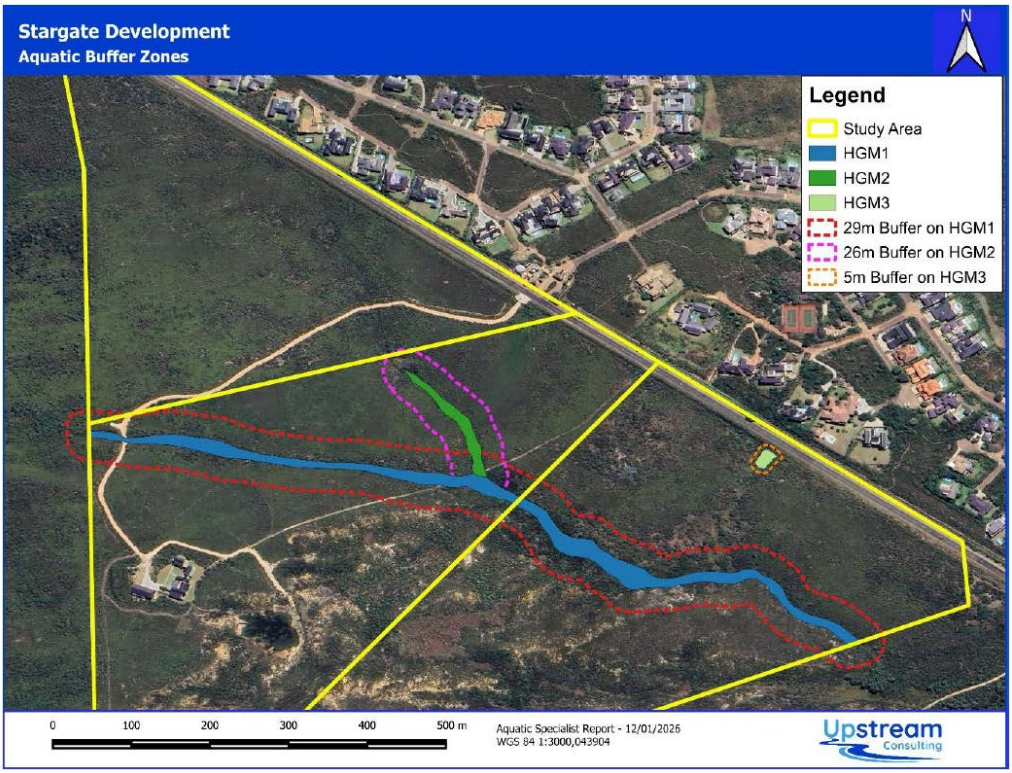

Figure 5: Map showing the aquatic resources near the proposed development and the calculated buffers as prescribed by the aquatic specialist.

These features ultimately contribute to downstream coastal systems but are not classified as permanently flowing rivers. Importantly, the proposed development footprints have been positioned to **avoid direct encroachment into delineated aquatic features**, with recommended buffers applied. The following mitigation measures are proposed:

- Strict adherence to delineated aquatic buffers;
- Implementation of an approved Stormwater Management Plan;
- Erosion and sediment control during construction;
- No stockpiling or refuelling within buffer areas;
- Alien vegetation control and rehabilitation with indigenous species;
- Ongoing monitoring during construction.

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	**NO**
3.2.	Provide the name and/or company who conducted the specialist study.		

The Aquatic study done by **Colin Fordham** of **Upstream consulting** verified potential impacts associated with the coastal environment as seen in **Appendix G3**. This study makes the following statements:

Aquatic features identified on site include:

- Ephemeral drainage lines;
- Channelled valley-bottom features;
- Seepage areas associated with sandy soils;
- Disturbed historical drainage modifications linked to past land use.

These features ultimately contribute to downstream coastal systems but are not classified as permanently flowing rivers.

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.

The 1 000 m Coastal Protection Zone extends across Portion 63, with Portion 62 located entirely within this zone. Although the proposed development is situated more than 600 m from the coastline, potential erosion impacts on drainage lines flowing toward the coast will be considered. These drainage lines are non-perennial, and the detailed design phase will incorporate appropriate stormwater management and sewage treatment measures in accordance with the requirements of the Integrated Coastal Management Act.

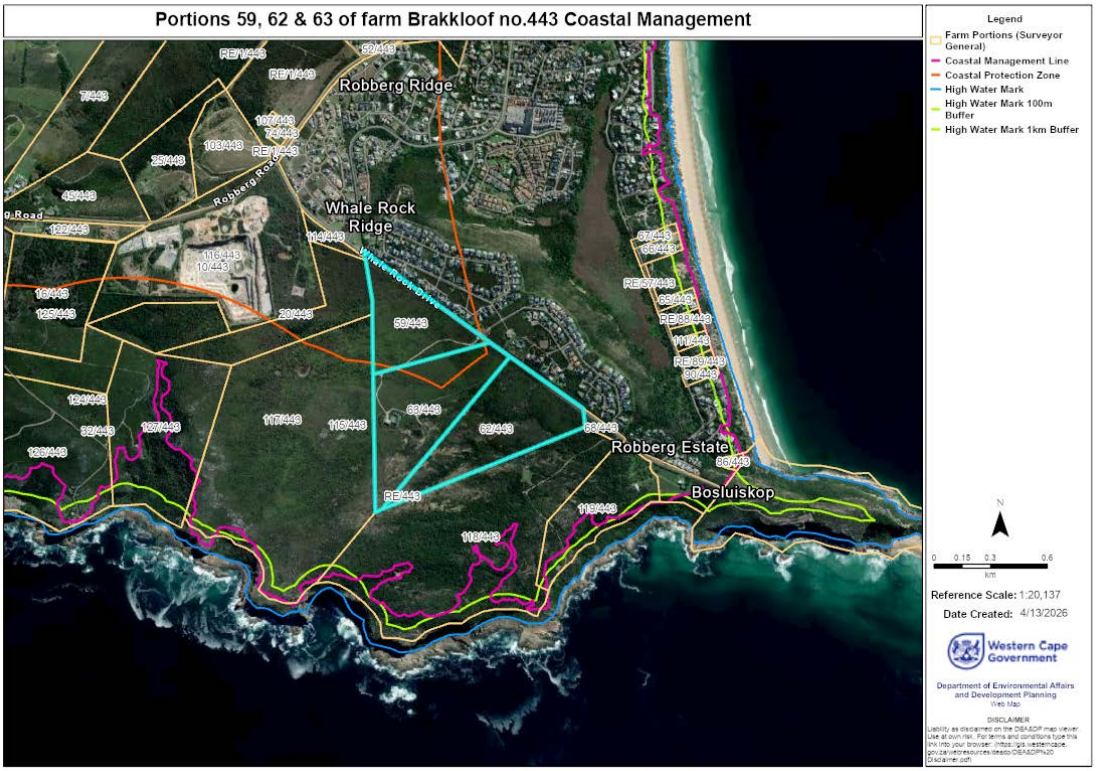

Figure 6: Map generated from DEA&DP coastal risk zones, showing the ICMA zones for the 3 properties

The Aquatic study (Appendix G3) identified a network of non-perennial drainage features and artificial wetland areas that function primarily as episodic stormwater conveyance systems linked to the coastal environment. The HGM1 watercourse is the main drainage line within the study area. It originates upslope, near the operational quarry off Robberg Road, and flows through the properties to the sea. It is classified as an episodic stream. Its primary functional role is the attenuation and conveyance of stormwater runoff from the upper catchments (including areas transformed by historical agriculture and upslope development) toward the coastal littoral zone.

Despite the lack of permanent water, HGM 1 (see Figure 7) is still a significant aquatic feature on site from a functional perspective as it provides a longitudinal ecological corridor to and from the coast.

While the site falls within the K60G DWS quaternary catchment, it is hydrologically disconnected from any major inland river systems. Instead, surface drainage terminates after a short distance within the coastal littoral zone. Despite this lack of connectivity to larger fluvial networks, the drainage lines perform a critical role in regional catchment-to-coast regulation and landscape connectivity. They serve as essential longitudinal corridors, providing natural pathways for the movement of biota between the inland fynbos plateaus and the coastal zone. Consequently, the conservation value of the site is not derived from perennial “high flow” river dynamics, but from its functional role as a biological and hydrological link within the coastal landscape.

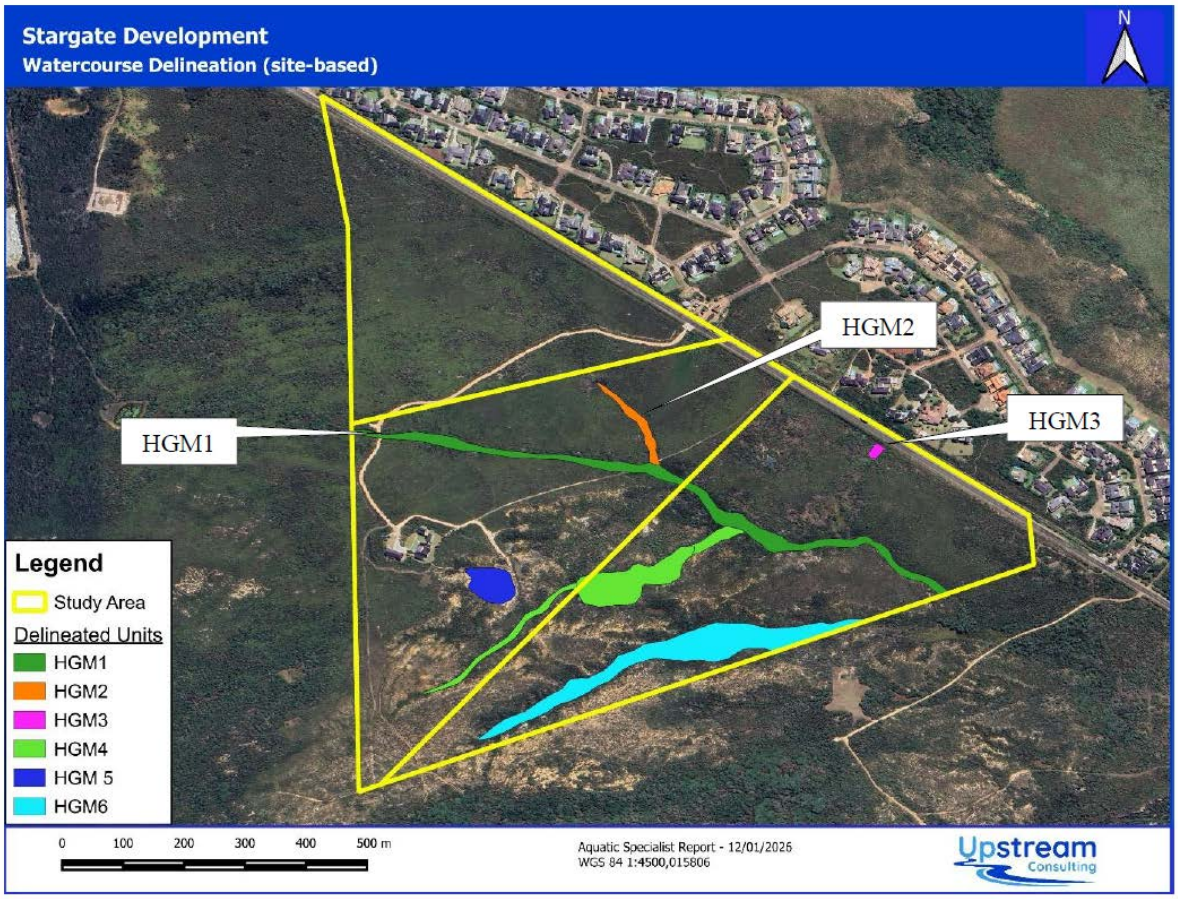

Figure 7: Map showing the identified HGM delineated units on site.

Mitigation Measures:

Mitigation measures will be implemented to minimise potential impacts on the Coastal Protection Zone and associated aquatic systems (refer to **Appendix G3**). These measures focus on maintaining ecological integrity, reducing erosion risk, and protecting water quality during both the construction and operational phases:

- A comprehensive **stormwater management plan**, incorporating Sustainable Urban Drainage Systems (SUDS), will be developed during the design phase. This will ensure that stormwater runoff is effectively managed to reduce volume and velocity, prevent contamination, and avoid erosion of natural systems. Preference will be given to **soft engineering solutions**, such as permeable surfaces, swales, and infiltration channels, which promote filtration, attenuation, and reduced flow energy. Discharge structures will be carefully designed to prevent concentrated flows into sensitive or unstable areas.
- Long-term monitoring will be undertaken to assess **hydrological behaviour, erosion potential, and water quality**, ensuring the continued stability and functioning of HGM units and associated ecosystem services. In addition, a robust **wastewater treatment system** will be implemented to ensure effective and reliable treatment of sewage.
- Vegetation clearing will be minimised and limited to essential development areas, with natural buffers retained where possible. Ongoing **alien invasive species control** will be undertaken, with appropriate methods to prevent re-infestation and avoid impacts on indigenous vegetation. During construction, **erosion and sediment control measures** (e.g. silt fences, berms, and sediment traps) will be installed, and all exposed soils will be stabilised promptly using appropriate techniques such as mulching, geotextiles, or indigenous seeding.

Collectively, these measures will ensure that the development remains compatible with the objectives of the Coastal Protection Zone by safeguarding ecological processes and minimising environmental degradation.

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 – **See Appendix A2**

4. Biodiversity

4.1.	Were specialist studies conducted?	**YES**	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
1. Terrestrial Plant Species Compliance Statement for portions 59, 62 and 63 of Brakkloof 443, Plettenberg Bay by Regalis Environmental Services (Jan Vlok) dated December 2009 and updated March 2026. 2. Animal Species & Terrestrial Biodiversity Assessment for portions 59, 62 and 63 of Brakkloof 443, Plettenberg Bay by Blue Skies Research (Dr Jaco Visser) dated November 2026.			
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.		

See the Site Sensitivity Verification Report Attached as **Appendix I2.**

According to the 2024 national vegetation map the Portion 59 consists of mostly of South Outeniqua Sandstone Fynbos (status = Least Concerned) and most of Portions 62 and 63 as Knysna Sand Fynbos (status = Critically Endangered), see Figure 8.

Ecological Threat Status:
According to the SANBI red list of threatened ecosystem status, Portions 62 and 63 is mapped to include the Endangered Knysna Sand Fynbos and Portion 59 falls mostly in the Least Threatened South Outeniqua Sandstone Fynbos.

The Fauna and Flora reports respectively found that the vegetation of the proposed development footprint area represent only South Outeniqua Sandstone Fynbos that is classified as Least Threatened and there were no SCC species found within these areas. The inclusion of Knysna Sand Fynbos is therefore a mapping mistake due to the coarse scale of the national vegetation types.

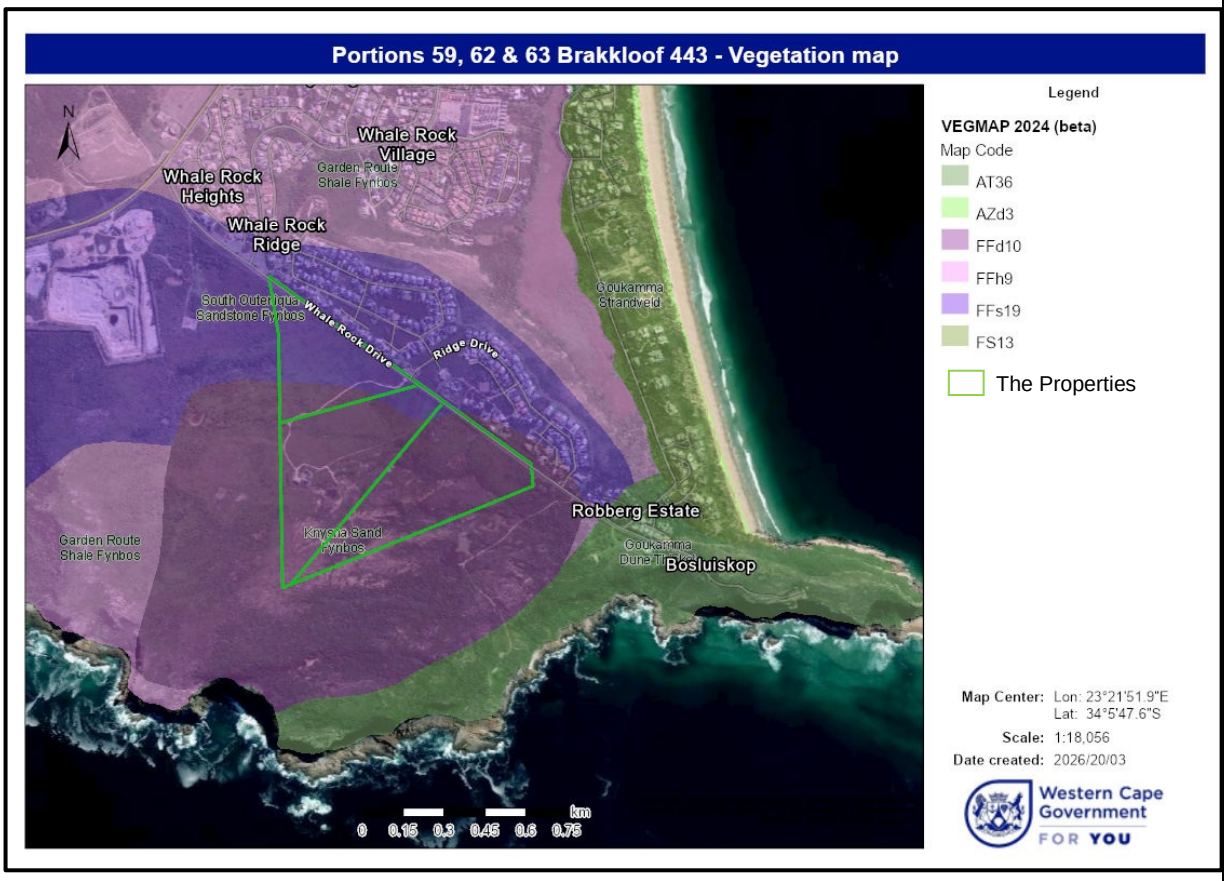

Figure 8: Vegetation map 2024 – Garden Route Granite Fynbos

Critical Biodiversity Areas:

The Western Cape Biodiversity Spatial Plan, 2023 identifies most of the study site as terrestrial Critical Biodiversity Areas (CBAs), including areas classified as CBA 1 (maintain), CBA 2 (restore), ESA 1 (Aquatic) and ESA1 (Terrestrial). These designations reflect the ecological importance of the site and surrounding landscape at a regional scale as a result of the mapped Critically Endangered Knysna Sand Fynbos.

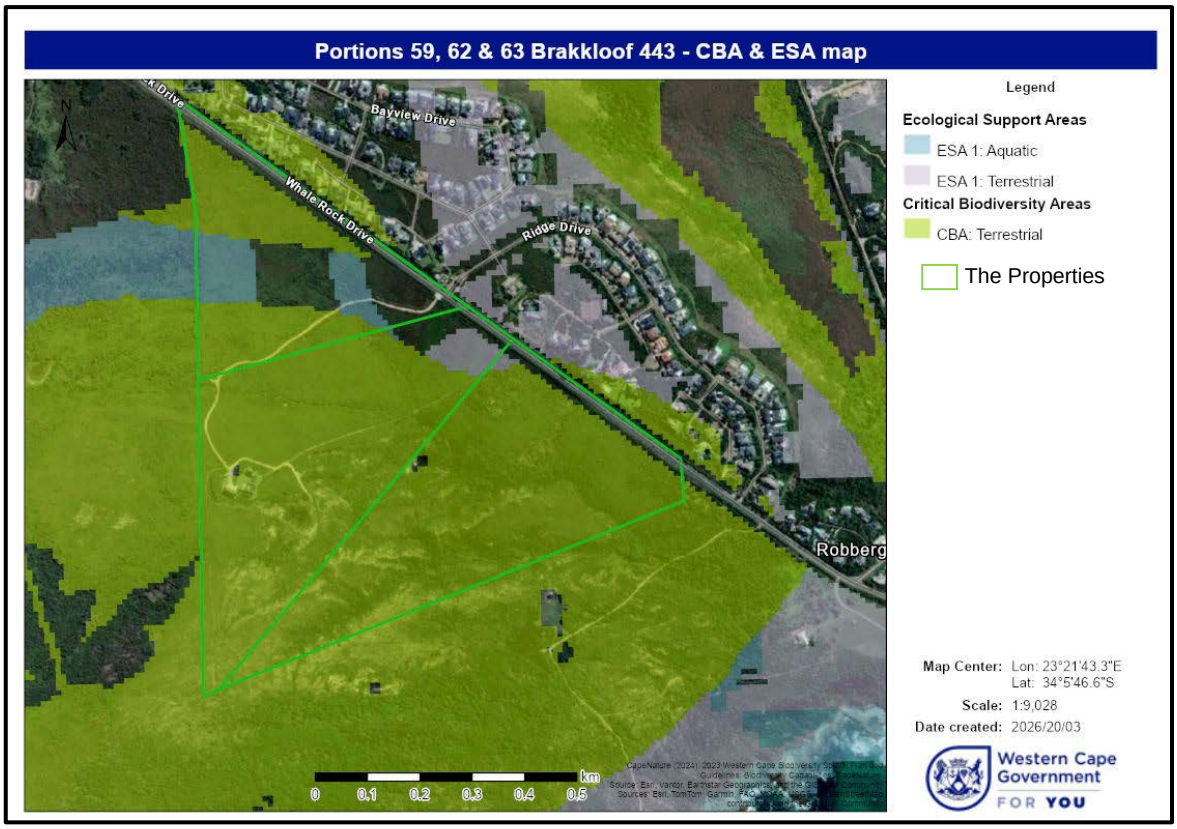

Figure 9: Ecosystem Threat Status as determined by the WCBSP, 2023

Category 1:	CBA: Terrestrial
Category 2:	CBA: Threatened Ecosystem (Knysna Sand Fynbos)
Definition:	Areas in a natural condition that are required to meet biodiversity targets, for pecies, ecosystems or ecological processes and infrastructure.
Objective:	Maintain in a natural or near-natural state, with no further loss of natural habitat. legraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land ses are appropriate.

Category 1:	ESA 1: Aquatic (Surface water source)
Category 2:	ESA 1: Terrestrial (Coastal Corridor)
Definition:	Areas that are not essential for meeting biodiversity targets, but that play an nportant role in supporting the functioning of PAs or CBAs, and are often vital for elivering ecosystem services.
Objective:	Maintain in a functional, near-natural state. Some habitat loss is acceptable, rovided the underlying biodiversity objectives and ecological functioning are not ompromised.

The Fauna and flora reports respectively found that the vegetation of the proposed development area represent South Outeniqua Sandstone Fynbos that is classified as Least Threatened and there were no SCC species found within these areas. The inclusion of the historically disturbed areas on the three

farm portions within the CBA areas is probably a mistake associated with the Endangered Knysna Sand Fynbos that is mapped incorrectly. **See Appendices G1 and G2.**

Aquatic Ecosystem assessment:
Review of available National Geo-spatial Information (NGI) and Department of Agriculture, Land Reform and Rural Development (DALRRD) as well as the Department of Water and Sanitation (DWS) datasets indicates that there are some non - perennial watercourses running through the centre of Portions 62 and 63 and an artificial wetland on the boundary next to Whale Rock Drive (as a result of stormwater from the north).

An aquatic specialist study delineated the aquatic watercourses and determined buffers for the non-perennial rivers. They confirmed that the proposed development falls outside the buffer zones of these watercourses and will have limited impact on them, but these can be mitigated. **See Appendix G3.**

Cape Farm mapper with all the relevant datasets mapped a small area on the western boundary of Portion 59 as Outeniqua Strategic Water Source area for groundwater, but the Aquatic specialists confirmed that there are no groundwater sources in the vicinity of the SWSA and that the mapping is as a result of broad scale regional mapping and not relevant to the study site.

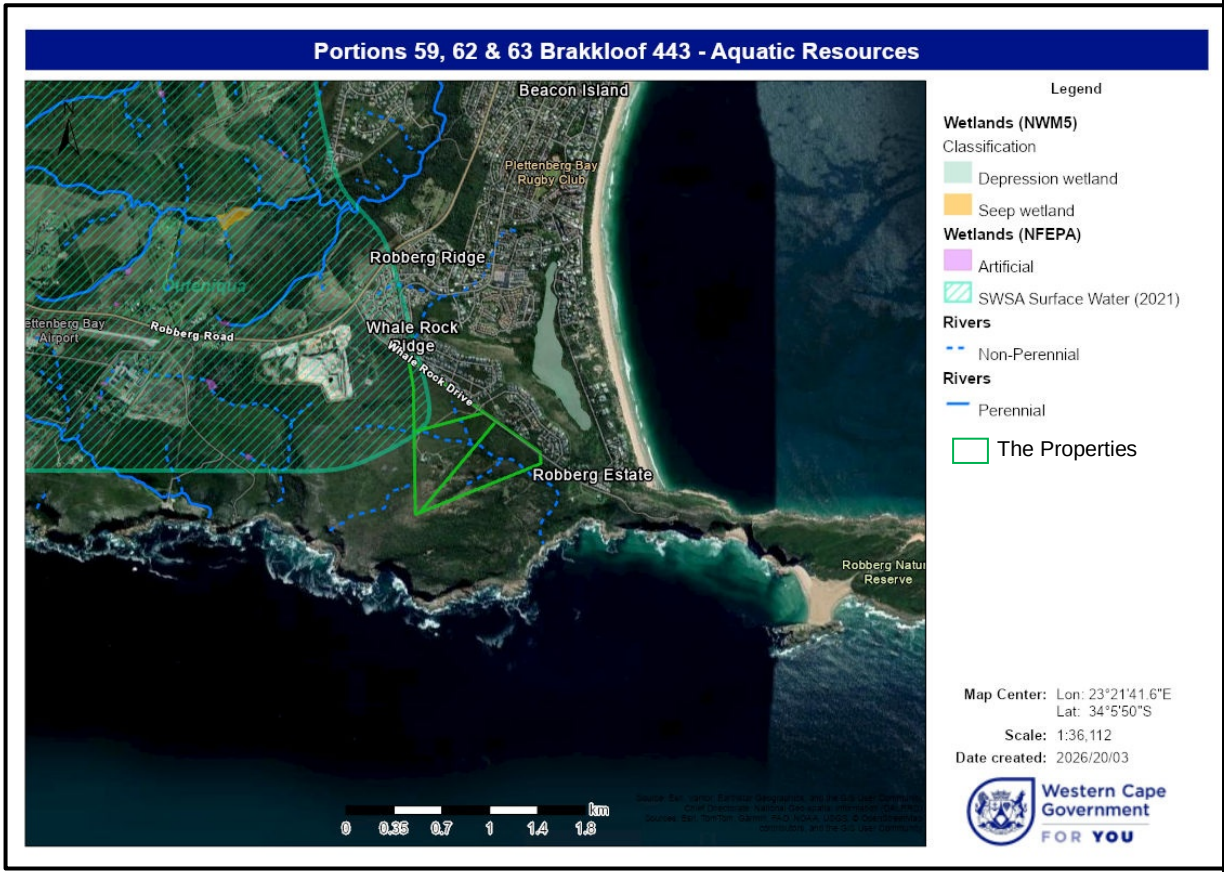

Figure 10: Water resources according designated by Geo-spatial Information (NGI) of the Department of Agriculture, Land Reform and Rural Development (DALRRD)

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 Western Cape Biodiversity Spatial Plan (2023) identifies Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) as key spatial priorities to safeguard ecological functioning and biodiversity. The CBA designation highlights the need for careful consideration of biodiversity impacts and guides environmental assessments toward avoidance, mitigation or compensation in sensitive areas.

Although portions of Portion 59 and most of Portions 62 and 63 are mapped as CBAs, historical aerial imagery and specialist assessments indicate that these areas are already transformed. A site-specific ecological assessment therefore refined the CBA boundaries and informed the proposed development areas. This approach is consistent with the intent of the biodiversity plan, which emphasises the interpretation of provincial mapping alongside current on-site conditions when evaluating development proposals.

Regarding the local and regional botanical conservation value and sensitivity of the affected vegetation on the properties the Specialist's general findings were as follows (**Appendix G1**):

- The vegetation on site is best classified as **South Outeniqua Sandstone Fynbos**, which is currently of **Least Concern** conservation status, and not Knysna Sand Fynbos as previously mapped.
- Large portions of the site have been **historically transformed** through agriculture, mining activities, and alien vegetation invasion, resulting in **low ecological integrity** in the proposed development areas.
- No **species of conservation concern** were recorded or are likely to occur within these areas.
- Furthermore, mapped **Critical Biodiversity Areas (CBAs)** within the development footprint are considered to be inaccurately delineated and of limited ecological significance. As a result, both the **botanical sensitivity and terrestrial biodiversity value** of the proposed development areas are regarded as **low**, and the development is not expected to result in significant impacts on threatened species, vegetation types, or key ecological processes.

Regarding important ecological processes operating in the general area and potential ecological corridor value of the affected vegetation, the findings were as follows:

Although the broader area is situated within a region of conservation importance, the proposed development areas are largely located on **disturbed and transformed land** along the periphery of the properties, thereby limiting their role in maintaining key ecological processes. The development footprint will not compromise critical processes such as **fire regimes**, provided that appropriate fire management measures are implemented. While transformed areas have reduced intrinsic conservation value, they may still contribute to broader ecological functioning at a landscape level. Importantly, the **retention and formal conservation of the undeveloped portions** of the properties, including their incorporation into the Robberg Conservation Corridor, will ensure the continued support of ecological connectivity and processes in the area. Overall, the proposed development is not expected to result in significant disruption of ecological processes or corridor functionality.

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.

Most of the three properties have been mapped as CBA 1 and 2 areas as well as ESA1 areas, but after site assessments done by the fauna and flora specialists, it was clear that Portion 59 was historically ploughed and the secondary vegetation is not considered Knysna Sand fynbos and is therefore of low sensitivity. The northeastern section of Portion 62 was also heavily invested by Alien invasive species and the secondary growth has a low sensitivity as it does not contain Knysna Sand Fynbos species.

Therefore, the areas of low sensitivity as determined by the Fauna, Flora and Aquatic specialists were set out for the proposed development.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.

The site is located within the Garden Route National Park buffer zone. The **retention and formal conservation of the undeveloped sections of Portions 62 and 63**, including their incorporation into the Robberg Conservation Corridor, will ensure the continued support of ecological connectivity and processes in the area. Overall, the proposed development is not expected to result in significant disruption of ecological processes or corridor functionality. The proposed development is therefore considered to be aligned with the principles and objectives of the buffer zone.

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

According to the Animal Species & Terrestrial Biodiversity Assessment the sensitive animals identified by means of the screening tool are not considered likely to occur on the study site.

The terrestrial faunal and avifaunal assessment concludes that:

- The proposed development footprints are of Low ecological sensitivity from a faunal perspective;
- No Species of Conservation Concern will be directly impacted;
- Development areas have been appropriately located within previously transformed portions of the property; and
- With recommended mitigation measures, the proposed development is unlikely to result in significant adverse impacts on terrestrial fauna or avifauna.

Nevertheless, after discussions with Cape Nature regarding the inclusion of the remainder of Portions 62 and 63 into the Robberg Conservation corridor (RCC), the Museum of Mankind was moved 30m from the boundary to provide a movement corridor for small mammals and invertebrates (Figure 11).

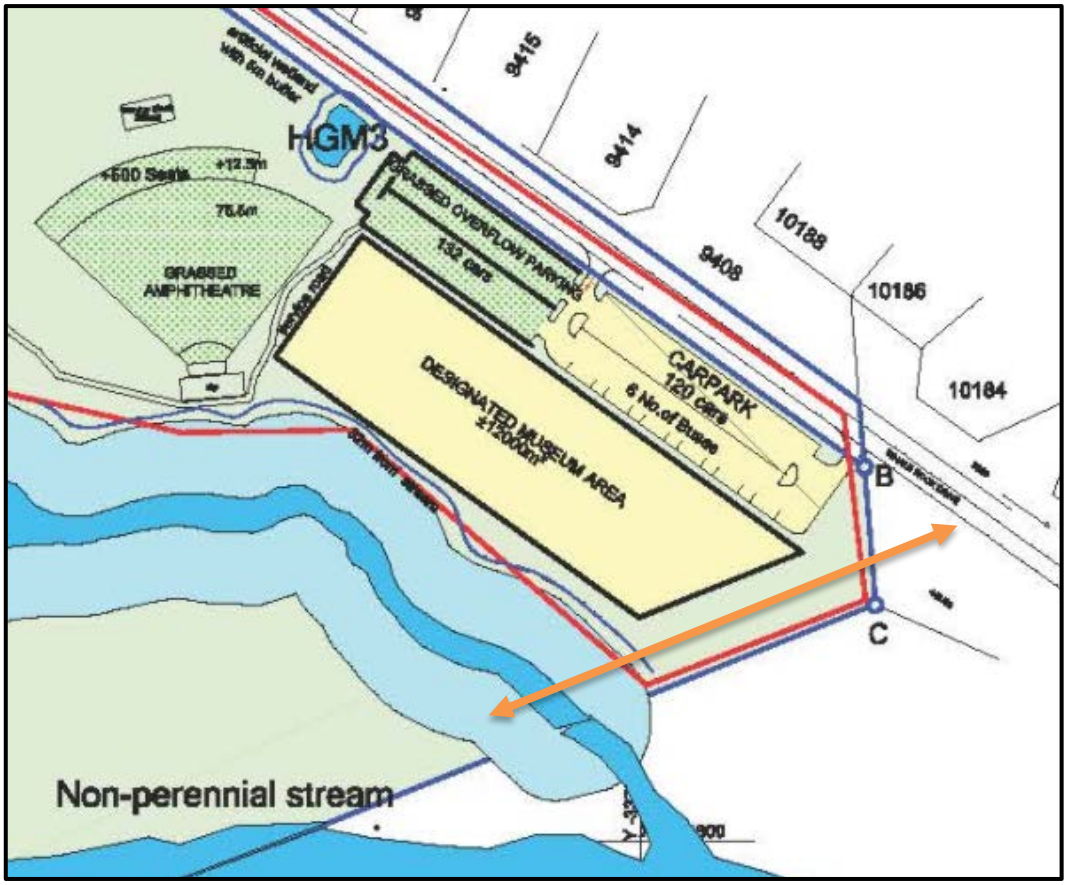

Figure 11: Plan showing the 30m corridor for the RCC

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
The following Geographical Aspects as detailed in the Town planning report (Appendix G8) were investigated and taken into consideration with the Preferred SDP**:** **1. Topography and Landform** • Site forms a gently sloping “bowl” descending toward the coastline. • Natural amphitheatre character with views toward the ocean and the Robberg Nature Reserve. • Layout responds to natural contours to minimise earthworks and maintain slope stability. **2. Development Suitability** • Portion 59 identified as suitable for development with no significant constraints. • Portions 62 and 63 retained as consolidated natural/open space areas. **3. Layout Response to Terrain** • Roads and building platforms aligned with contours to reduce visual impact and disturbance. • Development utilises natural slope to enable terraced positioning of units. **4. Views and Visual Setting** • Site’s elevation and slope allow uninterrupted ocean views from all units. • Single-storey buildings with low-pitch roofs maintain view corridors. • Spacing between units ensures clear sightlines across the development.

5. Accessibility and Movement

- Internal road network follows gentle gradients for ease of movement.
- Step-free, single-storey units designed for universal accessibility.
- Layout minimises level changes and promotes safe pedestrian connectivity.

6. Climate and Energy Orientation

- Layout optimised for north-facing orientation to maximise solar exposure.
- Spacing prevents overshadowing and supports solar energy generation.
- Passive design principles incorporated to improve energy efficiency.

7. Hydrology and Stormwater

- Non-perennial drainage lines incorporated into open space system.
- Sustainable Urban Drainage Systems (SUDS) (e.g. swales, detention areas) proposed.
- Stormwater management aligned with natural runoff patterns.

8. Vegetation and Ecological Connectivity

- Retention of ±20 m wide green corridors between development rows.
- Development integrated within existing fynbos landscape.
- Ecological linkages maintained across the site and with the RCC.

9. Sense of Place and Landscape Integration

- Development designed to maintain continuous interaction with natural surroundings.
- Inclusion of walking paths, lookout points, and passive recreation areas.

10. Safety and Environmental Risk

- Located within a high fire-risk area.
- Firebreaks, perimeter sprinklers, and emergency access incorporated.
- Fire Management Plan to address risk mitigation and emergency response.

11. Visual and Aesthetic Context

- Low-density, single-storey development reduces visual intrusion.
- Architectural style: coastal contemporary with natural materials.
- ±10 m landscaped buffer along Whale Rock Drive to soften visual impact.

6. Heritage Resources

6.1.	Was a specialist study conducted?	**YES**	NO
6.2.	Provide the name and/or company who conducted the specialist study.		
• Archaeological Impact Assessment by Jonathan Kaplan (June 2010) **(Appendix G5)** • Heritage Impact Assessment (HIA) by Aikman Associates (February 2012) **(Appendix G6)** • Reconnaissance study on Early Stone Age archaeological context undertaken by John Pether and Will Archer (22 May 2012) **(Appendix G7).**			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
The Heritage assessments as listed above found no significant built heritage on the property but identified archaeological sensitivity associated with Early Stone Age artefacts (ESAA), particularly concentrated in a high-significance area above the quarry in the south-western portion of the site, which is to be retained as a no-go conservation area with appropriate buffers. While ESAA material may occur more broadly, it is often obscured and of lower significance outside this core area.			

Subsequent investigations confirmed that the previously disturbed areas, including Portion 59 and the eastern section of Portion 62, are of low archaeological sensitivity and largely free of artefacts, making them suitable for development. The Museum of Mankind is therefore appropriately located within these disturbed, low-sensitivity areas, ensuring the protection of significant archaeological resources while allowing for development, subject to standard chance-find procedures during construction. **See Appendices G5-7.**

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.

An **Archaeological Impact Assessment** was done by Jonathan Kaplan (June 2010) that determined that there are archaeological artefacts on site.

A **Heritage Impact Assessment (HIA)** for the three properties was undertaken by **Aikman Associates (February 2012)**, with additional specialist investigation of the Early Stone Age archaeological context undertaken by **Pether and Archer (May 2012)**. These studies were commissioned as part of the environmental assessment process in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999) and Heritage Western Cape Case ID 1136 – no idea whether this process was finalised as this is now a new application with a new applicant.

The HIA (Aikman Associates, 2012) assessed the historical, aesthetic and scientific heritage significance of the property and its surrounding landscape. The report found that the broader landscape retains scenic and rural character but that no significant built heritage resources occur on the property itself. The primary heritage sensitivity relates to the **archaeological record**, particularly Early Stone Age (ESA) artefacts previously identified in the area. Subject to the implementation of recommended management measures to conserve areas of archaeological sensitivity and protect the landscape context, the report concluded that the proposed development could be supported from a heritage perspective.

A subsequent reconnaissance study by **Pether and Archer (2012)** focused specifically on the **Early Stone Age artefact (ESAA) context** on the property. Previous surveys had recorded **thousands of ESAA**, particularly concentrated on exposed bedrock in the **south-western portion of the site**, interpreted as a prehistoric stone tool manufacturing area. The study confirmed that ESAA may occur across large parts of the property, although many are obscured by vegetation or occur within the topsoil. The southwestern ESAA area represents the most sensitive archaeological locality and had previously been identified as a **no-go conservation area** to protect the integrity of the site.

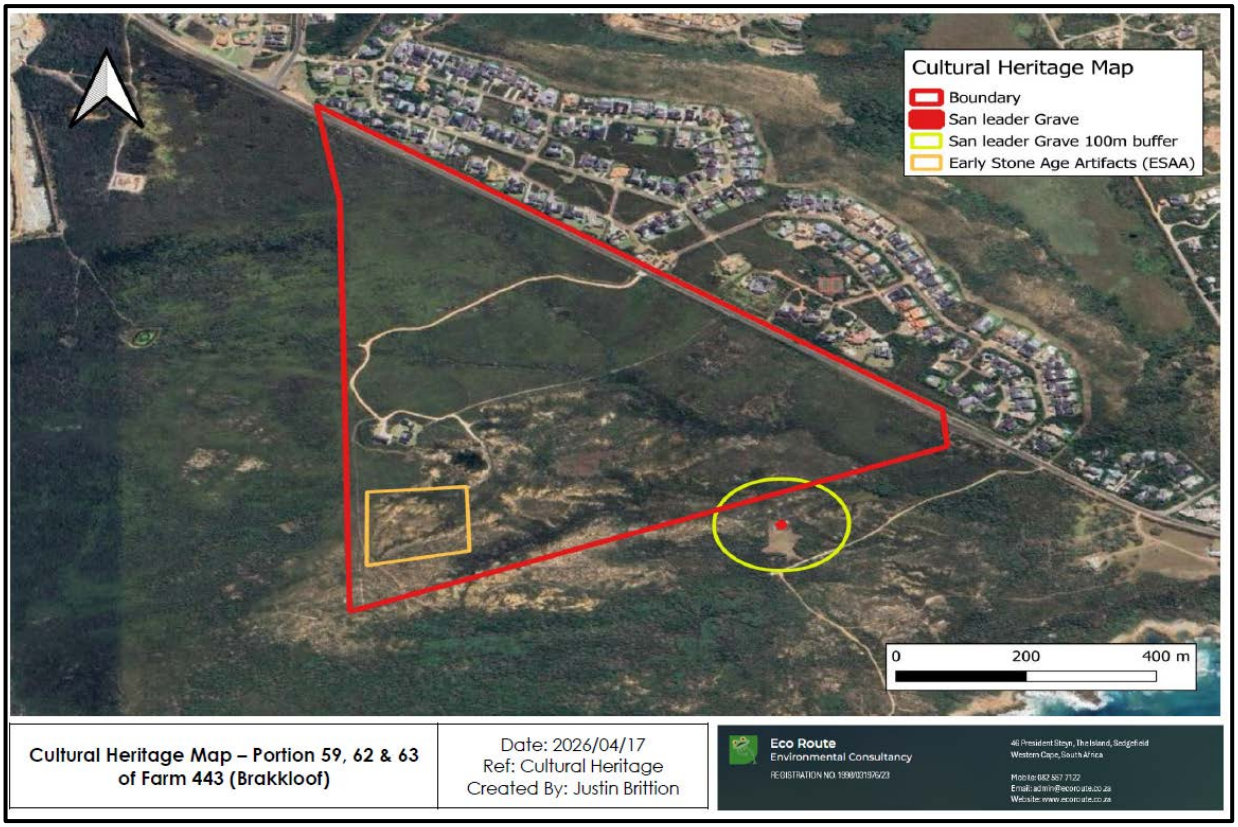

Figure 12: Map showing the Archaeological sensitive area

Based on these findings, the reports recommend that the **identified ESAA area in the south-western portion of the property be retained as a no-development (no-go) area**, with appropriate buffers where required. In addition, the archaeological specialists recommended that **targeted archaeological test excavations** be undertaken, where necessary, to better understand subsurface artefact distributions and inform detailed planning. These studies were done and found that Portion 59 and the north eastern section of Portion 62 has no artefacts and are of low archaeological significance and could be developed. Standard **chance-find procedures** should however be implemented during construction so that any archaeological material uncovered during earthworks can be recorded and managed in consultation with a qualified archaeologist and Heritage Western Cape (HWC).

The University of the Witwatersrand are supporting the establishment of the Museum of Mankind and have indicated the following academics will be available to assist:

- **Sarah Wurz** is Professor of Archaeology at the School of Geography, Archaeology and Environmental Studies, University of the Witwatersrand and she is affiliated to the Centre of Excellence on Early Sapience Behaviour at the University of Bergen. She is the director of excavations and research at Klasies River main site situated on the Tsitsikamma coast, a key site for understanding the origins of modern humans or *Homo sapiens*. Her research on the Middle Stone Age and the Klasies River sequence led to new insights into the complexity of lithic technological and related behaviours from the last 120 000 years. Her background and expertise include music science and psychology. This provides the multidisciplinary context from which she investigates the roots of the unique aspects that underlie typically human behaviors and cognition. She is also active in archaeological heritage management, and previously filled positions at the Iziko Museums of Cape Town and the South African Heritage Resources Agency.

  Links:
  https://www.wits.ac.za/people/academic-a-z-listing/w/sarahwurzwitsacza/
  https://past.org.za/grantee-sarah-wurz/
  https://www.uib.no/en/sapience/122156/stone-reader
  https://www.researchgate.net/profile/Sarah_Wurz

- **Bernhard Zipfel** is the University Curator of Fossil and Rock Collections at the University of the Witwatersrand and was formerly the Head of the Department of Podiatry at the University of Johannesburg (1990-2006). He curates all fossil and rock collections housed at the Evolutionary Studies Institute and School of GeoSciences, University of the Witwatersrand. He has a special interest in the biomechanics and evolution of the human foot, the origins of hominin bipedalism, palaeopathology and the preservation of natural history collections. He holds qualifications in Podiatry and Post-School Education from the University of Johannesburg, a B.Sc. (Honours) from the University of Brighton and a Ph.D. from the University of the Witwatersrand. He is the past President of the Palaeontological Society of Southern Africa (2012 to 2014) and is a Fellow of the South African Podiatry Association. He also co-directs the excavations at the archaeological site of Kromdraai.

HWC requested that a Heritage Impact Assessment be undertaken for the new proposed development that include the findings of all the above reports together with a Visual impact assessment. These are in process and will be included in the Draft BAR. **See the Historical studies in Appendices G5-7**

8. Socio/Economic Aspects

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

Plettenberg Bay reflects broader national socio-economic challenges, including relatively high levels of unemployment and poverty, which form an important part of the receiving environment for new development. In this context, the proposed project represents a significant private investment with positive ripple effects for the local economy and community well-being.

The development, comprising a high-end retirement resort and a cultural facility, is expected to generate substantial economic benefits. With an estimated capital investment of approximately R1.33–R1.66 billion, the project will stimulate economic activity during construction and contribute to long-term growth once operational. Construction is anticipated to create between approximately 460 and 1,200 employment opportunities (direct and indirect), while the operational phase is expected to sustain between 95 and 150 permanent jobs.

In addition to employment creation, the development will enhance municipal revenue, support local supply chains, and promote year-round economic activity, thereby contributing to a more resilient and diversified local economy.

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

The development, comprising a high-end retirement resort and a cultural facility, is expected to generate substantial economic benefits. With an estimated capital investment of approximately R1.33–R1.66 billion, the project will stimulate economic activity during construction and contribute to long-term growth once operational.

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

The development, comprising a high-end retirement resort and a cultural facility, is expected to generate substantial economic benefits. With an estimated capital investment of approximately R1.33–R1.66 billion, the project will stimulate economic activity during construction and contribute to long-term growth once operational. Construction is anticipated to create between approximately 460 and 1,200 employment opportunities (direct and indirect), while the operational phase is expected to sustain between 95 and 150 permanent jobs.

In addition to employment creation, the development will enhance municipal revenue, support local supply chains, and promote year-round economic activity, thereby contributing to a more resilient and diversified local economy.

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.
To be completed when the Architectural designs and Visual impact assessment has been finalised and will be included in the Draft BAR.	

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.

Portion 59 is the preferred site for the Retirement Complex as it was historically disturbed by ploughing and has a low archaeological sensitivity.

The north eastern section of Portion 62 is the preferred site for the Museum of Mankind as determined by all the specialist studies described above. Portion 63 was found to be sensitive in terms of the archaeological finds.

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

No alternative properties were considered as:

- The development is **site-specific**, due to:
  - The **unique archaeological landscape** underpinning the Museum concept.
  - The relationship with the **Robberg Coastal Corridor.**
- The three properties function as a **single ecological and planning unit.**
- The proposal depends on **integrating development with conservation**, which cannot be replicated elsewhere.
- These properties are owned by the applicant.

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

The preferred site alternative is informed by an integrated assessment of **environmental sensitivity, heritage resources, engineering constraints and planning policy**.

Specialist studies confirmed that:

- **Portion 59** is **previously transformed (agriculture)** and has **lower ecological and archaeological sensitivity**, making it the most suitable for the retirement development.
- The **north-eastern portion of Portion 62** represents a **low-sensitivity area** for vegetation and archaeological finds and is appropriate for the Museum of Mankind.
- **Portion 63 and parts of Portion 62** contain **high archaeological sensitivity**, including a significant Early Stone Age area, and are therefore retained as **no-go conservation areas.**

This results in a **clear avoidance hierarchy**:

1. Avoid high-sensitivity heritage and ecological areas.
2. Develop only within **disturbed and low-sensitivity areas.**
3. Incorporate the remainder into the **Robberg Coastal Corridor.**

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

The preferred site alternative was determined through:

- Review of **historical land disturbance** (agriculture and quarrying).
- Integration of **specialist inputs** (ecology, archaeology, aquatic, geotechnical).
- Identification of:
  - **No-go areas** (heritage area, drainage lines, basin)

- **Development-suitable areas**

- Consideration of **topography**, confirming Portion 59 as ideal for low-impact, accessible development.
- Alignment with **hydrological systems**, avoiding drainage lines and the central basin.
- Alignment with **planning and spatial frameworks (SDF, EMF & WCBSP).**
- Iterative refinement of the layout based on constraints.

This represents a **constraints-led, environmentally informed design process**, rather than a developer-driven layout.

All of the above were considered when the proposed site development plan was compiled.

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

N/A

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

Positive:

- Avoidance of high-sensitivity ecological and archaeological areas.
- Formal conservation of large portions of the site.
- Strengthening of ecological connectivity with the inclusion into the RCC.
- Efficient use of previously disturbed land.

Negative:

- Localised habitat transformation on Portion 59.
- Visual impact within a peri-urban landscape.
- Construction disturbance.

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

Provide a description of the **preferred activity alternative**.

A **mixed-use development** comprising:

- Portion 59 – Retirement complex.
- North Eastern Section of Portion 62 – Museum of Mankind with Associated Tourism facilities and amphitheatre.
- Conservation (Portions 62 & 63).

Provide a description of any other **activity alternatives** investigated.

1. Full Residential Development Across All Portions:

This alternative entails the development of all three portions (Portions 59, 62 and 63) for residential purposes, without significant avoidance of environmentally sensitive areas. Under this scenario, a more extensive development footprint would be implemented, potentially increasing residential yield and associated infrastructure across the entire site.

While this option may optimise short-term economic returns and housing provision, it was found to be **environmentally undesirable** due to the presence of **moderate to high sensitivity areas**, particularly on Portions 62 and 63. These areas include remnant indigenous vegetation (Knysna Sand Fynbos), ecological corridors and drainage features that play an important role in maintaining biodiversity and ecosystem functioning.

The implementation of this alternative would likely result in:

- Significant loss and fragmentation of **sensitive vegetation;**
- Disruption of **ecological processes and habitat connectivity;** and
- Increased pressure on **hydrological systems**.

As a result, this alternative was **not preferred**, as it does not adequately apply the mitigation hierarchy, particularly the principle of **impact avoidance**, and would lead to higher residual environmental impacts.

2. Conservation-Only Scenario

This alternative entails the exclusion of all development activities across the site, with the entirety of Portions 59, 62 and 63 being retained for conservation purposes. The site would remain largely undeveloped, with potential for formal conservation management and ecological restoration initiatives.

From an environmental perspective, this represents the **lowest impact option**, as it would:

- Avoid all direct habitat loss and disturbance,
- Allow for the **rehabilitation of previously disturbed areas**, and
- Enhance long-term **biodiversity conservation and ecosystem resilience**.

However, this alternative was not considered feasible or desirable in the broader planning and socio-economic context, as:

- It does not align with the **existing zoning and development rights** associated with the properties,
- It fails to contribute to **local economic development and job creation**, and
- It does not respond to the **identified need for residential (retirement and tourism) development** in the area.
- Furthermore, given the site's location within a **peri-urban transitional zone**, complete conservation is not considered the most appropriate or realistic land use outcome. This alternative was therefore **not preferred**, despite its environmental advantages.

3. Tourism-Only Development

This alternative considers the development of the site exclusively for tourism-related uses, such as a resort, lodges, or eco-tourism facilities, without incorporating a residential (retirement) component.

While tourism development could potentially capitalise on the scenic and natural attributes of the site and contribute to the local economy, this option presents several environmental and planning challenges:

- Tourism developments typically require **extensive infrastructure**, including access roads, parking areas, and service facilities, which may result in a **similar or greater development footprint** than the proposed residential alternative.
- The intensity and transient nature of tourism activities may lead to **increased disturbance** of sensitive areas, particularly if not carefully managed.
- This alternative does not align optimally with the **surrounding land use character**, which is predominantly low-density residential in nature.
- It may also result in **seasonal economic benefits**, rather than the more stable, long-term socio-economic contributions associated with a retirement estate.

Although this alternative has merit, particularly from a diversification perspective, it was not preferred as it does not provide the same level of **compatibility with the surrounding context**, nor does it offer a clear environmental advantage over the proposed development.

Provide a motivation for the preferred activity alternative.

The preferred activity:

- Responds to **demonstrated demand for retirement housing;**
- Unlocks **heritage tourism potential;**
- Balances **development with conservation outcomes;**
- Aligns with **municipal spatial planning and mixed-use character; and**
- Supports **long-term economic sustainability and job creation.**

Provide a detailed motivation if no activity alternatives exist.

The Applicant believes that the layout as presented offers the best option from a layout, density, and environmental perspective. It is also supported by the Specialists appointed in the field of expertise pertaining to the environment. Preliminary discussions with the Bitou Municipality and the Robberg Conservation Corridor (Cape Nature) were also positive.

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

Positive:

- Employment creation (construction and operational)
- Tourism diversification
- Conservation funding and stewardship

Negative:

- Increased traffic and activity
- Resource demand (water, energy)
- Potential noise impact associated with the Amphitheatre.

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**.

- Development confined to **Portion 59 (retirement)**
- **Dispersed, low-impact structures** for museum and tourism facilities
- Avoidance of:
    - Sensitive vegetation
    - Drainage lines and their buffers
    - Quarry basin
    - Heritage-sensitive areas
- Retention of **ecological corridors**
- Layout aligned to **natural topography**

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

Alternative 1: Retirement complex on Portion 59 and Museum of Mankind on the North eastern section of Portion 62, excluding a 30m RCC corridor and services inside the Regulated 32m buffer of aquatic resources. **See Appendix B1: Alternative 1.**

The alternative differs from the Preferred alternative at the portion set aside for the Museum of Mankind. This was the first design layout and did not make provision for a **conservation corridor** between the Museum complex and the RCC to the east. Services such as the bulk sewage and water pipelines as well as the Sewage Treatment plant were designed to be outside the **26 and 29m buffers** as calculated by the Aquatic study.

Other layouts considered

- Higher density / compact layouts
- Expansion into Portions 62 & 63
- Conventional grid layout

Rejected due to:

- Increased environmental impact
- Loss of ecological connectivity
- Greater visual intrusion

Provide a motivation for the preferred design or **layout alternative**.

Preferred alternative: Retirement complex on Portion 59 and Museum of Mankind on the North eastern section of Portion 62, including a 30m RCC corridor and services outside the Regulated 32m buffer of aquatic resources. **See Appendix B1: Preferred Alternative.**

This preferred alternative differs from the first design alternative at the portion set aside for the Museum of Mankind. This design layout and makes provision for a **30m conservation corridor** between the Museum complex and the RCC to the east. Services such as the bulk sewage and water pipelines as well as the Sewage Treatment plant were designed to be outside the **32m aquatic ecosystem buffers** to reduce potential impacts to aquatic resources.

Motivation

- Minimises **earthworks and site disturbance**
- Maintains **hydrological and ecological processes as well as biodiversity corridors**
- Supports **age-friendly design requirements**
- Protects landscape character

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.

Positive:

- Reduced footprint
- Improved stormwater management
- Biodiversity retention
- Vegetation clearing of “Least Concern” vegetation excluding sensitive species.

Negative:

- Vegetation clearing (limited to secondary vegetation)
- Permanent transformation of Portion 59

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**:

- **Self-sufficient services approach**, including:
  - Boreholes + rainwater harvesting
  - On-site sewage treatment plant
  - Solar / energy-efficient systems
  - SuDS stormwater design
  - Recycling of domestic waste and grey water for irrigation

Provide a description of any other technology alternatives investigated.

- Full reliance on municipal services

Rejected due to:

- Lack of municipal bulk capacity and availability
- Unsustainable source of water and electricity

Provide a motivation for the preferred technology alternative.

- Reduces pressure on **municipal infrastructure**
- Responds to **water scarcity and lack of capacity for electricity provision from Eskom or the Municipality**
- Improves long-term resilience
- Sustainable with management and maintenance

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.
Positive: • The use of energy saving and eco-friendly technology will alleviate the pressure on the national electricity grid • Reduced infrastructure burden on the Municipality • Lower carbon footprint (natural, renewable energy and groundwater) • Water security **Negative:** • Groundwater abstraction impacts • Management and Maintenance requirements

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

Provide a description of the preferred operational alternative.
• Privately managed development with: o Environmental Management Programme o Conservation management together with RCC (Cape Nature) o Controlled access o Waste and recycling systems o Stormwater management and erosion control associated with the development to reduce impacts to the Coastal Protection zone o Co-operation with the Fire Management Agency, including fire breaks and protection of properties while managing the requirements of the fynbos vegetation on site.
Provide a description of any other operational alternatives investigated.
• Properties stay undeveloped, with limited management of Fynbos or fire protection. • No Stormwater management and erosion control from the site to reduce impacts to the Coastal Protection zone
Provide a motivation for the preferred **operational alternative**.
• Ensures **long-term environmental compliance** • Protects conservation areas • Maintains infrastructure efficiency
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.
Positive: • Long-term environmental protection • Job creation • Efficient management **Negative:** • Ongoing resource use

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

Provide an explanation as to why the 'No-Go' Option is not preferred.
The No-Go option is not preferred because: • It would result in **no conservation formalisation** of Portions 62 & 63 • The **archaeological resource would remain inaccessible** • **Economic and employment benefits would be lost** • It would fail to address **demonstrated housing demand**

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

No additional feasible alternatives were identified. The current proposal already reflects:

- **Avoidance of sensitive areas**
- **Minimisation of impacts**
- **Optimisation of socio-economic benefits**

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

The preferred alternative is a **low-density, mixed-use and cultural development**:

- Retirement estate on **Portion 59**
- Museum node on **Portion 62 (low sensitivity area)**
- Conservation of **Portions 62 & 63 within the Robberg Coastal Corridor**

This alternative:

- **Avoids environmentally sensitive areas**
- **Maximises conservation outcomes**
- **Aligns with spatial planning and environmental policies and guidelines**
- **Responds to socio-economic needs of Plettenberg bay**

It is therefore considered the **most appropriate and sustainable option**.

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 areas were identified as:

- Aquatic ecosystems and their buffer areas
- Cultural heritage resources such as: Early Stone Age artefacts (ESAA), San leader grave and 100m buffer on neighbouring property
- Knysna Sand Fynbos or vegetation in good condition with biodiversity
- The quarry on Portion 63 that may have archaeological resources and is not suitable for development.

See Figure 13 below showing "no-go areas" as High sensitivity areas.

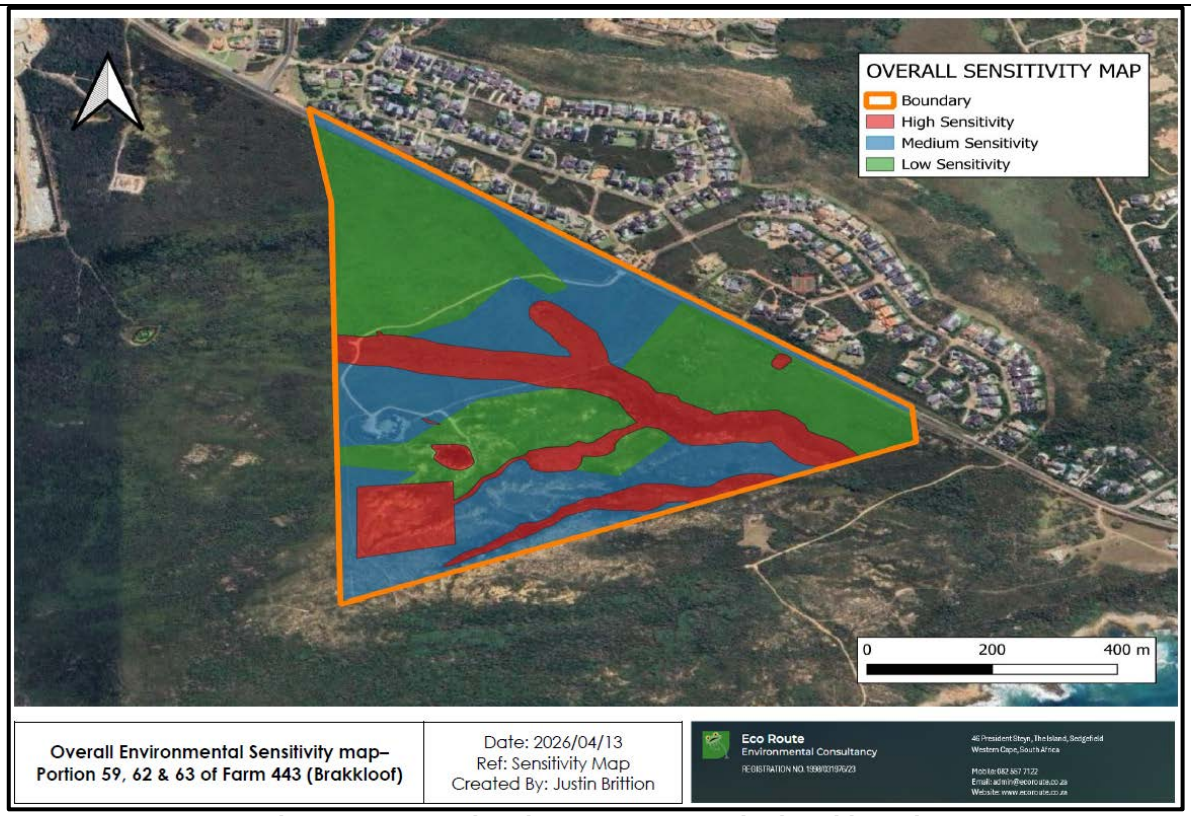

Figure 13: Map showing no-go areas depicted in red.

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.
Each potential environmental impact and risk identified was assessed according to specific criteria. These included the nature, extent, duration, consequence, probability and frequency of identified impacts, including the degree to which these impacts can be reversed, may cause irreplaceable loss of resources, and can be avoided, managed or mitigated. The criteria are based on the EIA Regulations, published by the Department of Forestry, Fisheries and the Environment (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989. These criteria include: Nature of the impact This is an estimation of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how. Extent of the impact Describe whether the impact will be: local extending only as far as the development site area; or limited to the site and its immediate surroundings; or will have an impact on the region or will have an impact on a national scale or across international borders. Duration of the impact The specialist should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long term (16-30 years) or permanent. Intensity The specialist should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The specialist study must attempt to quantify the magnitude of the impacts and outline the rationale used.

Probability of occurrence
The specialist should describe the probability of the impact actually occurring and should be described as improbable/unlikely (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures).

Reversibility
- Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
- Partly reversible – the impact is reversible but more intense mitigation measures are required
- Barely reversible – the impact is unlikely to be reversed even with intense mitigation measures
- Irreversible – the impact is irreversible, and no mitigation measures exist

Irreplaceable loss of resources
Describes the degree to which resources will be irreplaceably lost due to the proposed activity. It can be no loss of resources, marginal loss, significant loss or complete loss of resources.

Cumulative effect
An effect which in itself may not be significant but may become significant if added to other existing or potential impacts that may result from activities associated with the proposed development. The cumulative effect can be:
- Negligible – the impact would result in negligible to no cumulative effect
- Low – the impact would result in insignificant cumulative effects
- Medium – the impact would result in minor cumulative effects
- High – the impact would result in significant cumulative effects

Significance
Significance of impacts are determined through a synthesis of the assessment criteria and is described as:
- Low negative– where it would have negligible effects and would require little or no mitigation
- Low positive – the impact will have minor positive effects
- Medium negative – the impact will have moderate negative effects and will require moderate mitigation
- Medium positive – the impact will have moderate positive effects
- High negative – the impact will have significant effects and will require significant mitigation measures to achieve an accepted level of impact
- High positive – the impact will have significant positive effects
- Very high negative – the impact will have highly significant effects and are unlikely to be able to be mitigated adequately
- High positive – the impact will have highly significant positive effects.

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.

Appendix J will be completed when all the relevant alternatives, impacts and mitigation measures have been determined and will be provided in the Draft BAR.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

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

Specialist studies undertaken for Portions 59, 62 and 63 of the farm Brakkloof 443 identified the site as a **transitional peri-urban landscape** with a combination of **historically transformed areas (Portion 59)** and **ecologically sensitive areas associated with Knysna Sand Fynbos and drainage features (Portions 62 and 63)**.

The **Botanical assessment** confirmed that while parts of the site retain moderate to high conservation value, significant areas—particularly on Portion 59—have been historically disturbed by agriculture, reducing ecological sensitivity. Sensitive areas are primarily associated with remnant indigenous vegetation, ecological corridors, and drainage lines, that will be excluded from the proposed development.

The **Fauna assessment** confirmed that there are no Sensitive Species of Conservation Concern (SCC) within the areas identified for the proposed development. Impacts identified included:

- Habitat loss within secondary Fynbos
- Disturbance during construction (noise and vibration)
- Possible faunal displacement
- Risk of domestic pet predation during operational phase

The **Aquatic specialist assessment** identified and delineated aquatic ecosystems and their buffers that will be excluded from the preferred alternative layout.

Archaeological and Heritage Impact Assessments found that there is an area on the western section of Portion 63 that has a high sensitivity for Early Stone Age Artefacts. These studies also confirmed that the historically transformed Portion 59 and north eastern section of Portion 62 has a low sensitivity for ESAA.

These findings influenced the development layout in the following ways:

- **Avoidance of high-sensitivity areas**, particularly intact fynbos, archaeological area and drainage features.
- **Concentration of development on previously disturbed and transformed areas (Portion 59 and the North eastern section of Portion 62)**.
- **Incorporation of ecological buffers and open space corridors** to maintain biodiversity and ecological processes.
- **Low-density, clustered development approach** aligned with environmental constraints.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr – **This list will be expanded in the Draft BAR when all the studies and preferred SDP have been finalised.**

Biodiversity & Vegetation:

- Demarcation and protection of **no-go areas** (sensitive vegetation and drainage lines).
- Establishment of **ecological buffer zones** around sensitive habitats.
- **Search and rescue** of species of conservation concern, where applicable.
- Implementation of an **Alien Invasive Species Management Plan**.
- Rehabilitation of disturbed areas using **locally indigenous species**.

Coastal Protection zone:

- A **SUDS-based stormwater management system** must be implemented to control runoff, reduce erosion, and prevent pollution, with preference for permeable and soft-engineering solutions.
- **Long-term monitoring and infrastructure management** must ensure hydrological stability, protect water quality, and support ecosystem functioning, supported by an effective wastewater treatment system.

- **Vegetation and soil disturbance must be minimised**, with buffers retained, ongoing alien invasive control, and strict erosion and sediment control measures during construction.

Construction Phase:
- Environmental Control Officer (ECO) to oversee compliance.
- Clearly defined **construction footprints and access routes**.
- Erosion and sediment control measures.
- Prohibition of unnecessary vegetation clearing.

Stormwater & Hydrology:
- Implementation of **Sustainable Urban Drainage Systems (SUDS)**.
- Attenuation of stormwater to mimic **pre-development runoff conditions**.
- Protection of natural drainage patterns.

Waste & Pollution:
- Proper handling and disposal of construction and domestic waste.
- Prevention of **soil, surface water and groundwater contamination**.

Visual & Planning:
- Maintenance of **natural topography and landscape character**.
- Use of **appropriate architectural guidelines** to blend with surroundings.

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.

Some specialist recommendations will **not be fully implemented**, including:
- **Complete avoidance of all moderately sensitive vegetation areas.** *Reason:* Not feasible given the scale and viability of the development; instead, impacts are minimised through clustering and offsets (open space areas).
- **Full restoration of all historically transformed areas to pristine fynbos** *Reason:* Ecological restoration to original condition is not practical; rehabilitation will focus on improving ecological functioning rather than full restoration.
- **Zero development footprint across all portions** *Reason:* This represents the "no-go" alternative and does not meet the socio-economic objectives of the project.

These deviations are justified as the **best practicable environmental option** balances environmental protection with socio-economic benefits.

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

The proposed development is expected to have **both positive and limited negative impacts**:

Positive impacts:
- Creation of **employment opportunities** during construction and operation.
- Contribution to the **local economy and property market**.
- Provision of a **retirement estate**, supporting demographic needs in the area.
- Improved **infrastructure and service provision**.

Potential negative impacts:
- Temporary **construction-related disturbances** (noise, dust, traffic).
- Increased **traffic volumes** in the surrounding area.
- Potential **visual changes** to the landscape.
- Potential noise impacts related to the use of the amphitheatre, but this will be mitigated with design and events will be limited.

These impacts are **localised and manageable**, and mitigation measures will reduce their significance.

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 risks relevant to the site include:
- **Increased temperatures and drought conditions**
- **More intense storm events**

- Potential changes in **vegetation dynamics and fire regimes**

Mitigation and adaptation measures include:
- Water-wise landscaping using **indigenous, drought-resistant species**.
- Implementation of **efficient water management systems**.
- Stormwater infrastructure designed for **extreme rainfall events**.
- Retention of ecological corridors to support **ecosystem resilience**.

The development layout avoids environmentally sensitive areas, thereby **enhancing climate resilience**.

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

No significant direct conflicts between specialists were identified. However, **tensions between development objectives and biodiversity conservation** were noted, especially relating to CBA and ESA areas as depicted in the WCBSP. 2023.

These were resolved through:
- Prioritising **avoidance of high-sensitivity areas**.
- Applying a **precautionary approach** to ecological buffers.
- Adjusting the layout to ensure minimum ecological disruption.

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.

Specialist inputs were **integrated holistically** to inform the final layout and mitigation strategy:
- Botanical sensitivity mapping informed the **development footprint and open space system**.
- Archaeological sensitivity mapping informed the **development footprint**
- Hydrological considerations guided **stormwater design and buffer zones**.
- Planning inputs ensured alignment with **existing land uses and urban edge dynamics**.

This integrated approach ensures that:
- Environmental impacts are **avoided where possible**,
- **Minimised and mitigated** where unavoidable, and
- Balanced with **planning and socio-economic considerations**.

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

The mitigation hierarchy was applied as follows:

Avoidance:
- Development steered away from **high-sensitivity vegetation, archaeological sites and aquatic ecosystem features**.

Minimisation:
- Reduced development footprint through **clustering and layout design**.
- Controlled construction practices.

Rehabilitation:
- Rehabilitation of disturbed areas using **indigenous vegetation**.
- Erosion control measures incorporated with the Stormwater Management plan that will be implemented on site to reduce potential impacts on the Coastal Protection Zone.

Offset (where applicable):
- Retention of **large open space areas into the Robberg Conservation Corridor** to compensate for unavoidable impacts.

This approach ensures that the proposed development represents the **Best Practicable Environmental Option (BPEO)** by balancing environmental protection with development needs.

SECTION J: GENERAL

1. Environmental Impact Statement

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

The Basic Assessment undertaken for Portions 59, 62 and 63 of Brakkloof 443 confirms that the site comprises a **heterogeneous landscape** with both **ecologically sensitive areas and previously transformed land**.

The key findings are as follows:

- **Portion 59** has been **historically disturbed by agricultural activities**, resulting in low to moderate ecological sensitivity and is considered suitable for development.
- Portions 62 and 63 contain areas of **moderate to higher ecological sensitivity**, associated with remnant **Knysna Sand Fynbos**, archaeological findings, ecological corridors and drainage features. These areas will be excluded from the Proposed development of the Museum of Mankind and associated tourism node that will be confined to the previously transformed north eastern section of Portion 62.
- No fatal flaws were identified that would preclude development, provided that **appropriate avoidance and mitigation measures** are implemented.
- The site falls within a **peri-urban transitional zone**, where residential, conservation and tourism land use already coexist.
- The proposed development is consistent with the **desired spatial character** of the area, particularly in terms of low-density, high-quality residential expansion.
  The assessment concluded that the development can proceed as the **preferred alternative**, as it avoids high-sensitivity areas, utilises previously disturbed land, and incorporates mitigation measures to reduce environmental impacts to **acceptable levels**.

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

Positive impacts:

- **Socio-economic benefits**, including job creation during construction and operation.
- Contribution to the **local economy** and strengthening of the property market.
- Provision of a **retirement estate**, addressing an identified demographic need.
- Improved **infrastructure and service provision** in the area.
- Formalisation and management of open space areas, enhancing **ecological management**.
- Formal conservation and in situ preservation of the identified archaeological sensitive area (ESAA) and associated artefacts, coupled with their sensitive interpretation and presentation to the public, will enhance awareness and appreciation of the area's cultural heritage, while creating a unique educational resource and contributing to the tourism potential of the greater Plettenberg Bay area.

Negative impacts:

- Loss of **indigenous vegetation**, particularly in moderately sensitive areas.
- Potential disturbance to **ecological processes and habitat connectivity**, if not properly managed.
- **Construction-related impacts**, including noise, dust, and temporary traffic disruptions.
- Increased **traffic volumes** and pressure on local infrastructure.
- Potential **visual impacts** due to transformation of the landscape.
- Potential **noise impacts** related to the amphitheatre activities.

Risks:

- Inadequate implementation of mitigation measures leading to **degradation of sensitive areas**.
- Spread of **alien invasive species** if not actively managed.
- **Stormwater mismanagement**, potentially affecting downstream Coastal Protection Zone.
- Long-term **cumulative impacts** associated with incremental urban expansion.

With the implementation of the proposed mitigation measures, these impacts are expected to be **low to moderate in significance** and acceptable within the receiving environment.

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

The following outcomes must be achieved:

- **Protection of environmentally sensitive areas**, including formal demarcation of no-go areas and buffers.
- Maintenance of **ecological corridors and connectivity** across the site.
- Implementation of a **comprehensive Alien Invasive Species Control Programme**.
- Rehabilitation of disturbed areas using **locally indigenous vegetation**.
- Effective **stormwater management** that mimics natural hydrological processes.
- Strict adherence to **construction environmental controls**, supervised by an Environmental Control Officer (ECO).
- Prevention of **pollution and environmental degradation** during all phases of the development.
- Maintenance of the **visual and landscape character** of the area through appropriate design guidelines.

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

The following aspects are conditional to the findings of the assessment and must be included as conditions of authorisation:

- Final development layout must **strictly avoid high-sensitivity areas** identified in the botanical assessment.
- **Buffer zones** around drainage features and sensitive vegetation must be implemented and maintained.
- An **Environmental Control Officer (ECO)** must be appointed for the duration of construction.
- A detailed **Environmental Management Programme (EMPr)** must be implemented and adhered to.
- A **Search and Rescue Plan**, where applicable, must be undertaken prior to vegetation clearance.
- An **Alien Invasive Management Plan** must be implemented for the operational phase.
- Stormwater infrastructure must be designed and implemented in accordance with **SUDS principles**.
- Rehabilitation and landscaping must utilise **indigenous, locally appropriate species**.
- A **Fire management action** plan must be developed in accordance with the National Veld and Forest Fire Act of 1998 together with the Fire Protection Agency for that area.

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

It is the reasoned opinion of the Environmental Assessment Practitioner that the proposed development **should be authorised**, subject to the implementation of the recommended mitigation measures and conditions.

This opinion is based on the following:

- The development footprint is largely confined to **previously disturbed areas**, thereby reducing ecological impact.
- Sensitive areas have been **identified, avoided and buffered** in the design.
- No **fatal environmental flaws** were identified during the assessment.
- The development aligns with the **spatial planning context** and existing land use patterns.
- Potential impacts can be effectively **mitigated to acceptable levels**.

The development represents the **Best Practicable Environmental Option (BPEO)**, balancing environmental protection with socio-economic benefits.

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

The assessment is based on the following assumptions and limitations:

- Specialist assessments were conducted during **specific seasonal windows**, and some **seasonal variability** in flora may not have been fully captured.
- The extent of historical disturbance, particularly on Portion 59, is based on **available site observations and historical land use information**.
- Climate change projections are based on **current regional models** and may evolve over time.
- Detailed design elements (e.g. final stormwater engineering solutions) will be refined at a later stage.

  Despite these uncertainties, sufficient information is available to make a **robust and informed decision**, and a **precautionary approach** has been applied.

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

- The Environmental Authorisation (EA) is requested for a validity period of **10 years** from date of approval.
- Construction is anticipated to commence within this period and will likely be undertaken in **phases over approximately 5-10 years**.
- Post-construction rehabilitation and monitoring should continue for a **minimum period of 2–3 years** after completion of each phase, or until rehabilitation success criteria are met.
- Ongoing environmental management (e.g. alien vegetation control and erosion control as well as maintenance of the Sewage Treatment plant) will be required for the **operational lifespan of the development**.

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.

As confirmed in the attached Engineering Report (Appendix G9), no municipal water supply is currently available to the site. The development will therefore be serviced by boreholes, supplemented by rainwater harvesting from all buildings. An initial Hydrology Report and testing of the existing borehole on site indicates that quantity and quality of the ground water, supplemented by rainwater, should be sufficient to serve the development. Harvested rainwater will be used for non-potable purposes, while treated borehole water will comply with SANS drinking water standards. A bulk storage reservoir sized for domestic demand and fire protection will be provided at the highest point on site, and the internal water reticulation network will be privately owned and maintained. The system will be designed in accordance with Bitou municipal standards and national engineering guidelines, with provision made for a future link to the municipal water system when capacity becomes available. A Water Use Licence Application has been initiated for approval with Reference number **WU49745**. Comments from DWS will be made available for the Draft BAR.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.

A central refuse collection area will be provided near the main entrance, from where waste can be accessed and collected by the municipality. The estate will collect private waste from individual homes on waste collection days. A recycling system will be introduced in the estate to reduce waste.

Refuse such as container bags, gravel, rubble, cans, plastic, wire, etc. generated during the execution of any works will be separated out and stored in appropriately designated areas within the refuse collection area. All recyclable waste will be separated out with separate containers for paper products, glass, plastic, etc. and taken away by recycling companies. This will be enforced through the Environmental Management Programme, **Appendix H** that will be finalised after all the alternatives and specialist studies have been finalized.

5. Energy Efficiency

5.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

The development of the Retirement complex is intended to operate largely off-grid in terms of electricity generation. Energy efficiency therefore informed the orientation of the layout at an early stage. In the Southern Hemisphere, north-facing roofs provide optimal solar exposure. The layout has been structured so that residential rows are aligned to maximise north orientation, allowing roofs to accommodate solar panels at appropriate angles.

Roof forms are expected to incorporate shallow pitches suitable for photovoltaic installations while maintaining a low visual profile. The spacing between rows ensures that buildings do not overshadow one another, preserving solar access and reinforcing passive design principles. Energy-efficient architectural guidelines will later address insulation, shading, glazing ratios, and renewable energy systems to reduce long-term energy demand.

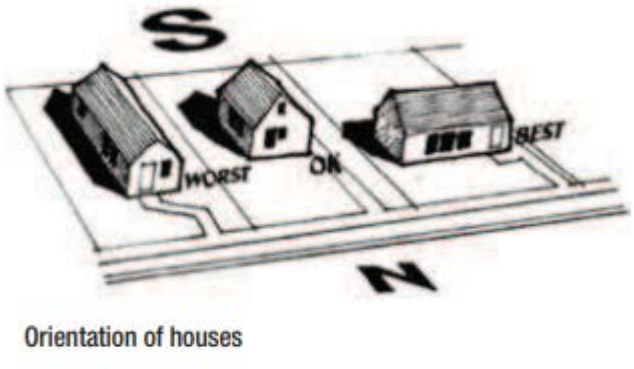

Figure 13: Diagram showing orientation of dwellings in the retirement complex

Energy efficiency that will be implemented in the proposed development include:

- Solar geysers and geyser thermal insulation
- Solar panels
- Use of gas
- Energy efficient light bulbs
- Low bollard-type lighting
- Natural ventilation in certain buildings
- Roof water tanks

The same principles will also be taken into consideration when designing the Museum of Mankind and will be included in the architectural guidelines and scope of work, to be completed for the Draft BAR.

SECTION K: DECLARATIONS – THESE DECLARATIONS WILL BE PROVIDED IN THE DRAFT BAR

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I **Vanessa Marais**, EAP Registration number **2019/1627** 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;

16/04/2026

Signature of the EAP: Date:

Eco Route Environmental Consultancy

Name of company (if applicable):