PRE-APPLICATION DRAFT BASIC ASSESSMENT REPORT

for

PLETT LAGOON ESTATE

on

Remainder of Erf 6503, Plettenberg Bay

In terms of the

National Environmental Management Act (Act No. 107 of 1998, as amended)
& 2014 Environmental Impact Regulations

Prepared for Applicant:
Plett Lagoon Estate (Pty) Ltd

Date: 10 November 2023

Candidate EAP: Mr Francois Byleveld (EAPASA Reg 2023/6770)
Primary EAP: Ms Louise-Mari van Zyl (EAPASA Reg 2019/1444)
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Report Reference: BIT794/05
Department Reference: 16/3/3/6/7/1/D1/13/0177/23
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APPOINTED ENVIRONMENTAL ASSESSMENT PRACTITIONER:

***Cape EAPrac* Environmental Assessment Practitioners**

PO Box 2070

George

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Tel: 044-874 0365

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Candidate EAP: Mr **Francois Byleveld** (MSc Geology [University of the Free State]) (Candidate EAPASA Registration Number: **2023/6770**) under supervision of the Primary EAP.

Primary EAP: Ms **Louise-Mari van Zyl** (MA Geography & Environmental Science [US]; EAPSA, Registration Number **2019/1444**. Ms van Zyl has over twenty years' experience as an environmental practitioner.

PURPOSE OF THIS REPORT:

Pre-Application Draft Basic Assessment Report

APPLICANT:

Plett Lagoon Estate (Pty) Ltd

CAPE EAPRAC REFERENCE NO:

BIT794/05

SUBMISSION DATE

10 November 2023

PUBLIC PARTICIPATION

With reference to the POPIA legislation, please note that by participating in this environmental process, whether it be through written submissions, telephonic enquiries, registrations or attendance of meetings, you are automatically giving consent for your full contact details and/or any submissions/inputs to be used and published in all matters pertaining to this application i.e. reports/notifications/communication for review or decision-making.

DOCUMENT TRACKING

DOCUMENT HISTORY

DOC REF	REVISION	DATE
BIT794/05	Pre-Application Draft Basic Assessment Report	2023-11-10

APPROVAL FOR RELEASE

NAME	TITLE	SIGNATURE
Ms Louise-Mari van Zyl (Primary EAP 2019/1444)	Primary EAP	

DISTRIBUTION

DESIGNATION	NAME	EMAIL / FAX
Potential Stakeholders	Stakeholder Register	Preferred Communication
DEA&DP, George	Jessica Christie	Electronic Submission

PRE-APPLICATION DRAFT BASIC ASSESSMENT REPORT

in terms of the
National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended &
Environmental Impact Regulations 2014

Plett Lagoon Estate

Remainder of Erf 6503, Plettenberg Bay

Submitted for:
Stakeholder Review & Comment

Report Issued by:
Cape Environmental Assessment Practitioners

Tel: 044 874 0365
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17 Progress Street
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Requirement	***Details***
(a) Details of - *(i) The EAP who prepared the report; and* *(ii) The expertise of the EAP, including, curriculum vitae.* *(iii) Applicant Details*	Mr Francois Byleveld (Candidate EAP 2023/6770) Ms Louise-Mari van Zyl (Primary EAP 2019/1444) Refer to main report.
(b) The location of the activity, including – *(i) The 21 digit Surveyor General code of each cadastral land parcel;* *(ii) Where available, the physical address and farm name;* *(iii) Where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties.*	Remainder of Erf 6503, Plettenberg Bay C03900080000650300000
(c) a plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is *(i) A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or* *(ii) On land where the property has not been defined, the coordinates within which the activity is to be undertaken.*	Refer to Appendix A1 and B1 for the location and site development plan respectively.
(d) a description of the scope of the proposed activity, including - *(i) All listed and specified activities triggered and being applied for; and* *(ii) A description of the activities to be undertaken including associated structures and infrastructure.*	Refer to main report.
(e) A description of the policy and legislative context within which the development is proposed, including – *(i) An identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and* *(ii) How the proposed activity complies with and responds to the legislation and policy context,*	Refer to main report.

Requirement	***Details***
plans, guidelines, tools frameworks and instruments.	
(f) A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location.	Refer to main report.
(g) A motivation for the preferred site, activity and technology alternative.	Refer to main report.
(h) A full description of the process followed to reach the proposed preferred alternative within the site, including - *(i) Details of all alternatives considered;* *(ii) Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;* *(iii) A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;* *(iv) The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;* *(v) The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts:* *(aa) can be reversed;* *(bb) may cause irreplaceable loss of resources; and* *(cc) can be avoided, managed or mitigated.* *(vi) The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;* *(vii) Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;* *(viii) The possible mitigation measures that could be applied and level of residual risk;* *(ix) The outcome of the site selection matrix;* *(x) If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and* *(xi) A concluding statement indicating the preferred alternatives, including preferred location of the activity.*	Refer to main report.
(i) A full description of the process undertaken to identify, assess and rank the impacts the	Refer to main report.

Requirement	***Details***
activity will impose on the preferred location through the life of the activity, including – *(ii) A description of all environmental issues and risks that were identified during the environmental impact assessment process; and* *(iii) An assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.*	
(j) An assessment of each identified potentially significant impact and risk, including - *(i) Cumulative impacts;* *(ii) The nature, significance and consequences of the impact and risk;* *(iii) The extent and duration of the impact and risk;* *(iv) The probability of the impact and risk occurring;* *(v) The degree to which the impact and risk can be reversed;* *(vi) The degree to which the impact and risk may cause irreplaceable loss of resources; and* *(vii) The degree to which the impact and risk can be mitigated.*	Refer to main report.
(k) Where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report.	Refer to main report.
(l) An environmental impact statement which contains: *(i) A summary of the key findings of the environmental impact assessment;* *(ii) A map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and* *(iii) A summary of the positive and negative impacts and risks of the proposed activity and identified alternatives.*	Refer to main report.
(m) Based on the assessment, and where applicable, impact management measures from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr.	Refer to main report and Appendix H for EMMPr.
(n) Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation.	Refer to main report.
(o) A description of assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed.	Refer to main report.

Requirement	***Details***
(p) A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation.	Refer to main report.
(q) Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded and the post construction monitoring requirements finalised.	Refer to main report.
(r) An undertaking under oath or affirmation by the EAP in relation to: *(i) The correctness of the information provided in the reports;* *(ii) The inclusion of comments and inputs rom stakeholders and I&APs;* *(iii) The inclusion of inputs and recommendations from the specialist reports where relevant; and* *(iv) 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.*	Refer to main report.
(s) Where applicable, details of any financial provisions for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impacts.	Not applicable.
(t) Any specific information that may be required by the competent authority.	Not applicable.
(u) Any other matters required in terms of section 24(4)(a) and (b) of the Act.	Not applicable.

BASIC ASSESSMENT REPORT

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

NOVEMBER 2019

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

GENERAL PROJECT DESCRIPTION

Plett Lagoon Estate (Pty) Ltd, hereafter referred to as the Applicant, proposes to develop a residential estate, on the transformed areas of Portion of Remainder of Erf 6503, Plettenberg Bay.

Remainder of Erf 6503 (19.1129ha) is located in Plettenberg Bay, east of the N2 and Plett Primary School, bordering the Keurbooms Estuary (Figure 1).

Access is currently gained from an existing public road (Beacon Way) in the south-west corner of the proposed development site, between the Checkers Centrum and Plettenberg Bay Primary School.

DEVELOPMENT PROPOSAL:

The proposed development will be a gated village, with access from Susan Drive / Cuthbert Close corner behind the Checkers Centrum via the Poortjies residential neighbourhood (Figure 2).

The proposed development entails the following:

- Five (5) x **General residential erven** (Residential Zone II), consisting of thirty-eight (38) apartments in total. (General apartments and retirement units).
- Twenty-eight (28) x **Group housing erven** (Residential Zone II).
- Nine (9) x **Single residential erven** (Residential Zone I).
- Sixteen (16) x **Garage units** in the north-western corner of the single residential portion.
- **Clubhouse** to cater for the needs of the residents.
- **Entrance gate/road access** with security and fencing. Access will be approximately 18m wide (four lanes to allow for visitors and residents at point of entry).
- **Internal access roads** between plots and apartments (Transport Zone III; up to 5.5m wide brick paved roads).
- Fourteen (14) x **Open Space Zone II** erven (~0.6985ha).
- One (1) x **Open Space Zone III** erf (~10.5784ha) making up the bulk of the untransformed, remnant natural coastal buffer. This will act as a private nature reserve.

The proposed development therefore consists of **75 units** on 8.54ha developable area of the site excluding the large conservation area.

STATUS QUO:

The northern part of the property contains an existing primary dwelling and outbuildings which will occupy the centre plot (Figure 1 and Figure 2). The proposed single residential erven will form a separate gated area from the Group and General Residential areas (medium & higher density). A right of way servitude will be registered along the western road, in favour of the single residential component of the proposed development.

Remainder of Erf 6503 is zoned **Agricultural Zone I** and it is proposed to rezone the development site into **Residential Zone I and II** as well as **Open Space Zone II and III**.

The internal Open Space Zone II (approximately 0.6985ha) will consist of a communal clubhouse, maintenance buildings and communal pedestrian walkways that connect the western units with the private nature reserve.

The remainder of the property (approximately 10.5784ha) will be zoned Open Space Zone III. Internal access roads (approximately 2.1065ha) will be zoned Transport Zone III.

The development of all the proposed dwellings, clubhouse and parking garages is proposed to be concentrated on the existing, **disturbed secondary grassland area**, thereby avoiding the more

sensitive estuarine area containing wetland and natural, intact thicket vegetation, thus creating a sizeable coastal buffer along the Keurbooms Estuary (Figure 2).

Stormwater infrastructure will form part of the development and will be managed on site, with input from the aquatic specialist considering the presence of on-site wetlands in the remaining lower lying, natural eastern portion of the site. Internal roads will be designed with formal kerbs/edgings, roadside channels and a stormwater drainage network (1.5m wide swale).

An open swale stormwater network has been designed with sufficient capacity to manage and convey up to a 1:5 year rainfall event. The open swales stormwater network will follow the internal road network and will have inlet structures and pipe culverts at road crossings. Energy dissipation structures (headwalls and reno mattresses) will be installed at high energy discharge points to prevent unwanted erosion, especially into the lower lying on-site wetland in the conservation area.

Due to the likely occurrence of a seasonal perched ground water table in the lower lying conservation area, provision will be made for a subsoil drainage network beneath the internal roads. The subsoil drainage network will consist of a 110mm diameter perforated pipe network installed 800mm below the final road level.

The proposed development will make use of municipal services regarding electricity, water and sewage.

Extract from Civil Engineering Report compiled by Vita Consulting Engineers (July 2023) regarding water supply to the proposed development: "*The bulk water system to the Goose Valley, Wittedrift and Matjiesfontein reservoirs is at capacity and must be upgraded according to the Bitou master plan before additional developments within the reservoir supply areas can be accommodated.*

However, GLS Consulting provided the following temporary solution:

- *Installation of an additional 160mm bulk main off the existing 160mm distribution main in the N2 road reserve which will free up an additional 860kl/day.*
- *There is sufficient capacity in the 860kl/day to accommodate the developments on Farm 444/38, Farm 304/32 and Erf 6503.*

The implementation of the temporary solution will be done by the developer of Portion 19 and 27 of Farm 444, as this development will be the first to have a civil contractor on site. The pro-rata contributions (Farm 444/38, Farm 304/32 and Erf 6503) for the installation of the pipe will be paid directly to the developer of Portion 19 and 27 of Farm 444".

The **internal water reticulation** system will be a metered network consisting of a combined domestic and fire water reticulation network (**75mm diameter uPVC** Class 12 potable water main). Provision will be made inside erf boundaries of every property for individual water meters (located 1m inside each erf boundary).

The **internal sewage network** will consist of a **160mm diameter uPVC** Class 34 gravity pipe network. The internal sewage pipes will drain towards a small **underground pump station** located between Erf 9 and 10 of the development, from which sewage will be **pumped** along the eastern boundary of the development footprint through a **75mm rising main** towards the existing 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserves on the southern boundary of Erf 6503. The internal sewage network will **not encroach into the sensitive thicket** in the eastern portion of Erf 6503 but is subject to a Water Use License considering its proximity within the regulated area (500m from the on-site wetland).

A communal **refuse collection area** is proposed at the **entrance gate** inside the proposed development perimeter near the main security access.

Figure 1: Locality map of Remainder of Erf 6503 (red outlined area) (CapeFarmMapper, 2023).

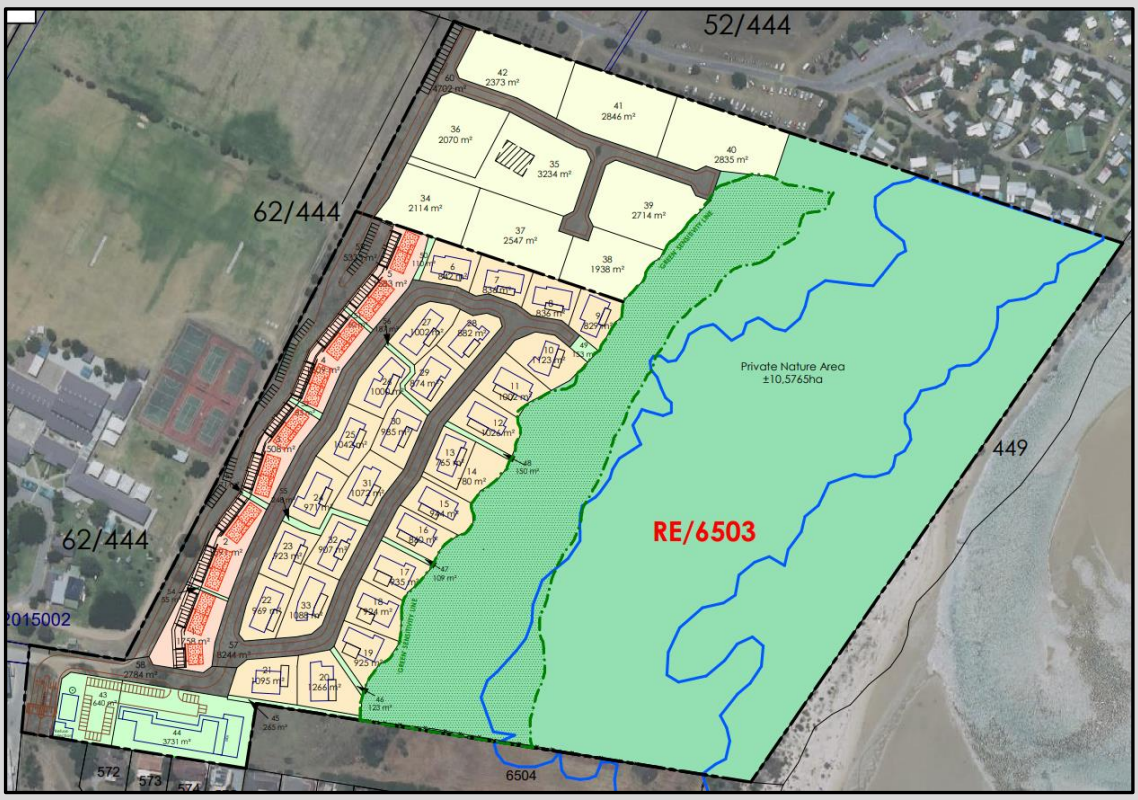


Figure 2: Site development plan indicating high density dwellings/apartment blocks (red shade, western border), medium density residential dwellings (orange shade), low density residential dwellings (yellow shade) as well as proposed clubhouse (green shade) at the entrance (Marike Vreken Town and Regional Planners, 2023).

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

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.
2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".
3. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.
4. All applicable sections of this BAR must be completed.
5. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.
6. This BAR is current as of **November 2019**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za/eadp to check for the latest version of this BAR.
7. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.
8. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.
9. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.
10. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.
11. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.
12. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.
13. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.
14. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-

    Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

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

DEPARTMENTAL DETAILS

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

MAPS

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

	• Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

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

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**		✓
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	✓
	~~**Appendix E2:**~~	~~**Copy of comment from Cape Nature**~~	**x**
	~~**Appendix E3:**~~	~~**Final Comment from the DWS**~~	**x**
	~~**Appendix E4:**~~	~~**Comment from the DEA: Oceans and Coast**~~	**x**
	~~**Appendix E5:**~~	~~**Comment from the DAFF**~~	**x**
	~~**Appendix E6:**~~	~~**Comment from WCG: Transport and Public Works**~~	**x**
	~~**Appendix E7:**~~	~~**Comment from WCG: DoA**~~	**x**
	~~**Appendix E8:**~~	~~**Comment from WCG: DHS**~~	**x**
	~~**Appendix E9:**~~	~~**Comment from WCG: DoH**~~	**x**
	~~**Appendix E10:**~~	~~**Comment from DEA&DP: Pollution Management**~~	**x**

	~~Appendix E11:~~	~~Comment from DEA&DP: Waste Management~~	x
	~~Appendix E12:~~	~~Comment from DEA&DP: Biodiversity~~	x
	~~Appendix E13:~~	~~Comment from DEA&DP: Air Quality~~	x
	~~Appendix E14:~~	~~Comment from DEA&DP: Coastal Management~~	x
	~~Appendix E15:~~	~~Comment from the local authority~~	x
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	✓
	~~Appendix E17:~~	~~Comment from the District Municipality~~	x
	~~Appendix E18:~~	~~Copy of an exemption notice~~	x
	~~Appendix E19~~	~~Pre-approval for the reclamation of land~~	x
	~~Appendix E20:~~	~~Proof of agreement/TOR of the specialist studies conducted.~~	x
	Appendix E21:	Zoning Map	✓
	~~Appendix E22:~~	~~Proof of public participation agreement for linear activities~~	x
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.		✓
Appendix G:	Specialist Report(s)		✓
Appendix H:	EMMPr		✓
Appendix I:	Screening tool report		✓
~~Appendix J:~~	~~The impact and risk assessment for each alternative~~		x
~~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~~		x
Appendix L:	Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970): Confirmation of the designation of Erf 6503.		✓
Appendix M:	Comment From Bitou Municipality Town Planning Consistency With SDF.		✓
Appendix N:	Civil Engineering Services Layout Plan		✓

Appendix O:	**Plett Lagoon Estate Open Space Trail Map**	✓
Appendix P:	**WULA Technical Report With Appendices**	✓
Appendix Q:	**Regulation 3(3) To Conduct Public Participation**	✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	~~CAPE TOWN OFFICE:~~		GEORGE OFFICE:	
	~~REGION 1~~ ~~(City of Cape Town, West Coast District~~	~~REGION 2~~ ~~(Cape Winelands District & Overberg District)~~	REGION 3 (Central Karoo District & Garden Route District)	
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Plett Lagoon Estate (Pty) Ltd			
Name of contact person for Applicant/Proponent (if other):	Mr Paul Burton			
Company/ Trading name/State Department/Organ of State:	Plett Lagoon Estate (Pty) Ltd			
Company Registration Number:	2022/859190/07			
Postal address:	PO Box 1055			
	Cape Town		Postal code:	8000
Telephone:			Cell:	083 700 8216
E-mail:	pbu@maynards.co.za		Fax:	
Company of EAP:	Cape Environmental Assessment Practitioners (*Cape EAPrac*)			
Registered EAP name:	Ms Louise-Mari van Zyl			
Candidate EAP name:	Mr Francois Byleveld			
Postal address:	PO Box 2070			
	George		Postal code:	6530
Telephone:	044 874 0365		Cell:	071 603 4132
Registered EAP E-mail:	louise@cape-eaprac.co.za		Fax:	
Candidate EAP E-mail:	francois@cape-eaprac.co.za			
Qualifications:	MA Geography & Environmental Science (University Stellenbosch) MSc Geology (University of the Free State)			
EAPASA registration no:	Mr Francois Byleveld (MSc Geology [University of the Free State]) (Candidate EAPASA Registration Number: **2023/6770**) under supervision of the Primary EAP, Ms Louise-Mari van Zyl who is a registered with EAPASA (MA Geography & Environmental Science [US]. Director **Louise-Mari van Zyl** (MA Geography & Environmental Science [US]; Registered Environmental Assessment Practitioner with the			

	Environmental Assessment Practitioners of South Africa, EAPSA, Registration Number **2019/1444**. Ms van Zyl has over twenty years' experience as an environmental practitioner.		
Duplicate this section where there is more than one landowner Name of landowner:	Sheila Storey and Ray Anne Cook		
Name of contact person for landowner (if other):	Brian Cook		
Postal address:			
		Postal code:	
Telephone: E-mail:		Cell:	082 551 7073
	bcookza@gmail.com	Fax:	
Name of Person in control of the land: Name of contact person for person in control of the land: Postal address:	Plett Lagoon Estate (Pty) Ltd		
	Mr Paul Burton		
	PO Box 1055		
	Cape Town	Postal code:	8000
Telephone:		Cell:	083 700 8216
E-mail:	pbu@maynards.co.za	Fax:	

Municipality in whose area of jurisdiction the proposed activity will fall:	Bitou Municipality		
Contact person:	Mr Chris Schliemann (Planner)		
Postal address:	Pvt Bag 1002		
	Plettenberg Bay	Postal code:	6600
Telephone	044 501 3324	Cell:	083 628 4001
E-mail:	cschliemann@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.				

Brownfield Site. There is an existing residential dwelling and outbuilding on Remainder of Erf 6503 that is connected to municipal water, electricity and sewage facilities.

Existing access is gained from the existing public road (Beacon Way) in the south-west corner of the site, between the Checkers Centrum and Plettenberg Bay Primary School.

The area considered for development was historically utilised for grazing activities and is deemed to be transformed.

The site is separated from the Estuary by Erf 449 which is a long narrow property abutting the estuary, however existing pedestrian access through the remaining natural conservation area enables the owners to access the estuary on foot.

3.	~~**For Linear activities or developments**~~				
3.1.	~~Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:~~				
3.2.	~~Development footprint of the proposed development for all alternatives.~~				~~m²~~
3.3.	~~Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.~~				
~~3.4.~~	~~Indicate how access to the proposed routes will be obtained for all alternatives.~~				
3.5.	~~SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives~~				
3.6.	~~**Starting point co-ordinates for all alternatives**~~				
	~~Latitude (S)~~	~~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):	19.1129ha
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):	~4826m^2
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:	~85364m^2
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).	

The applicant proposes to develop a residential estate, on a Portion of Remainder of Erf 6503, Plettenberg Bay.

Remainder of Erf 6503 (19.1129ha) is located in Plettenberg Bay, east of the N2 and Plett Primary School, bordering the Keurbooms Estuary (Figure 1).

Access is currently gained from an existing public road (Beacon Way) in the south-west corner of the proposed development site, between the Checkers Centrum and Plettenberg Bay Primary School. The proposed development will be a gated village, with access from the Susan Drive / Cuthbert Close corner behind the Checkers Centrum, via the Poortjies residential neighbourhood (Figure 2).

The proposed development entails the following:

- Five (5) x General residential erven (**Residential Zone II**, high density), consisting of thirty-eight (38) apartments in total. (General apartments and retirement units).
- Twenty-eight (28) x Group housing erven (**Residential Zone II**, medium density).
- Nine (9) x Single residential erven (**Residential Zone I**, low density).
- Sixteen (16) x Garage units in the north-western corner of the single residential portion.
- Clubhouse to cater for the needs of the development.
- Entrance gate/road with security and fencing. Access will be approximately 18m wide (four lanes).
- Internal access roads between plots and apartments (**Private Streets**; up to 5.5m wide brick paved roads).
- Fourteen (14) x **Open Space Zone II** erven (~0.6985ha).
- One (1) x **Open Space Zone III** erf (~10.5784ha).

The proposed development therefore consists of 75 units on 19.1129ha (~4 units per hectare).

The northern part of the property contains an existing primary dwelling and outbuildings which will occupy the centre plot (Figure 1 and Figure 2). The proposed single residential erven will form a separate gated community. A right of way servitude will be registered along the western most private road, in favour of this proposed development (registration of this right of way servitude will be exempted from a formal subdivision application, in terms of Section 24(1)(g)(ii) of the Bitou Municipality's land use planning law).

Remainder of Erf 6503 is zoned Agricultural Zone I and it is proposed to rezone the development site into **Residential Zone I and II** as well as **Open Space Zone II and III**. Open Space Zone II (approximately 0.6985ha) will consist of a communal clubhouse, maintenance buildings and communal pedestrian walkways that connect the western units with the private nature reserve. The remainder of the property (approximately 10.5784ha) will be zoned Open Space Zone III. Internal access roads (approximately 2.1065ha) will be zoned Transport Zone III.

The development of all the proposed dwellings, clubhouse and parking garages is proposed to be concentrated on the existing, disturbed secondary grassland area, thereby avoiding the more sensitive estuarine area containing wetland and natural, intact thicket vegetation, thus creating a sizeable coastal buffer along the Keurbooms Estuary (Figure 2).

Stormwater infrastructure will form part of the development and will be managed on site, with input from the aquatic specialist considering the presence of on-site wetlands in the remaining lower lying, natural eastern portion of the site. Internal roads will be designed with formal kerbs/edgings, roadside channels and a stormwater drainage network (1.5m wide swale).

An open swale stormwater network will be designed which will have sufficient capacity to manage and convey up to a 1:5 year rainfall event. The open swales stormwater network will follow the road network and will have inlet structures and pipe culverts at road crossings. Energy dissipation structures (headwalls and reno mattresses) will be installed at high energy discharge points. If a rainfall event with a return period larger than 1:5 year occurs, the internal roadways will act as overland flow routes which will convey stormwater run-off towards the lower lying eastern portion of the property.

Due to the likely occurrence of a seasonal perched ground water table, provision will be made for a subsoil drainage network beneath the internal roads. The subsoil drainage network will consist of a 110mm diameter perforated pipe network installed 800mm below the final road level.

The proposed development will make use of municipal services regarding electricity, water and sewage.

Extract from Civil Engineering Report compiled by Vita Consulting Engineers (July 2023) regarding water supply to the proposed development: *The bulk water system to the Goose Valley, Wittedrift and Matjiesfontein reservoirs is at capacity and must be upgraded according to the master plan before additional developments within the reservoir supply areas can be accommodated.*

GLS Consulting provided the following temporary solution:

- *Installation of an additional 160mm bulk main off the existing 160mm distribution main in the N2 road reserve which will free up an additional 860kl/day.*
- *There is sufficient capacity in the 860kl/day to accommodate the developments on Farm 444/38, Farm 304/32 and Erf 6503.*

The implementation of the temporary solution will be done by the developer of Portion 19 and 27 of Farm 444, as this development will be the first to have a civil contractor on site. The pro-rata contributions (Farm 444/38, Farm 304/32 and Erf 6503) for the installation of the pipe will be paid directly to the developer of Portion 19 and 27 of Farm 444.

The internal water reticulation system will be a metered network consisting of a combined domestic and fire water reticulation network (75mm diameter uPVC Class 12 potable water main). Provision will be made inside erf boundaries of every property for individual water meters (located 1m inside each erf boundary).

The internal sewage network will consist of a 160mm diameter uPVC Class 34 gravity pipe network and round precast concrete ring manholes in the road reserves. The internal sewage pipes will drain towards a small underground pump station located between Erf 9 and 10, from which sewage will be pumped along the eastern boundary of the development footprint through a 75mm rising main towards the 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserves on the southern boundary of Erf 6503. The internal sewage network will not encroach into the sensitive thicket in the eastern portion of Erf 6503.

A communal refuse collection area is proposed at the entrance gate inside the proposed development perimeter which will be accessed from the Susan Drive / Cuthbert Close corner behind the Checkers Centrum.

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

Access is proposed via the Susan Drive / Cuthbert Close corner in the Poortjies residential neighbourhood (Figure 3).

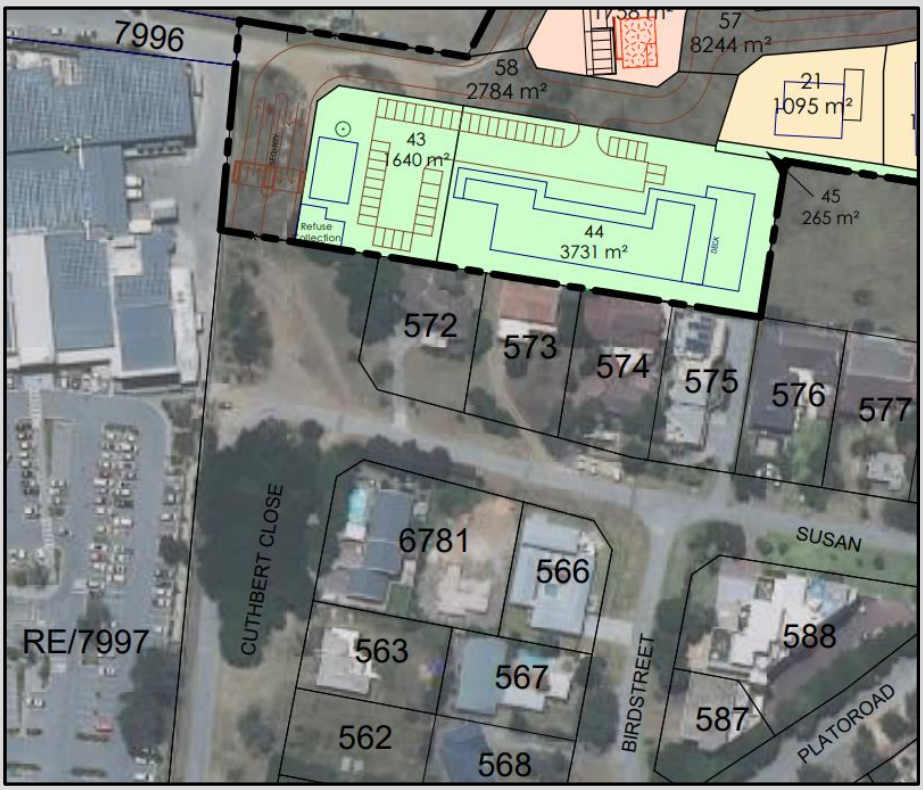


Figure 3: Proposed access road from Susan Drive / Cuthbert Close corner in Poortjies residential neighbourhood.

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	0	3	9	0	0	0	8	0	0	0	0	6	5	0	3	0	0	0	0	0

4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	34°	02‘	23.26“
	Longitude (E)	23°	22‘	27.92“

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

1. EXEMPTION APPLIED FOR IN TERMS OF THE NEMA AND THE NEMA EIA REGULATIONS

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

2. IS THE FOLLOWING LEGISLATION APPLICABLE TO THE PROPOSED ACTIVITY OR DEVELOPMENT

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) (“ICMA”). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	~~YES~~	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (“NHRA”). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	~~NO~~

The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	YES	~~NO~~
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	~~YES~~	NO
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	~~YES~~	NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	~~YES~~	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	~~YES~~	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	~~YES~~	NO

3. OTHER LEGISLATION

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

Rezoning in terms of SPLUMA.

Remainder of Erf 6503 is zoned Agricultural Zone I and it is proposed to rezone the development site into **Residential Zone I, II** as well as **Open Space Zone II and III**.

Internal access roads will be zoned **Transport Zone III**.

4. POLICIES

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.

The Western Cape Provincial Spatial Development Framework (PSDF) was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that 'communicates the provinces spatial planning agenda'.

The proposed development complements the PSDF goals in regard to the following aspects:

- Greater productivity, competitiveness and opportunities within the spatial economy.
- More inclusive development in the urban area.
- Strengthening resilience and sustainable development.

The proposed development is in line with the following policies laid down by the PSDF:

- **E3:** Revitalise and strengthen urban space-economies as the engine of growth.
    - The proposed development will create employment opportunities for the local community during the construction and operational phases.
- **R1:** Protect biodiversity and ecosystem services.
    - The proposed development takes into account the presence of CBA areas as well as all other environmentally sensitive features identified by specialists.
- **S3:** Ensure compact, balance and strategically aligned activities and land uses.
    - The proposed development will have a mixture of densities that is consistent with this policy and densification of land:
        - Five (5) x General residential erven (Residential Zone II, high density), consisting of thirty-eight (38) apartments in total. (General apartments and retirement units). **38 units in 0.7949ha.**
        - Twenty-eight (28) x Group housing erven (Residential Zone II, medium density). **10.5 units per hectare.**
        - Nine (9) x Single residential erven (Residential Zone I, low density). **4 units per hectare.**
- **S4:** Ensure balanced and coordinated delivery of facilities and social services.
    - The proposed development includes private recreation facilities (clubhouse).
- **S5:** Promote sustainable, integrated and inclusive housing in formal and informal housing markets.

The proposed development will increase the density of the area which will ensure sufficient use of municipal service infrastructure. A range of housing typologies are included in the development proposal which will allow purchase opportunities to various income groups in the formal housing market.

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.

5.1. Guideline on Need and Desirability, DEA (2017)

Refer to section E(12) for a detailed Need & Desirability project description.

5.2. Guideline for the Review of Specialist input in the EIA process (June 2005)

The guideline was followed to:

- Ensure that the specialists inputs meet the terms of reference.
- Ensure that specialist inputs are provided in a form and quality that can be incorporated into the integrated report and can be understood by non-specialists.

5.3. Guideline for Environmental Management Plans (June 2005)

The EMMPr has been included with this Pre-Application Draft Basic Assessment to provide practical and implementable actions to ensure that the development maintains sustainability and minimise impacts through all its phases. The document is finalised as per the Guidelines and requirements of NEMA.

5.4. Guideline on generic terms of Reference for EAPs and Project Schedules (March 2013)

Followed guidance on:

- Generic Requirements for EAPs (what an EAP must manage).
- Generic Requirements for persons compiling a specialist report.
- Scope of Work (project description, primary responsibility, anticipated inputs etc.).

5.5. Guideline for determining the scope of specialist involvement in the EIA process (June 2005)

This Guideline was used to determine the timing, scope and quality of specialist inputs in the EIA process along with the Specialist Protocol requirements.

5.6. Guideline on Alternatives (March 2013)

Refer to section H for a detailed Alternatives comparison for the proposed project.

5.7. Guideline for involving biodiversity specialists in the EIA process (June 2005)

This guideline was used to identify the key triggers and issues which will require specialist input on biodiversity in addition to the Specialist Protocols. Refer to section C(6) for a detailed motivation for including/excluding specific specialist studies during the project.

5.8. Guideline for involving social assessment specialists in the EIA process (February 2007)

Refer to section C(5) for a information on the socio-economic description.

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

According to the DEA&DP series of guidelines for the involvement of specialists in the EIA process (2005), one of the underpinning generic principles is to **eliminate the unnecessary specialist**

involvement through proactive project planning and design to avoid or sufficiently reduce negative impacts. Another is to **maximise the use of existing relevant information** prior to involving a specialist. This includes the input from the EAP and specialists, in the form of site photographs and site inspections. These principles apply to the specialist studies that have been identified in the screening tool and motivated as not necessary in this report.

According to the Screening Tool the following themes have been identified as sensitive.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme			X	
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Agriculture - The property has been utilised for natural grazing over many years. The area however is small, with no registered water rights, implying that it is not a feasible agricultural unit despite the Screening Tool indicating it has high potential. An **agricultural compliance statement** confirmed that the land has **no agricultural production potential** and is therefore assessed as being of **no significance and the proposed development is acceptable**. It was confirmed by the Department of Environmental Affairs and Development Planning that Erf 6503, Plettenberg Bay was included in the Knysna, Wilderness and Plettenberg Bay Regional Structure Plan. This portion was designated as **'Recreational'** and **'Township development'**. **Erf 6503 is therefore exempt from the provisions of the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) (Appendix L).** The Department of Agriculture remains a registered stakeholder for the environmental authorisation application process and will be requested to comment on the application.

Animal Species – The DFFE screening tool report indicated the site sensitivity for animal species to be **High** with the possibility of ten (10) species (seven bird species, one amphibian specie and two mammal species) with a threat status of endangered/vulnerable, that could possible be present on the proposed development site. Taking the possibility of occurrence of these species into account, it was determined that a **Terrestrial Animal Species Specialist Assessment** must be conducted which forms part of this BAR.

Aquatic Biodiversity – The proposed development site is located in close proximity to the Keurbooms Estuary as well as a delineated wetland habitat. Although development will be limited to secondary grassy fynbos areas, avoiding all wetland habitat areas, a full **Aquatic Biodiversity Impact Assessment** was completed by Confluent Consulting. The presence of the wetland habitat on the property means that the construction and operation of the proposed development will be taking place in the Regulated Area of a watercourse as defined in GN509 of the National Water Act and therefore it is necessary to apply for a **Water Use License** incorporated with this BAR.

Archaeological and Cultural Heritage - Due to the historic and ongoing land use, potential archaeological sites on the property will be out of context by now, thus being of low significance. Development on the proposed development site is unlikely to have a notable impact on a Grade II Heritage site that may be in proximity to the property. Stefan De Kock (Perception Planning) submitted a Notice of Intent to Develop to Heritage Western Cape. Heritage Western Cape (HWC) confirmed that **no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.** HWC is a registered stakeholder on this application process.

Civil Aviation – The development of a residential estate, within an urban area, will not exceed any of the Civil Aviation Regulations in terms of height and does not pose a threat to air traffic in terms of any obstruction. The sensitivity rating is **refuted,** and the EAP is of the opinion that the theme is not applicable to this application. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating level of **Low** remains. The only reason for Civil Aviation being highlighted in the Screening Tool is because the site is ~6.8km from the Plettenberg Bay Airport. **There are no reasonable grounds for any specialist studies to confirm this.** The SACAA remains a registered stakeholder for the environmental authorisation application process.

Defence – The development will pose no threat to military or defence forces of South Africa. The site is not situated near any military facilities. The EAP is of the opinion that the theme is not applicable to this application. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating level of Low remains. **There are no reasonable grounds to conduct any specialists' studies to affirm this and further consultation with Department of Defence is not necessary.**

Palaeontology Impact Assessment: Due to the historic and ongoing land use, potential palaeontological sites on the property will be out of context by now, thus being of low significance. Stefan De Kock (Perception Planning) **submitted a Notice of Intent to Develop to Heritage Western Cape.** Heritage Western Cape (HWC) confirmed that **no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.** HWC is a registered stakeholder on this application process.

Plant Species Theme – The DFFE screening tool report indicated the site sensitivity for plant species to be **Medium** due to the likely occurrence of eighteen (18) Species of Conservation Concern (SCC). Sites identified by the screening tool as being of medium sensitivity must submit either a Terrestrial Plant Species Assessment Report of a Terrestrial Plant Species Compliance Statement depending on the outcome of a site inspection. Based on the findings of the site inspection, it was determined that a full **Terrestrial Plant Species Specialist Assessment** was deemed necessary and have been incorporated with this BAR.

Terrestrial Biodiversity Theme – A site sensitivity verification undertaken by Biodiversity Africa, determined that the western portion of Erf 6503 (portion of proposed development) has an overall **'Low'** sensitivity. Based on the low sensitivity and the negligible impacts on the terrestrial biodiversity features associated with the proposed development, a **Terrestrial Biodiversity Compliance Statement** has been completed for the proposed development and informs this BAR.

Additional protocols identified in the Screening Tool Report:

Landscape/Visual Impact Assessment: The proposed development site is located on an isolated portion of land next to Plettenberg Bay Primary School. The proposed development will not exceed two storeys with development only proposed on already transformed/disturbed grassland areas. The surrounding community already contains similar height residential units/buildings/structures. The proposed development will therefore not result in a significant change in land use compared to the existing surrounding uses. The property is identified for infill development and falls within the urban edge of Plettenberg Bay. The criteria of the site context and proposal does not justify a visual impact assessment.

Socio-Economic Assessment: A socio-economic study has not been undertaken for this application mainly due to the compatibility of the land use with surrounding land uses and alignment with the local spatial planning for the area.

Consideration was given to the following key triggers for a socio-economic impact assessment, as these are stipulated in the Guideline for Social Impact Assessment as drawn up for the Department of Environmental Affairs by Tony Barbour (2007).

- Consideration of the nature of the receiving environment, in particular whether vulnerable community, or areas with high poverty/unemployment, or areas where livelihoods depend on existing social relationships and income generating patterns, will be affected;
    - *The study area does not qualify in terms of these characteristics – the proposed development site area forms part of the urban landscape. The community of the surrounding area is not vulnerable and/or an area with high poverty/unemployment.*
- Areas where access to services, mobility/community networks are affected, or where livelihoods depend on access to and use of environmental resources and services;
    - *The property is not utilised for ecosystem services at a communal scale. Care has been taken to place infrastructure in areas that do not contain sensitive wetland habitat and the remaining natural areas will continue to function as normal.*
- Areas where the proposed land use will alter the sense of place or character of the area, or where the project represents a significant change in land use from the prevailing use;
    - *Development of residential units, adjacent to the Plettenberg Bay Primary School as well as existing Poortjies residential neighbourhood, within an urban context, will not change the character of the area (although the vacant status of the property itself will change) and as such will not result in a significant change in the land use compared to the prevailing urban use;*
- Projects that require large workforce relative to the size of the existing workforce such as dams, railways, roads;
    - *The development will not require a larger workforce compared to similar developments in the surrounding area. The proposed development will provide employment opportunities for the local community during the construction and operational phases.*
- Areas of important tourism or recreational value should conflicting land uses be introduced;
    - *The coastal community/suburbs of Plettenberg Bay are characterised by a combination of primary dwellings, secondary (holiday) homes, as well as resort type developments mainly due to its proximity to the ocean/beach/Keurbooms Estuary. Development of residential units is not considered a conflicting land use but rather compatible with the tourism/recreational/residential qualities of the area;*

Having considered the above-mentioned key triggers that would typically indicate the need for a socio-economic impact assessment to be undertaken to inform decision-making, it was determined that the proposal is not the type of activity (both in nature and in scale) for which such a study is required.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	[The development of – (xii) **infrastructure or structures with a physical footprint of 100 square metres or more;]** where such development occurs – (c) if no development setback exists, **within 32 metres** of a watercourse, measured from the edge of the watercourse.	Although the physical development footprint falls outside 32 metres measured from the edge of the watercourse, portions of stormwater discharge infrastructure will be located within 32 metres of the watercourse.
17	Development – (v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is greater; In respect of – (e) [buildings of 50 square metres or more; or **(f)] infrastructure of structures with a development footprint of 50 square metres or more.**	Although the physical development footprint falls **outside 100 metres** from the high-water mark of the Keurbooms Estuary, **portions of services** such as stormwater discharge infrastructure/sewer line may be within 100 metres inland of the high-water mark of the Keurbooms Estuary but separated by the conservation area.
19A	The **infilling or depositing of any material** or more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shell grit, pebbles or rock of more than 5 cubic metres from – (ii) the **littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary**, whichever distance is the greater.	Although the **physical development footprint falls outside 100 metres** from the high-water mark of the Keurbooms Estuary, **portions of services** such as stormwater discharge/sewer infrastructure may involve the infilling and/or removal of more than 5 cubic metres of soil/sand within 100 metres from the high water mark of the Keurbooms Estuary but separated by the conservation area.
27	The **clearance** of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.	The SANBI Red List of Ecosystems indicate that the proposed development footprint consists of **Garden Route Shale Fynbos** which is listed as **Endangered.** The proposed development will entail the clearance of ~8.54ha of

		transformed, secondary grassy fynbos vegetation with the majority of remaining natural vegetation outside of the development footprint. The plant species specialist assessment confirmed that the vegetation in the proposed development footprint **is no longer representative of Garden Route Shale Fynbos.** The area has been disturbed by prolonged mowing and historical grazing with the exclusion of fire.
28	**Residential,** mixed, retail, commercial, industrial or institutional developments where such land **was used for agriculture,** game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur **inside an urban area**, where the total land to be developed is bigger than 5 hectares.	Development **footprint of approximately ~8.54ha** within an urban area. The proposed development site indicates historic grazing activities.
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. **i. Western Cape** ii. <u>Areas outside urban areas:</u> (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. <u>Inside urban areas:</u> (aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.	The internal access roads will be up to **5.5m wide** and have a road reserve less than 13.5m.
12	The clearance of 300 square metres or more of **indigenous vegetation** except where such clearance of indigenous vegetation is required for maintenance	The study site contains a designated critical biodiversity area, specifically a **CBA2 (Terrestrial**, western portion of the property) and **CBA1 (Estuary**, eastern

	purposes undertaken in accordance with a maintenance management plan. **(i) Western Cape** (i) Within any critically endangered or **endangered** ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (ii) Within **critical biodiversity areas** identified in bioregional plans; (iii) Within the **littoral active zone or 100 meres inland from the 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.	portion of the property. No development proposed in this area). A small portion of **CBA1 (Terrestrial,** with no development proposed in this area) is designated on the ecotone between the secondary grassy fynbos (western portion of property) and dune thicket (eastern portion of property). The plant species specialist assessment confirmed that the vegetation in the proposed development footprint **is no longer representative of Garden Route Shale Fynbos.** The area has been disturbed by prolonged mowing and historical grazing with the exclusion of fire. Although the physical development footprint falls outside 32 metres measured from the edge of the watercourse, portions of stormwater discharge/sewer infrastructure will be located within 100m from the estuary.
14	The development of – [(vi) bulk stormwater outlet structures exceeding 10 square metres in size; (x) buildings exceeding 10 square metres in size; (xii) infrastructure or structures with a physical footprint of 10 square metres or more;] where such development occurs – (a) within a watercourse; (b) in front of a development setback line; (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; **i. Western Cape** i. <u>Outside urban areas:</u> (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by	Although the physical development footprint falls outside 32 metres measured from the edge of the watercourse, portions of stormwater discharge infrastructure will be located within 32 metres of the watercourse.

	the competent authority or in bioregional plans, (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.	

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

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

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

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

Alternative 1 (Preferred)

The applicant proposes to develop a residential estate, on a Portion of Remainder of Erf 6503, Plettenberg Bay.

Remainder of Erf 6503 (19.1129ha) is located in Plettenberg Bay, east of the N2 and Plett Primary School, bordering the Keurbooms Estuary (Figure 1).

Access is currently gained from an existing public road (Beacon Way) in the south-west corner of the proposed development site, between the Checkers Centrum and Plettenberg Bay Primary School.

The proposed development will be a gated village, with access from Susan Drive / Cuthbert Close corner via the Poortjies residential neighbourhood (Figure 2).

The proposed development entails the following:

- Five (5) x General residential erven (**Residential Zone II**, high density), consisting thirty-eight (38) apartments in total. (General apartments and retirement units).
- Twenty-eight (28) x Group housing erven (**Residential Zone II**, medium density).
- Nine (9) x Single residential erven (**Residential Zone I**, low density).
- Sixteen (16) x Garage units in the north-western corner of the single residential portion.
- Clubhouse to cater for the needs of the development.
- Entrance gate/road with security and fencing. Access will be approximately 18m wide (four lanes).
- Internal access roads between plots and apartments (**Transport Zone III**; up to 5.5m wide brick paved roads).
- Fourteen (14) x **Open Space Zone II** erven (~0.6985ha).
- One (1) x **Open Space Zone III** erf (~10.5784ha).

The proposed development therefore consists of 75 units on 19.1129ha (~4 units per hectare).

The northern part of the property contains an existing primary dwelling and outbuildings which will occupy the centre plot (Figure 1 and Figure 2). The proposed single residential erven will form a separate gated community. A right of way servitude will be registered along the western most private road, in favour of this proposed development (registration of this right of way servitude will be exempted from a formal subdivision application, in terms of Section 24(1)(g)(ii) of the Bitou Municipality's land use planning law).

Remainder of Erf 6503 is zoned Agricultural Zone I and it is proposed to rezone the development site into **Residential Zone I and II** as well as **Open Space Zone II and III**. Open Space Zone II (approximately 0.6985ha) will consist of a communal clubhouse, maintenance buildings and communal pedestrian walkways that connect the western units with the private nature reserve. The remainder of the property (approximately 10.5784ha) will be zoned Open Space Zone III. Internal access roads (approximately 2.1065ha) will be zoned Transport Zone III.

The development of all the proposed dwellings, clubhouse and parking garages is proposed to be concentrated on the existing, disturbed secondary grassland area, thereby avoiding the more sensitive estuarine area containing wetland and natural, intact thicket vegetation, thus creating a sizeable coastal buffer along the Keurbooms Estuary (Figure 2).

Stormwater infrastructure will form part of the development and will be managed on site, with input from the aquatic specialist considering the presence of on-site wetlands in the remaining lower lying, natural eastern portion of the site. Internal roads will be designed with formal kerbs/edgings, roadside channels and a stormwater drainage network (1.5m wide swale).

An open swale stormwater network will be designed which will have sufficient capacity to manage and convey up to a 1:5 year rainfall event. The open swales stormwater network will follow the road network and will have inlet structures and pipe culverts at road crossings. Energy dissipation structures (headwalls and reno mattresses) will be installed at high energy discharge points. If a rainfall event with a return period larger than 1:5 year occurs, the internal roadways will act as overland flow routes which will convey stormwater run-off towards the lower lying eastern portion of the property.

Due to the likely occurrence of a seasonal perched ground water table, provision will be made for a subsoil drainage network beneath the internal roads. The subsoil drainage network will consist of a 110mm diameter perforated pipe network installed 800mm below the final road level.

The proposed development will make use of municipal services regarding electricity, water and sewage.

Extract from Civil Engineering Report compiled by Vita Consulting Engineers (July 2023) regarding water supply to the proposed development: *The bulk water system to the Goose Valley, Wittedrift and Matjiesfontein reservoirs is at capacity and should be upgraded according to the master plan before additional developments within the reservoir supply areas can be accommodated.*

GLS Consulting provided the following temporary solution:

- *Installation of an additional 160mm bulk main off the existing 160mm distribution main in the N2 road reserve which will free up an additional 860kl/day.*
- *There is sufficient capacity in the 860kl/day to accommodate the developments on Farm 444/38, Farm 304/32 and Erf 6503.*

This temporary solution was discussed with Bitou Municipality on 9 March 2023, who stated that they will accept the temporary solution on the following conditions:

- *Design, installation, etc. costs for the temporary solution will be the responsibility of the developer/developers and will not be deductible from the Augmentation Levee's.*

- *The temporary solution is not a permanent solution and Augmentation Levee's for Water and Sewage will be used towards the permanent solution.*
- *The proposed pro-rata contribution towards the temporary solution must be resolved between the developers of the different properties.*
- *A Service Level Agreement must be drafted for the development.*

The implementation of the temporary solution will be done by the developer of Portion 19 and 27 of Farm 444, as this development will be the first to have a civil contractor on site. The pro-rata contributions (Farm 444/38, Farm 304/32 and Erf 6503) for the installation of the pipe will be paid directly to the developer of Portion 19 and 27 of Farm 444.

The internal water reticulation system will be a metered network consisting of a combined domestic and fire water reticulation network (75mm diameter uPVC Class 12 potable water main). Provision will be made inside erf boundaries of every property for individual water meters (located 1m inside each erf boundary).

The internal sewage network will consist of a 160mm diameter uPVC Class 34 gravity pipe network and round precast concrete ring manholes in the road reserves. The internal sewage pipes will drain towards a small underground pump station located between Erf 9 and 10, from which sewage will be pumped along the eastern boundary of the development footprint through a 75mm rising main towards the 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserves on the southern boundary of Erf 6503. The internal sewage network will not encroach into the sensitive thicket in the eastern portion of Erf 6503.

A communal refuse collection area is proposed at the entrance gate inside the proposed development perimeter which will be accessed from Susan Drive / Cuthbert Close corner behind the Checkers Centrum.

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

The Remainder of Erf 6503 is zoned **Agricultural Zone I** and it is the intention of the applicant to **re-zone** the property to **Residential Zone I and II** as well as **Open Space Zone II and III** before development starts. Internal access roads will be zoned **Transport Zone III**.

It was confirmed by the Department of Environmental Affairs and Development Planning that Erf 6503, Plettenberg Bay was included in the Knysna, Wilderness and Plettenberg Bay Regional Structure Plan. This portion was designated as **'Recreational'** and **'Township development'**. **Erf 6503 is therefore exempt from the provisions of the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) (Appendix L).**

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.

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

According to Marike Vreken Town & Regional Planners the Western Cape Provincial Spatial Development Framework (PSDF) was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that 'communicates the provinces spatial planning agenda'.

The proposed development complements the PSDF goals in regard to the following aspects:

- Greater productivity, competitiveness and opportunities within the spatial economy.
- More inclusive development in the urban area.

- Strengthening resilience and sustainable development.

The proposed development is in line with the following policies laid down by the PSDF:

- **E3:** Revitalise and strengthen urban space-economies as the engine of growth.
  - The proposed development will create employment opportunities for the local community during the construction and operational phases.
- **R1:** Protect biodiversity and ecosystem services.
  - The proposed development takes into account the presence of CBA areas as well as all other environmentally sensitive features identified by specialists.
- **S3:** Ensure compact, balance and strategically aligned activities and land uses.
  - The proposed development will have a mixture of densities that is consistent with this policy and densification of land:
    - Five (5) x General residential erven (Residential Zone II, high density), consisting of hirty-eight (38) apartments in total. (General apartments and retirement units). **38 units in 0.7949ha.**
    - Twenty-eight (28) x Group housing erven (Residential Zone II, medium density). **10.5 units per hectare.**
    - Nine (9) x Single residential erven (Residential Zone I, low density). **3.97 units per hectare.**
- **S4:** Ensure balanced and coordinated delivery of facilities and social services.
  - The proposed development includes private communal recreation facilities (clubhouse).
- **S5:** Promote sustainable, integrated and inclusive housing in formal and informal housing markets.

A range of housing typologies are included in the development proposal which will allow purchase opportunities to various income groups.

4.2	The Integrated Development Plan of the local municipality.

Bitou Municipality has adopted strategic objectives to deliver on its vision and to help realize the objectives of the district economic development, provincial strategic goals and national development plan. Strategic objectives that are relevant to the proposed development:

- Provide excellent service delivery to the residents of Bitou Municipality.
- Re-establish, grow and expand tourism within Bitou Municipality.
- Facilitate growth, jobs and empowerment of the people of Bitou.
- To ensure the safety of residents and visitors of Bitou Municipality.
- To build institutional and financial sustainability.

Extract from Specialist Planning Report (Marike Vreken Town and Regional Planners, 2023): *The IDP is a municipal planning tool to integrate municipal planning and allocate municipal funding to achieve strategic objectives that will contribute to the overall municipal vision. Although this application is not considered to be an important strategic objective it can be motivated that the development of the land supports important municipal interventions amongst others creating economic jobs within the ward. Further to the above the proposed development will contribute to the economic expenditure in the area, providing housing opportunities, create employment and the make use of existing services network. It is the considered opinion that the proposed development will contribute to the strategic objectives within Ward 2.*

4.3.	The Spatial Development Framework of the local municipality.

The proposed development is in line with the Bitou Municipal Spatial Development Framework in terms of the following:

- Expansion of the urban footprint should be directed to strategically locate priority development areas which will contribute towards the overall consolidation of the currently fragmented urban footprint of the municipality.
- The development of a diverse range of housing typologies for all income groups, at low, medium and higher densities and offering a variety of tenure alternatives should be a priority. This applies to housing for permanent residents and for holiday accommodation.

The proposed development site is located **inside the urban edg**e as demarcated in the Bitou Municipal SDF and included in the area between Goose Valley and Plettenberg Bay which is earmarked for future urban expansion (Figure 4). Please also refer to **Appendix M** for comment received from Bitou Municipality Town Planners regarding the consistency with the 2021 Bitou SDF.

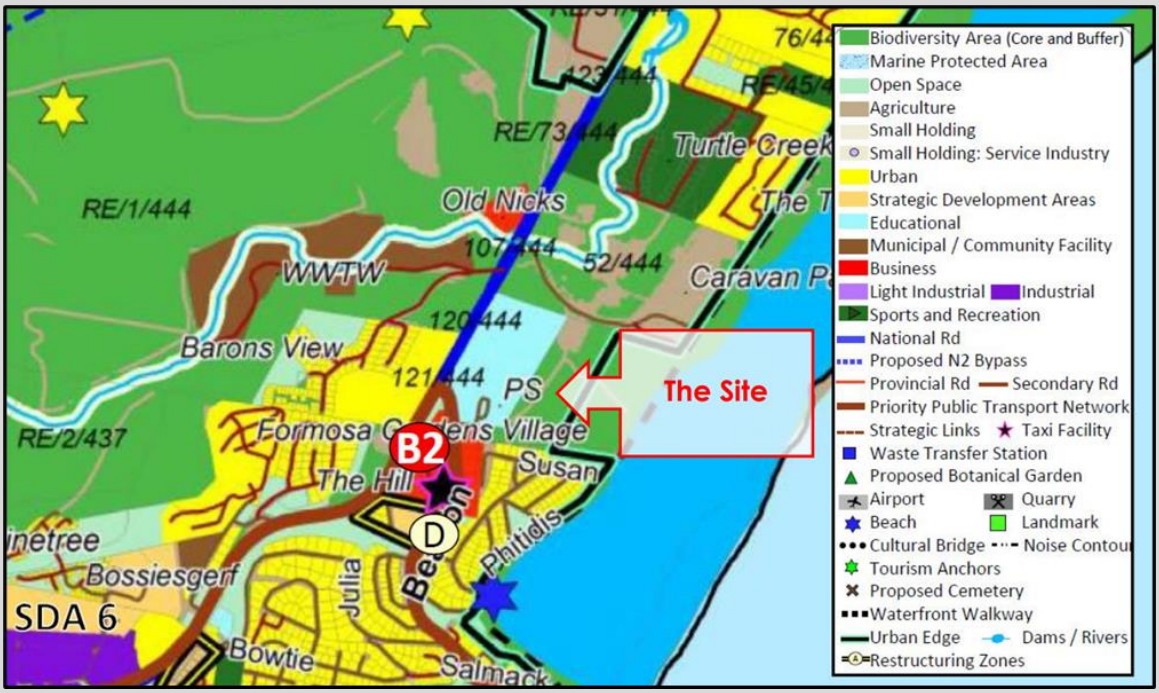


Figure 4: Extract of Bitou Municipal SDF.

4.4.	The Environmental Management Framework applicable to the area.

Not applicable.

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

Aquatic Biodiversity Impact Assessment (Confluent Consulting): The Aquatic Biodiversity Impact Assessment stipulated the following:

- A wetland habitat was delineated in the easter portion of Erf 6503. It is considered as the last remaining natural wetland habitat on the western bank of Keurbooms Lagoon and therefor has a great significance.
  - Mitigation: The proposed development layout was **amended to avoid the entire delineated wetland habitat** in the eastern portion of the property. Development infrastructure will be focussed in the higher lying western portion of the property.
- A wetland buffer of 30m is recommended.
  - Mitigation: The **30m wetland buffer will be adhered** to as this will protect the wetland from residential development and will provide a level of connectivity between the terrestrial and wetland areas of the Keurbooms Estuary.

The proposed development of the Plett Lagoon Estate is supported, provided that the residential areas are planned outside the wetland and buffer area with the wetland habitat being conserved and well maintained.

Terrestrial Biodiversity Compliance Statement (Biodiversity Africa): The Terrestrial Biodiversity Compliance statement stipulated the following:

- The western portion of RE/325 in which the Garden Route Shale Fynbos (endangered) historically occurred, has been disrupted by the prolonged exclusion of fire, mowing and historical grazing. The plant species present is **no longer representative of Garden Route Shale Fynbos** and will therefore not contribute to the terrestrial biodiversity sensitivity and will not be affected by the proposed development.
    - The proposed development will be **concentrated in the historically disturbed** western portion of the property.
- Analysis of the features contributing to the classification of the critical biodiversity and ecological support areas within the proposed development area concludes that provided the proposed development is limited to the previously disturbed western portion of Erf 6503, with the **portion of Goukamma Dune Thicket** (eastern portion of Erf 6503) **is conserved**, these features will not be impacted by the proposed development.
    - The proposed development will be concentrated in the historically disturbed western portion of the property.

The proposed development will be limited to the **secondary grassy fynbos** with a **Low** sensitivity. The proposed development will therefore have a negligible impact on the biodiversity theme features.

Terrestrial Plant Species Specialist Report (Biodiversity Africa): The Terrestrial Plant Species Specialist Report stipulated the following:

- The Goukamma Dune Thicket was found to have a **High** sensitivity due to the likelihood of two vulnerable species occurring which contributes to the conservation importance of the vegetation type.
    - Mitigation: **Avoidance mitigation** will be applied by the developer by avoiding any development in the eastern portion of Erf 6503 containing Goukamma Dune Thicket and limiting usage of the area to pedestrian access for hiking/cycling etc and focussing on invasive alien vegetation clearing (temporary vehicle access only for the removal of invasive alien vegetation when needed).

The specialist confirms and supports the preferred development layout, with development being limited to the western portion of Erf 6503 (consisting of secondary grassy fynbos with a SEI of **Low),** therefore applying avoidance mitigation by avoiding any development in the eastern portion of Erf 6503 (Goukamma Dune Thicket Vegetation with a SEI of **High**).

Terrestrial Animal Species Specialist Report (Biodiversity Africa): The Terrestrial Animal Species Specialist Report stipulated the following:

- The site ecological importance of the Goukamma Dune Thicket, Cape Seashore and the wetland habitat for faunal species of conservation (SCC) is confirmed to be **High**. The secondary grassy fynbos was confirmed as **Medium**.

Areas with a **High** SEI (eastern portion of Erf 6503) will be avoided (avoidance mitigation), with proposed development limited to the western portion of Erf 6503. Development in areas with a **Medium** SEI (western portion of Erf 6503) is permissible provided that all mitigation measures are adhered to.

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

The proposed development site is located in a designated Critical Biodiversity Area, specifically a Terrestrial area (CBA1), Estuary (CBA1) area as well as a Degraded Terrestrial area (CBA2). **The development footprint avoids the CBA Estuary and CBA Terrestrial areas altogether** (Figure 5)**.**

A small portion in the south-western corner of the proposed development site is located it an Ecological Support Area (Terrestrial), however this area is highly transformed and forms part of the current access route to the property.

Critical Biodiversity Area 1

Definition: Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.

Objective: Maintain in a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.

Critical Biodiversity Area 2

Definition: Areas in a degraded or secondary condition. Required to meet biodiversity targets for species, ecosystems or ecological processes and infrastructure.

Objective: Maintain in a functional, natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.

Figure 5: Critical Biodiversity Areas map of the proposed development site (CapeFarmMapper, 2023).

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

Considerations regarding the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("**ICMA**"):

- Whether coastal public property, the coastal protection zone or coastal access land will be affected, and if so, the extent to which the proposed development or activity is consistent with the purpose for establishing and protecting those areas.

- The proposed development is not located in coastal public property and will have no affect on surrounding coastal public properties.
- Remainder of Erf 6503 is not designated as coastal access land.
- The proposed development site is partially located in the Coastal Protection Zone. However, development will be limited to already disturbed areas while preserving/maintaining the remaining coastal habitat (eastern portion of RE/6503) (Figure 6).

Figure 6: Coastal protection zone in reference to the proposed development site.

- The estuarine management plans, coastal management programmes and coastal management objectives applicable in the area.
  - The Keurbooms Estuary is of high conservation value and in terms of the management objectives, the Keurbooms-Bitou Estuarine Management Plan (K-BEMP) stipulates that formal protections mechanisms to obtain conservation status for land parcels within or spanning the estuarine functional zone (EFZ) must be investigated. The following guidelines are provided in the K-BEMP and are relevant to the proposed land-use and infrastructure:
    - *Planning should allow for the maintenance of a riparian zone along the length of the estuary where sensitive habitats (wetlands, supratidal saltmarshes and indigenous vegetation) occur.* The implementation of the coastal management lines (CML), coastal protection zones (CPZ), flood lines and the inclusion of CBA's within all planning schemes will allow for compliance with this guideline. The proposed development **layout will allow for the maintenance/preservation of the riparian zone** located in the eastern portion of RE/6503 (wetland habitat within Goukamma Dune Thicket vegetation).
    - *Development and land use in the catchment and estuarine area should not lower water quality or interfere with normal hydrodynamic or sedimentary process and cycles.* The proposed development will **not discharge any effluent water in the estuarine area** and will therefore not alter the water quality. Mitigation measures are in place for potential sewer spills from the gravity sewer line.

- Socio-Economic impact if the activity is authorised / not authorised.
    - If the proposed development is authorised, it will have the following impacts relating to socio-economics:
        - Create temporary and permanent employment opportunities during construction and operational phase.
        - Preserve and maintain the riparian zone (wetland habitat vegetation) in the eastern portion of the proposed development site.
        - Optimise vacant land in an urban setting, therefore increasing the holistic financial sustainability of Bitou Municipality.
        - Meet the management objectives of the Keurbooms-Bitou Estuarine Management Plan.
    - If the proposed development is not authorised, it will have the following impacts relating to socio-economics:
        - Property remains vacant and will therefore not increase the holistic financial sustainability of Bitou Municipality.
        - Property will not be maintained in such a way as to support the management objectives of the Keurbooms-Bitou Estuarine Management Plan.
        - No employment opportunities will be created for the local community of Bitou Municipality.
- The likely impact of the proposed activity on the coastal environment, including the cumulative effect of its impact together with those of existing activities.
    - The proposed development will be limited to already disturbed areas on RE/6503, therefore applying avoidance mitigation to the riparian zone. An environmental maintenance and management plan will be adhered to for the proposed development which will aim to preserve/maintain the natural coastal environment.
- The likely impact of coastal environmental processes on the proposed activity.
    - The proposed development will not be affected by coastal processes such as wave, current and wind action, erosion, accretion, sea-level rise, storm surges and flooding. The eastern portion of the proposed development site will be maintained in its natural state which will provide a sizeable buffer between the development activities and the Keurbooms Estuary.

It is evident from the considerations regarding the **NEM:ICMA** mentioned above, that the proposed development **will not prejudice the achievement of any coastal management objectives** and is not in contrary to the interests of the surrounding community. The proposed development will **not cause irreversible or long-lasting adverse** affects to any aspect of the **coastal environment**. The proposed development will **not deny the public access** to the coastal environment as it is private land and a private development.

8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.

The screening tool report has not changed since the submission of the Application Form.

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

The property is currently largely vacant and makes limited contribution to the local economy of the town other than rates & taxes for primary usage. The proposed development promotes smart growth by ensuring the efficient use of the land and infrastructure, by containing urban sprawl and prioritising infill, intensification and redevelopment within settlements.

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

Access to the proposed development site will be from an existing public road (Susan Drive / Cuthbert Close corner behind the Checkers Centrum) via the Poortjies residential neighbourhood.

Electricity will be connected in existing municipal services.

The internal sewage pipes will drain towards a small underground pump station from which sewage will be pumped along the eastern boundary of the development footprint towards the 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserves on the southern boundary of Erf 6503.

Links to the existing municipal water supply system are required within the scope of the Bitou Municipal Master Plan.

Please refer to **Appendix N** for a full Civil Engineering Layout map.

11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).

Please refer to Appendix G7 for the Civil Engineering Services Report which includes a Municipal Services Capacity Analysis completed by GLS Consulting.

The Municipality has confirmed services and capacity availability for all services. Water infrastructure of the Municipality will be upgraded in accordance with the Bitou Municipal Master Plan with respect to defunct water lines that must be replaced to ensure supply within the reservoir area.

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.

'Need', as defined by DEA&DP, refers to the timing of the proposal and the 'Desirability' refers to the 'placing' of the proposed development.

Need:

The proposed development is in line with all the provincial, district and local development policies. The timing is correct for this development as it will:

- Create employment opportunities during the construction and operational phases;
- Contribute to the economic growth of the town (providing a mixed density of residential housing);
- Increase the holistic financial sustainability of Bitou Municipality.

Please also refer to Section E) 4.1., 4.2. and 4.3. for additional information regarding the need for the proposed development.

Desirability:

The proposal is regarded as desirable because the proposed development:

- Is unlikely to impact negatively on existing land use rights of neighbouring property owners.
- It will not prevent any surrounding owner to exercise their legal land use rights.
- Will create employment opportunities during the construction and operational phase.
- It will optimise vacant land in an urban setting.
- It will support the management objectives of the Keurbooms-Bitou Estuarine Management Plan (K-BEMP).
- Services are available to the development.

Please also refer to Section E) 4.1., 4.2. and 4.3. for additional information regarding the need for the proposed development.

Questions to be engaged with when considering need & desirability:

1. How will this development impact the ecological integrity of the area?

The development will result in a loss of approximately 8.5ha of transformed CBA2 habitat. The proposed development site is not located in a high-risk area such as areas affected by flood lines and steep slopes. The preferred alternative for the proposed development avoids all sensitive wetland habitat areas and the remaining dune thicket will be protected through appropriate zoning to be a private nature reserve in excess of 10ha.

Ecological fire no longer forms part of the processes necessary to maintain a natural fynbos habitat. The lack of fire and the establishment of alien invasive vegetation along with historical grazing have caused a loss of any historically occurring fynbos in this area.

The proposed development will support and adhere to the management objectives of the Keurbooms-Bitou Estuarine Management Plan as well as the Integrated Coastal Management Act.

The proposed development will avoid any pollution runoff into the adjacent wetland habitat through implementation of mitigation measures recommended by the aquatic specialist in consultation with the project engineer.

2. How will this development enhance ecosystems and/or result in the loss or protection of biological diversity? What measures were explored to avoid negative impacts and enhance positive impacts?

The proposed development will be limited to disturbed, secondary grassy fynbos areas (CBA2). Avoidance mitigation will be applied to the eastern portion or the property (highly sensitive wetland habitat, Goukamma Dune Thicket). The estuarine functional zone will be preserved/maintained in a natural state.

- The preferred development layout will avoid the removal of sensitive indigenous vegetation such as Goukamma Dune Thicket in the eastern portion of the property.
- The preferred development layout avoids highly sensitive biodiversity areas such as the wetland habitat delineated by the aquatic specialist.
- A 30m aquatic buffer will be adhered to around the wetland habitat as delineated by the aquatic specialist.
- Stormwater attenuation will take place on site to reduce the risk of influencing the surrounding wetland habitat.
- The proposed development will prevent any pollution runoff into the adjacent wetland habitat from unlawfully dump/infill material by developing a perimeter fence.

3. How will this development pollute and/or degrade the biophysical environment? What measures were explored to avoid or minimise these impacts?

The proposed development will not pollute and/or degrade the biophysical environment. The following measures were explored to avoid or minimise pollution/degradation impacts:

- All No-Go areas/biodiversity sensitive areas will be avoided during construction.
- Construction vehicles will be limited to the predetermined access route of the proposed development site.
- A 30m aquatic buffer around delineated wetland habitat will be adhered to.
- The proposed development will prevent any pollution runoff into the adjacent wetland habitat from unlawfully dump/infill material.
- Stormwater attenuation will take place on site to reduce the risk of influencing the surrounding wetland habitat.
- All general construction waste/rubble which will be removed to the local municipal waste site for building rubble or alternatively the material can be re-used in the construction phase where fill material is required.

- The gravity sewer line will be inspected by the HOA to ensure there are no leaks. Should leaks be detected immediate action will be taken to avoid pollution of the lower lying wetland/estuarine environment.
- Construction phase will be monitored by an aquatic specialist as well as an environmental control officer (ECO).

4. What waste will be generated by this development? Measures to avoid waste?

General construction waste during the development phase of the proposed project. Waste produced during construction will be collected and removed by appointed contractors to a registered waste management facility (records must be kept and provided to the environmental control officer for auditing purposes). Alternatively, the material can be re-used in the construction phase where fill material is required.

General household/domestic waste will be generated during the operational phase (approximately 20kg of solid waste per household per week) of the proposed development, with the homeowner association administrating the collection at each residential unit to a communal refuse facility (at the entrance of the gated community). The refuse facility will be adequately sized to accommodate the correct amount of 240l refuge bins for organic waste as well as make allowance for waste separation bins for temporary storage of recyclable waste. Recycled waste to be collected by a registered Bitou Municipality service provider.

5. How will this development use and/or impact on non-renewable resources?

The proposed development will make use of municipal services regarding water and electricity.

The use of a combination of gas, heat pumps, solar geysers, duel flush toilets, low flow showers and rainwater tanks must be implemented to reduce pressure on non-renewable resources.

Non-treated water must be utilised for construction so as to conserve potable water sources.

6. How will the ecological impacts resulting from this development, have an impact on people's environmental right in terms of the following:

<u>Negative impact:</u>

- Temporary noise during construction – refer to EMMPr for mitigation measures.
- Temporary construction traffic associated with the development phase.
- Development of a new structure(s) within the landscape.

<u>Positive impacts:</u>

- Optimise vacant land.
- Employment opportunities during construction and operational phases.
- Preserving/maintaining the riparian area of the Keurbooms Estuary as a functional coastal corridor.

<u>Socio-economic impacts:</u>

- Change in character and sense-of-place from an open property to a lifestyle estate with mixed-density residential units.
- Employment opportunities during the construction and operational phases.
- Increase the holistic financial sustainability of Bitou Municipality.

<u>Positive and negative ecological impacts:</u>

- Result in limited loss of vegetation.
- Sensitive wetland habitat will be avoided.
- Continuous management of alien invasive vegetation within the study site.

7. What is the socio-economic context of the area?

Please refer to Section G(8) in this Pre-Application Draft Basic Assessment Report.

SECTION F: PUBLIC PARTICIPATION

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

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

Not applicable.

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

Please refer to Appendix F for copies of advert, site notices, notifications & stakeholder register. The report will be updated with comments received once the comment period on the Pre-Application DBAR ends.

- Neighbouring property owners were identified using CapeFarmMapper.
- Select neighbouring property owners were compiled into a list sent to the Bitou Municipality for confirmation of contact details ito the POPIA.
- Key Authorities were identified according to whether or not they have a mandated interest in the area/site.
- Local Councillor was verified with the Bitou Municipality.
- Site Notices were placed at three separate locations on the site calling for I&APs to register and review the Pre-Application DBAR.
- Written notifications were sent to all potential I&APs via email/post informing of the availability of the Pre-Application DBAR and the opportunity to register as an I&AP.
- Advert appeared in the Knysna-Plett Herald on 09 November 2023 for I&APs to register and submit comment on the Pre-Application DBAR.

Comments received in response to the Pre-Application DBAR or in request to be registered will be considered and added to the Stakeholder Register and all submissions will be incorporated and reflected in the Final Basic Assessment Report.

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

The following State Departments and Organs of State were consulted with:

- Bitou Municipality
- Provincial Roads
- SANRAL
- Oceans and Coast
- Department of Forestry
- Department of Agriculture
- CapeNature
- Garden Municipality
- Breede-Olifants Catchment Management Agency
- Department of Health
- SACAA

- Heritage Western Cape

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

Department of Defence – The development will pose no threat to military or defence forces of South Africa. The site is not situated near any military facilities. The EAP is of the opinion that the theme is not applicable to this application. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating level of Low remains. **There are no reasonable grounds to conduct any specialists' studies to affirm this and further consultation with Department of Defence is not necessary.**

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

To be updated in the Draft and Final Basic Assessment Report following the outcome of engagement and public participation in response to the pre-application as well as the draft BAR.

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

To be updated in the Final Basic Assessment Report following the outcome of engagement and public participation in response to the pre-application as well as the draft BAR.

Comments and concerns raised by the Department of Environmental Affairs and Development Planning during Pre-Application Meeting:

- Clarity on large erf sizes applied to the single residential (Residential Zone I) portion.
  - The existing dwelling has heritage value as identified by Perception Planning. It was recommend to accommodate the dwelling by applying similar large erven around the existing dwelling to protect the character of the original homestead. The dwelling will remain on the property and will not be demolished.
- Clarity regarding higher density across the remainder of the property (Residential Zone II and IV erven).
  - The proposed development will entail a mixture of residential densities (apartments and larger erven) to accommodate a wider market range.
  - The mixture of densities that is consistent with the Western Cape Biodiversity Spatial Development Framework and densification of land will entail:
    - Five (5) x General residential erven (Residential Zone II, high density), consisting of thirty-eight (38) apartments in total. (General apartments and retirement units). **38 units in 0.7949ha**.
    - Twenty-eight (28) x Group housing erven (Residential Zone II, medium density). **10.5 units per hectare**.
    - Nine (9) x Single residential erven (Residential Zone I, low density). **3.97 units per hectare**.
- Clarity on the consideration of a second access from the Keurbooms Camp Site.
  - Secondary access through the Keurbooms Camp Site is not recommended as this will require upgrades to the Keurbooms Campsite intersection with the N2 national road. The Poortjies residential neighbourhood was designed, with public streets that end on the southern boundary of Erf 6503 which is an indication that the original intention was to allow for the extension of the Poortjies residential neighbourhood in a northern direction.
- Clarity on the future subdivision of the nine single residential erven (Residential Zone I).
  - It is suggested that a condition of approval be imposed that the title deeds of plot 34, 35, 36, 38 and 42 allow for not further subdivision. Plot 37, 39, 40 and 41 could

potentially be subdivided in the future and as such the internal services will be designed to have sufficient capacity for 13 Single residential erven.

- Clarity on the access to open space areas (wetland area).
    - The homeowners association (HOA) of the proposed development will be restricted to walkways that does not cross the main wetland. The necessary restrictions will be put in place to ensure the open space will achieve the protection of the wetland habitat. Restrictions/impact management measures discussed in Section H) 4.
    - Pathways will be maintained by brush cutting (maximum of 1.5m) with no infilling or erection of boardwalks which may cause further disturbance. An open space trail map is attached as Appendix O, that reflect permissible routes and there maintenance.
- Clarity on coastal accretion occurring along the eastern boundary of Erf 6503.
    - The HOA of the proposed development may not conduct any work/infilling/stabilising of any sort along the estuary boundary. The HOA must make specific provision for controlled access in the management plan/house rules/ constitution.
    - The coastal accretion is taking place on Erf 449 which separates the property from the Estuary.
- Clarity on access gates along the Poortjies residential neighbourhood boundary.
    - Presumably this comment refers to the vacant Erf 6504 bordering the property to the South. The existing pedestrian gates in the exiting ClearVu fence separating the properties will remain, however the Applicant will not permit vehicular access from Erf 6504 onto the property across the wetland areas on the property. The wetland area will not be accessible to vehicles.
- Clarity on the type of fencing to be erected along the Plettenberg Bay Primary School Boundary.
    - The existing farm fence will be replaced with ClearVu.
- Clarity on how the development will be secured from the side of the Keurbooms Estuary.
    - No fences will be erected along the eastern property edge that is orientated to the Estuary. Security measures inclusive of patrol / CCTV cameras etc will be utilised instead. This is to ensure that faunal movement is not restricted between the estuary and the private conservation area. It must be noted that the Applicant cannot comment on the intention of Erf 449 that separates the property from the Estuary.
- Clarity on the proposed access from the Poortjies residential neighbourhood considering that the roads are very narrow.
    - The Poortjies residential neighbourhood was designed, with public streets that end on the southern boundary of Erf 6503 which is an indication that the original intention was to allow for the extension of the Poortjies residential neighbourhood in a northern direction.
    - The routes to the proposed access of Erf 6503 was investigated by UDS in the Traffic Impact Assessment (Appendix G7).
    - Proposed access was informed by Bitou Municipality.
    - Upgrades to existing road network not required, however the access to the proposed development will require 4-lanes (visitors/residents in and out) on the property specifically to avoid congestion in Susan Drive / Cuthbert Close.
- Clarity regarding milkwood tree in proximity the proposed access.
    - The milkwood tree identified has been accommodated in the design layout and will not be removed. It is noted that the validity periods of Environmental Authorisation vs implementation timeframes can create a situation where

protected trees can present themselves as saplings by the time construction commences. Forestry Permits will have to be obtained in such events.

- Clarity on the volume of stormwater runoff that will enter the wetland area.
  - The stormwater design (Appendix G7) makes sufficient allowance for stormwater runoff. The groundwater levels of the wetland will be monitored during the construction phase to determine if any additional measures are necessary.
- Clarity on infilling in the lower lying portion of the development footprint.
  - The proposed development will follow natural ground levels as far as possible with only minor alterations (cut and fill) but no development will take place in the lower lying wetland/remaining dune thicket areas.
- Clarity on whether the existing access will be utilised for construction traffic.
  - Construction traffic will be limited to the proposed access and potentially via the existing access depending on traffic safety requirements. Construction traffic will be managed to accommodate school traffic should the existing access be used.
- Clarity on whether the existing access will be permanently closed during operational phase of the proposed development.
  - The existing access for Erf 6503 will be permanently closed. Pedestrian gates will be installed for use by residents of Plett Lagoon Estate.

Note:

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

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

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

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

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

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

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

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. GROUNDWATER

1.1.	Was a specialist study conducted?	~~YES~~	NO
1.2.	~~Provide the name and or company who conducted the specialist study.~~		
1.3.	~~Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.~~		
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.~~		

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.		
Dr Jackie Dabrowski (Confluent Consulting)			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

The proposed development site is located in the lower extent of quaternary catchment K60E and K60G. Quaternary catchment K60E drains towards the Keurbooms River to the east (Figure 7).

The aquatic biodiversity for the proposed development site has been identified as **Very High**. One key reason for this sensitivity rating is that the site falls within the Outeniqua Strategic Water Source Area for surface water (SWSA-sw). An important objective for SWSAs is to ensure that the quantity and quality of water within and flowing from SWSAs are protected from developments that cause unacceptable and irreparable impacts. The proposed development supports this objective by attenuating stormwater on site and applying avoidance mitigation to the entire delineated wetland habitat area.

The Aquatic Biodiversity Impact Assessment stipulated the following:

- A wetland habitat was delineated in the eastern portion of Erf 6503 (Figure 8). It is considered as the last remaining natural wetland habitat on the western bank of Keurbooms Lagoon and therefor has a great significance.
    - Mitigation: The proposed development layout was amended to avoid the entire delineated wetland habitat in the eastern portion of the property. Development infrastructure will be focussed in the higher lying western portion of the property.
- A wetland buffer of 30 is recommended (Figure 9).
    - Mitigation: The 30m wetland buffer will be adhered to as this will protect the wetland from residential development and will provide a level of connectivity between the terrestrial and wetland areas of the Keurbooms Estuary.

The proposed development of the Plett Lagoon Estate is supported, provided that the residential areas are planned outside the wetland and buffer area with the wetland habitat being conserved and well maintained.

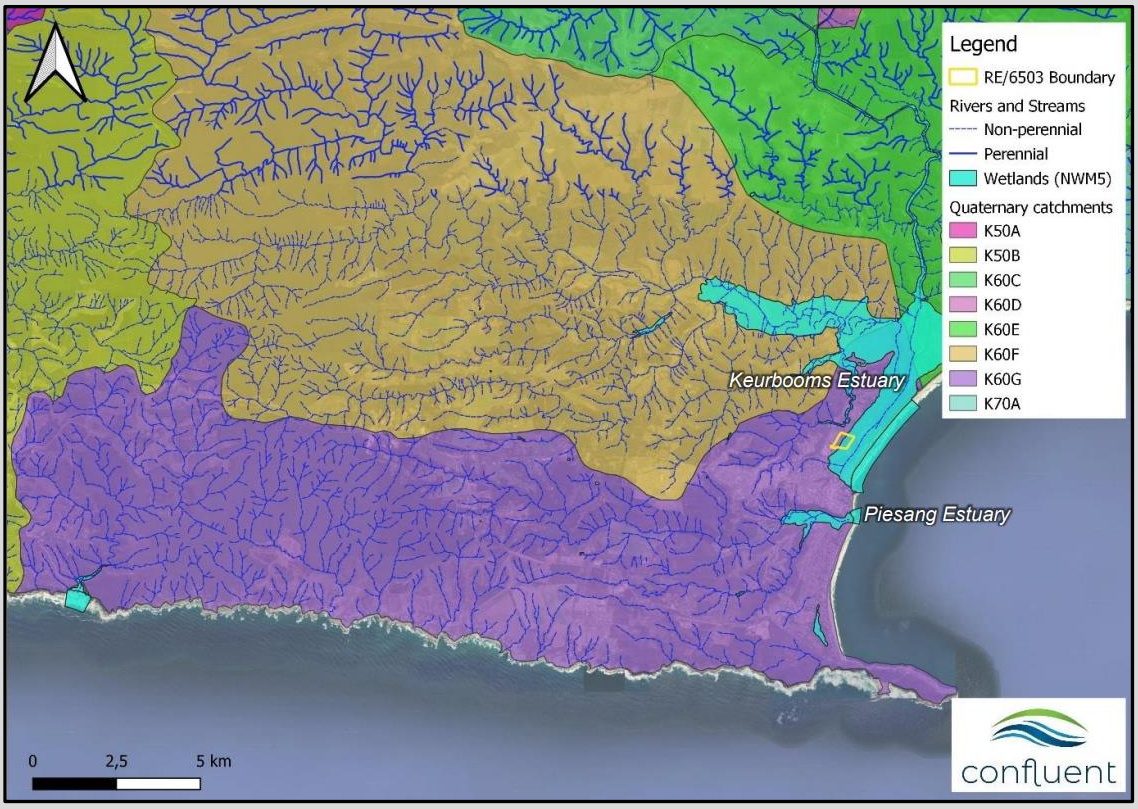


Figure 7: Location of the proposed development site in relation to quaternary catchments K60E and K60G (Confluent Consulting, 2023).

Figure 8: Delineated wetland habitat on the proposed development site (Confluent Consulting, 2023).

Figure 9: Delineated wetland habitat with a 30m buffer area (Confluent Consulting, 2023).

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.~~		
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.		

Considerations regarding the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("**ICMA**"):

- Whether coastal public property, the coastal protection zone or coastal access land will be affected, and if so, the extent to which the proposed development or activity is consistent with the purpose for establishing and protecting those areas.
    - The proposed development is not located in coastal public property and will have no affect on surrounding coastal public properties.
    - Remainder of Erf 6503 is not designated as coastal access land.
    - The proposed development site is partially located in the Coastal Protection Zone. However, development will be limited to already disturbed areas while preserving/maintaining the remaining coastal habitat (eastern portion of RE/6503) (Figure 6).
- The estuarine management plans, coastal management programmes and coastal management objectives applicable in the area.
    - The Keurbooms Estuary is of high conservation value and in terms of the management objectives, the Keurbooms-Bitou Estuarine Management Plan (K-BEMP) stipulates that formal protections mechanisms to obtain conservation status for land parcels within or spanning the estuarine functional zone (EFZ) must be investigated. The following

guidelines are provided in the K-BEMP and are relevant to the proposed land-use and infrastructure:

- *Planning should allow for the maintenance of a riparian zone along the length of the estuary where sensitive habitats (wetlands, supratidal saltmarshes and indigenous vegetation) occur.* The implementation of the coastal management lines (CML), coastal protection zones (CPZ), flood lines and the inclusion of CBA's within all planning schemes will allow for compliance with this guideline. The proposed development layout will allow for the maintenance/preservation of the riparian zone located in the eastern portion of RE/6503 (wetland habitat within Goukamma Dune Thicket vegetation).
- *Development and land use in the catchment and estuarine area should not lower water quality or interfere with normal hydrodynamic or sedimentary process and cycles.* The proposed development will not discharge any effluent water in the estuarine area and will therefore not alter the water quality.

- Socio-Economic impact if the activity is authorised / not authorised.
  - If the proposed development is authorised, it will have the following impacts relating to socio-economics:
    - Create temporary employment opportunities during construction and operational phase.
    - Preserve and maintain the riparian zone (wetland habitat vegetation) in the eastern portion of the proposed development site.
    - Optimise vacant land in an urban setting, therefore increasing the holistic financial sustainability of Bitou Municipality.
    - Meet the management objectives of the Keurbooms-Bitou Estuarine Management Plan.
  - If the proposed development is not authorised, it will have the following impacts relating to socio-economics:
    - Property remains vacant and will therefore not increase the holistic financial sustainability of Bitou Municipality.
    - Property will not be maintained in such a way as to support the management objectives of the Keurbooms-Bitou Estuarine Management Plan.
    - No employment opportunities will be created for the local community of Bitou Municipality.
- The likely impact of the proposed activity on the coastal environment, including the cumulative effect of its impact together with those of existing activities.
  - The proposed development will be limited to already disturbed areas on RE/6503, therefore applying avoidance mitigation to the riparian zone. An environmental maintenance and management plan will be adhered to for the proposed development which will aim to preserve/maintain the natural coastal environment.
- The likely impact of coastal environmental processes on the proposed activity.
  - The proposed development will not be affected by coastal processes such as wave, current and wind action, erosion, accretion, sea-level rise, storm surges and flooding. The eastern portion of the proposed development site will be maintained in its natural state which will provide a sizeable buffer between the development activities and the Keurbooms Estuary.

It is evident from the considerations regarding the **NEM:ICMA** mentioned above, that the proposed development will not prejudice the achievement of any coastal management objectives and is not in contrary to the interests of the surrounding community. The proposed development will not cause

irreversible or long-lasting adverse affects to any aspect of the coastal environment. The proposed development will not deny the public access to the coastal environment.

3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.

The estuarine management plans, coastal management programmes and coastal management objectives applicable in the area:

- The Keurbooms Estuary is of high conservation value and in terms of the management objectives, the Keurbooms-Bitou Estuarine Management Plan (K-BEMP) stipulates that formal protections mechanisms to obtain conservation status for land parcels within or spanning the estuarine functional zone (EFZ) must be investigated. The following guidelines are provided in the K-BEMP and are relevant to the proposed land-use and infrastructure:
    - *Planning should allow for the maintenance of a riparian zone along the length of the estuary where sensitive habitats (wetlands, supratidal saltmarshes and indigenous vegetation) occur.* The implementation of the coastal management lines (CML), coastal protection zones (CPZ), flood lines and the inclusion of CBA's within all planning schemes will allow for compliance with this guideline. The proposed development layout will allow for the maintenance/preservation of the riparian zone located in the eastern portion of RE/6503 (wetland habitat within Goukamma Dune Thicket vegetation).
    - *Development and land use in the catchment and estuarine area should not lower water quality or interfere with normal hydrodynamic or sedimentary process and cycles.* The proposed development will not discharge any effluent water in the estuarine area and will therefore not alter the water quality.

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.

- The proposed development is not located in coastal public property and will have no affect on surrounding coastal public properties.
- Remainder of Erf 6503 is not designated as coastal access land.
- The proposed development site is partially located in the Coastal Protection Zone. However, development will be limited to already disturbed areas while preserving/maintaining the remaining coastal habitat (eastern portion of RE/6503) (Figure 6).

4. BIODIVERSITY

4.1.	Were specialist studies conducted?	YES	~~NO~~
4.2.	Provide the name and/or company who conducted the specialist studies.		

Biodiversity Africa

4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.

The following key resources were used during the biodiversity studies:

- The SA VEGMAP (SANBI, 2018).
- The revised list of ecosystems that are threatened and in need of protection (DFFE, 2022).
- The Red List of Ecosystems (SANBI, 2021): Remnants spatial dataset.
- The 2017 Western Cape Biodiversity Spatial Plan (WCBSP): Bitou.
- The South African Protected Areas Database (SAPAD, Q1, 2023).
- The South African Conservation Areas Database (SAQAD, Q1, 2023).
- The National Protected Area Expansion Strategy (NPAES, 2010).
- The National Protected Expansion Strategy (NPAES) Negotiated Focus Areas (2018).
- The Plants of Southern Africa (POSA) database.

- Red List of South African Plants.
- The Western Cape Provincial Nature and Environmental Conservation Ordinance No. 19 of 1974.
- National Environmental Management: Biodiversity Act, 2004 (Act No 10. of 2004): Publication of Lists of Critically Endangered, Endangered, Vulnerable and Protected Species.
- NEM:BA: National List of Invasive Species in terms of Sections 70(1), 71(3) and 71a.
- Conservation of Agricultural Resources Act 1983 (CARA) (Act No. 43 of 1983).
- Atlas and Red List of Reptiles of South Africa, Lesotho and Swaziland (Bates et al., 2014)
- Atlas and Red List of Frogs of South Africa, Lesotho and Swaziland (Minter et al., 2004)
- Red List of Mammals of South Africa, Swaziland and Lesotho (Child, et al., 2016)
- Red Data Book of Birds of South Africa, Lesotho and Swaziland (Taylor, et al., 2015)
- IUCN (2022)
- Western Cape Nature Conservation Laws Amendment Act, 200

4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.

The proposed development site is located in a designated Critical Biodiversity Area, specifically a Terrestrial area (CBA1), Estuary (CBA1) area as well as a Degraded Terrestrial area (CBA2). **The development footprint avoids the CBA Estuary and CBA Terrestrial areas altogether** (Figure 5)**.**

A small portion in the south-western corner of the proposed development site is located it an Ecological Support Area (Terrestrial), however this area is highly transformed and forms part of the current access route to the property.

Critical Biodiversity Area 1

Definition: Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.

Objective: Maintain in a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.

Proposal: The proposed development will avoid the CBA1 areas (eastern portion of the property), with development limited to the CBA2 areas (western portion of the property).

Critical Biodiversity Area 2

Definition: Areas in a degraded or secondary condition. Required to meet biodiversity targets for species, ecosystems or ecological processes and infrastructure.

Objective: Maintain in a functional, natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.

Proposal: The western portion of the property is located in a designated CBA2 Terrestrial area (Garden Route Shale Fynbos). However, it is evident that the area is highly disturbed and due to prolonged grazing and exclusion of fire, the area is no longer representative of Garden Route Shale Fynbos (Endangered). Development will be limited to the remnant secondary grass fynbos areas.

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.

According to the SANBI Red List of Ecosystems map, the proposed development site consists of Garden Route Shale Fynbos (Endangered, western portion of the property) and Goukamma Dune Thicket (Least Concern, eastern portion of the property) (Figure 10).

Figure 10: SANBI Red List of Ecosystems map in relation to the proposed development site (CapeFarmMapper, 2023).

Terrestrial Biodiversity Compliance Statement (Biodiversity Africa): The Terrestrial Biodiversity Compliance statement stipulated the following:

- The western portion of RE/325 in which the Garden Route Shale Fynbos (endangered) historically occurred, has been disrupted by the prolonged exclusion of fire, mowing and historical grazing. The plant species present is no longer representative of Garden Route Shale Fynbos and will therefore not contribute to the terrestrial biodiversity sensitivity and will not be affected by the proposed development.
    - The proposed development will be concentrated in the historically disturbed western portion of the property.
- Analysis of the features contributing to the classification of the critical biodiversity and ecological support areas within the proposed development area concludes that provided the proposed development is limited to the previously disturbed western portion of Erf 6503, with the portion of Goukamma Dune Thicket (eastern portion of Erf 6503) is conserved, these features will not be impacted by the proposed development.
    - The proposed development will be concentrated in the historically disturbed western portion of the property.

The proposed development will be limited to the secondary grassy fynbos with a **Low** sensitivity. The proposed development will therefore have a **negligible impact** on the biodiversity theme features.

Terrestrial Plant Species Specialist Report (Biodiversity Africa): The Terrestrial Plant Species Specialist Report stipulated the following:

- The Goukamma Dune Thicket was found to have a **High** sensitivity due to the likelihood of two vulnerable species occurring which contributes to the conservation importance of the vegetation type.
    - Mitigation: Avoidance mitigation will be applied by the developer by avoiding any development in the eastern portion of Erf 6503 containing Goukamma Dune Thicket.

The specialist confirms and supports the preferred development layout, with development being limited to the western portion of Erf 6503 (consisting of secondary grassy fynbos with a SEI of **Low),**

therefore applying avoidance mitigation by avoiding any development in the eastern portion of Erf 6503 (Goukamma Dune Thicket Vegetation with a SEI of **High**).

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 proposed development site is not located within a protected area.

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

Terrestrial Animal Species Specialist Report (Biodiversity Africa):

The DFFE screening tool report identified seven bird SCC, one amphibian species and two mammal species.

- Sensitive Species 8 (VU), Duthie's Golden Mole (*Chloroalkane duthieae*) (VU), Black Harrier (*Circus maurus*) (EN) and Knysna Warbler (*Bradypterus sulvaticus*) (VU) have a high likelihood of occurring in the Goukamma Dune Thicket vegetation of the project area.
- Duthie's Golden Mole (*Chloroalkane duthieae*) (VU), also has a high likelihood of occurring in the secondary grassy fynbos vegetation of the project area.
- Marsh Harrier (*Circus ranivorus*) (EN) and the Knysna Leaf Folding Frog (*Afrixalus knysnae*) (EN) have a high and medium likelihood of occurrence in the wetland habitat area respectively.
- The Caspian Tern (*Hydroprogne caspia*) has a high likelihood of occurrence in the Cape Seashore habitat.
- The Martial Eagle (*Polemaetus bellicosus*), Crowned Eagle (*Stephanoaetus coronatus*), and Denham's Bustard (*Neotis denhami*) all have a low likelihood of occurrence in the proposed development site.

The site ecological importance of the Goukamma Dune Thicket, Cape Seashore and the wetland habitat for faunal species of conservation (SCC) is identified to be **High**. The secondary grassy fynbos was identified as **Medium**.

Areas with a **High** SEI (eastern portion of Erf 6503) will be avoided (avoidance mitigation), with proposed development limited to the western portion of Erf 6503. Development in areas with a **Medium** SEI (western portion of Erf 6503) is permissible provided that all mitigation measures are adhered to.

5. GEOGRAPHICAL ASPECTS

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
No geographical aspects will be affected.

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.		
Stefan de Kock (Perception Planning)			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
Stefan De Kock (Perception Planning) submitted a Notice of Intent to Develop to Heritage Western Cape. Heritage Western Cape (HWC) confirmed that **no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.** HWC is a registered stakeholder on this application process.			

In the event that any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the development, all work must be stopped immediately, and Heritage Western Cape must be notified without delay.

7. HISTORICAL AND CULTURAL ASPECTS

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
No historical and cultural aspects will be affected.

8. SOCIO/ECONOMIC ASPECTS

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

The proposed development site is bordered by the Keurbooms Lagoon Holiday Resort to the north, the Keurbooms Estuary to the east, the Poortjies residential neighbourhood to the south and the Plettenberg Bay Primary School to the west.

Private residential properties in the area are associated with the high-end income bracket. Properties are of reasonable size, mostly with large homes. Redevelopment in the area see older houses being renovated and/or modified often.

The area is fully serviced and Municipality services are well maintained with a high level of service delivery. Road infrastructure is of good condition and maintenance done when required.

Due to the proximity of the various coastal suburbs that make up this Plettenberg Bay-Keurbooms area, the area offers both permanent as well as semi-permanent accommodation through short-term rental, as well as ownership.

Residents in the area are mostly well-educated, highly qualified and either employed or retired. There is a school in the immediate area (Plettenberg Bay Primary), and access to the beach and estuary makes it a popular area for walking/hiking and cycling.

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

Development of a lifestyle estate, in this particular area is unlikely to deter from the character/value of the greater area.

The proposed development will contribute to the socio-economic value of Bitou Municipality in the following ways:

- Create temporary employment opportunities during pre-construction and construction phase.
- Create employment opportunities during operational phase.
- Create temporary employment opportunities for contractors, small businesses and suppliers during construction and operational phases.
- Increase in the attraction of Bitou Municipality.
- Improve the holistic financial sustainability of the local municipality due to additional rates and taxes being generated.

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 is proposed as a private development. The 'community' in which the site is located is not characterised as impoverished and it is unlikely that community upliftment (projects) is required.

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.

Pre-construction and Construction Phase:

- Minimal noise impact – construction activities will be limited to normal working hours (07:00 – 18:00) with no activities to take place on Sundays and public holidays.
- No impact regarding odours.
- Minimal dust pollution – construction vehicle movement will be limited to the designated access routes and dust control measures will be put in place.

Operational Phase:

- No noise impact.
- No impact regarding odours.
- Low impact regarding visual character and sense of place.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. DETAILS OF THE ALTERNATIVES IDENTIFIED AND CONSIDERED

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

Provide a description of the preferred property and site alternative.

The western portion of Remainder of Erf 6503 located between the Plettenberg Bay Primary School and Keurboom Estuary, Bitou Municipality.

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

Below development proposal was considered by the Applicant at the outset of the environmental investigation process (Figure 11).

Figure 11: Original site development plan (not preferred and not assessed).

This alternative was eliminated on the basis that development would have encroached into the highly sensitive remaining dune thicket and wetland areas. This would have destroyed the coastal corridor that acts as a buffer against climate change conditions associated with sea level rise, coastal accretion, flooding and damages to property and infrastructure.

Furthermore the proposal relies on an access via the existing access point to the property, which is not supported in terms of the traffic assessment as the access.

In addition, this alternative does not accommodate the existing dwelling that is deemed to have heritage value as part of the concept.

The preferred layout has been informed by the outcome of several specialist studies and adjusted to avoid the sensitive features identified.

This alternative is not deemed feasible and although considered, has not been assessed for the purposes of this application process.

It is determined that the preferred layout is a substantial improvement on this original proposal for reasons stated above.

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

The preferred site alternative was identified considering the overall site sensitivity of RE/6503. The preferred area on the property is already disturbed by historical grazing activities. The prolonged exclusion of burning contributed to the disappearance of Garden Route Shale Fynbos. The vegetation within the development footprint, is no longer representative of the endangered fynbos species and rather that of secondary grassy fynbos.

The preferred site alternative also avoids the delineated wetland habitat and dune thicket in the eastern portion of the property, therefore preserving/maintaining the highly sensitive riparian area of the Keurbooms Estuary that will act as a coastal corridor and conservation area.

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

An aquatic specialist was appointed by the applicant to assist with the delineation of the wetland habitat on the property. This wetland delineation was captured in a spatial layer that was used to inform the location of the proposed development.

Botanical/Biodiversity specialists were appointed to map the habitat sensitivity of the remaining dune thicket area as well.

An overlay was performed of the various sensitivity maps to arrive at a 'development area' which was given to the Applicant to inform the preferred layout.

In addition, the heritage consultant identified the on-site heritage features (existing house) and such was used to inform the layout and orientation of the single residential erven in the northern portion of the site.

Consideration was subsequently given to the point of access and it was deemed that the existing access is not deemed a safe access point to the property with a development. The access point was adjusted as part of the preferred layout.

This alternative also included infrastructure i.e. jetty/moorings extending into the Keurbooms Estuary. It was pointed out that the property on which these structures are does not belong to the Applicant (different owner) and the Applicant was advised that is it not deemed sustainable considering the risk of future coastal processes that may damage such a structure.

The presence of a protected tree close to the proposed access point resulted in the micro-siting of the structure in the vicinity of the tree being such that it will avoid the tree altogether.

The information gathered was used by the Urban Planner to compile a site development plan presented herewith as the preferred alternative.

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

Site selection is determined by ownership and therefore no alternative other property was available for consideration by the applicant.

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

Positive Impacts:

- Development will be focused on the already disturbed portion of RE/6503 with less dense/sensitive vegetation compared to the remainder of the property in the lower lying, more sensitive wetland habitat.
- Development will make use of existing municipal water, sewage, and electrical services.
- Development will manage alien invasive vegetation species.
- Development will maintain protected indigenous trees on the property.
- Development will create employment opportunities.
- Additional income to the local municipality through municipal rates and taxes.
- Improved maintenance/management of the riparian area of Keurbooms Estuary.

Negative Impacts:

- Permanent loss of ~8.5ha of secondary grassy fynbos.
- Fragmentation of intact habitat with the positioning of residential units in an otherwise natural environment.
- Impacting on ecological support and critical biodiversity area objectives.
- Additional pressure on non-renewable (municipal) resources such as water and electricity.
- Additional traffic in the Poortjies residential neighbourhood, especially during the peak holiday periods.
- Additional waste generation that must be accommodated through the Municipal waste disposal systems.
- Additional effluent that must be accommodated through the Municipal sewage processing systems.
- Temporary noise impact during pre-construction and construction phases.

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

Provide a description of the preferred activity alternative.

Alternative 1 (Preferred):

The preferred activity alternative entails the following:

- Five (5) x General residential erven (**Residential Zone II**, high density), consisting of thirty-eight (38) apartments in total. (General apartments and retirement units).
- Twenty-eight (28) x Group housing erven (**Residential Zone II**, medium density).
- Nine (9) x Single residential erven (**Residential Zone I**, low density).
- Sixteen (16) x Garage units in the north-western corner of the single residential portion.
- Clubhouse to cater for the needs of the development.
- Entrance gate/road with security and fencing. Access will be approximately 18m wide (four lanes).
- Internal access roads between plots and apartments (**Transport Zone III**; up to 5.5m wide brick paved roads).
- Fourteen (14) x **Open Space Zone II** erven (~0.6985ha).
- One (1) x **Open Space Zone III** erf (~10.5784ha).

Alternative 2 was eliminated.

The (Alternative 3) **No-Go alternative** (status quo) with no development of a lifestyle resort. Under this alternative the current land use would continue within the primary rights of agriculture.

Considering the site is located within the urban edge and is designated for urban expansion however this alternative is unlikely to remain in place for much longer. The property is deemed prime residential property and as such it will be subject to development at some point in time.

Provide a description of any other activity alternatives investigated.

No activity alternatives were considered as the Applicant intends to develop a residential estate.

Provide a motivation for the preferred activity alternative.

Alternative 1 (Preferred):

Alternative 1 is the preferred activity due to the following aspects:

- Development will manage alien invasive vegetation species.
- Development will maintain protected indigenous trees on the property.
- Development will create temporary and permanent employment opportunities.
- Additional income to the local municipality through municipal rates and taxes.
- Improved maintenance/management of the riparian area of Keurbooms Estuary.
- Does not encroach beyond the property boundaries.
- Services is available for the proposed development (as confirmed by the Municipality).
- Access can be obtained via existing road infrastructure.
- Development is restricted to areas that are already transformed.

Provide a detailed motivation if no activity alternatives exist.

The proposal is regarded as desirable because the proposed development:

- Is unlikely to impact negatively on existing land use rights of neighbouring property owners;
- It will not prevent any surrounding owner to exercise their legal land use rights;
- Will create employment opportunities during the construction and operational phases.
- It will optimise vacant land in an urban setting.
- It will contribute to the holistic financial sustainability of Bitou Municipality.
- It will support the management objectives of the Keurbooms-Bitou Estuarine Management Plan (K-BEMP).

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

Impact	No-Go Alternative	Alternative 1 (Preferred)
Positive	No vegetation will be disturbed. Habitat will remain intact. No fragmentation of ecosystem patterns/processes.	Invasive alien vegetation will be managed better through designated management and levees that will be allocated for environmental management inclusive of invasive alien management in particular. Employment opportunities will be created. Create an additional attraction and accommodation in an area that is popular amongst tourists. Additional rates and taxes will be generated for the Municipality.

		Support the management objectives of the K-BEMP.
Negative	Invasive alien vegetation will be less maintained since the area is not utilised by the residents/homeowners or visitors that generally obliges the owners/managers to keep invasive alien vegetation under control. No additional employment opportunities will be created. Property will remain vacant, and concern has been raised about land invasion. No addition attraction for Bitou Municipality. No additional rates and taxes will be generated towards Municipal income. Risk of informal settlement within the remaining natural areas since there is no fence along the estuary and the area is accessible on foot from other areas along the Estuary.	Permanent loss of ~8.5ha of vegetation. Fragmentation of intact habitat and ecosystem. Impacting on the CBA objectives. Additional traffic especially during peak holiday periods. Additional pressure on non-renewable resources.

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

Provide a description of the preferred design or layout alternative.

Alternative 1 (Preferred):

The preferred design layout entails the following (Figure 2):

- Five (5) x General residential erven (**Residential Zone II**, high density), consisting of thirty-eight (38) apartments in total. (General apartments and retirement units).
- Twenty-eight (28) x Group housing erven (**Residential Zone II**, medium density).
- Nine (9) x Single residential erven (**Residential Zone I**, low density).
- Sixteen (16) x Garage units in the north-western corner of the single residential portion.
- Clubhouse to cater for the needs of the development.
- Entrance gate/road with security and fencing. Access will be approximately 18m wide (four lanes).
- Internal access roads between plots and apartments (**Transport Zone III**; up to 5.5m wide brick paved roads).
- Fourteen (14) x **Open Space Zone II** erven (~0.6985ha).
- One (1) x **Open Space Zone III** erf (~10.5784ha).

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

Alternative 2 (not preferred and not assessed):

The original site development plan entails the following (**Error! Reference source not found.**):

- Access to the proposed development will be from Beacon Way between Checkers Centrum and Plettenberg Bay Primary School.

- Dwelling units are concentrated in the southern portion of the property, with erven located within the environmentally sensitive lower lying estuary area.
- Ten (10) x General residential erven with a retirement component (Residential Zone IV), consisting of four (4) apartments in each erf = forty (40) apartments in total.
- Twenty-three (23) x Group housing erven (Residential Zone II).
- Thirteen (13) x Single residential erven (Residential Zone I).
- Jetty in the Keurbooms Estuary.

Provide a motivation for the preferred design or layout alternative.

The preferred alternative layout was specifically designed to avoid the delineated wetland habitat in the eastern portion of the property, with development being limited to already disturbed secondary grassy fynbos vegetation.

The preferred layout allows for a 30m wetland habitat buffer to be adhered to and therefore contributing to the objectives of the K-BEMP.

The preferred layout omits the jetty in the Keurbooms Estuary.

The preferred layout takes input from specialist and authorities regarding the entrance of the development into consideration.

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

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

Impact	Alternative 1 (Preferred)	Alternative 2 (Not Preferred)
Positive	Avoids all protected indigenous trees. Allows for 30m a buffer on the delineated wetland habitat. Contributes to the management objectives of the K-BEMP. In line with the management objectives of the Western Cape Biodiversity Spatial Development Framework for CBA 1 areas. Allows for the management of alien invasive species in the eastern portion of the property.	Avoids all protected indigenous trees.
Negative	Permanent loss of ~8.5ha of secondary grassy fynbos vegetation.	Permanent loss of Goukamma Dune Thicket. Development will take place within the delineated wetland habitat. Fragmentation of natural environment due to fences that will block animal movement within the remaining natural habitat in the north of the property.

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:

Internal Roads and Parking Areas:

The design of all internal roads and parking areas will be similar to typical urban road networks with a minimum 2.0% crossfall and 0.5% longitudinal slope. The road network will consist of 5.5m wide brick paved roads with formal kerbs/edgings, roadside channels and a stormwater network (Figure 12). Each single residential unit will have a double garage and two additional parking bays in front of the garage.

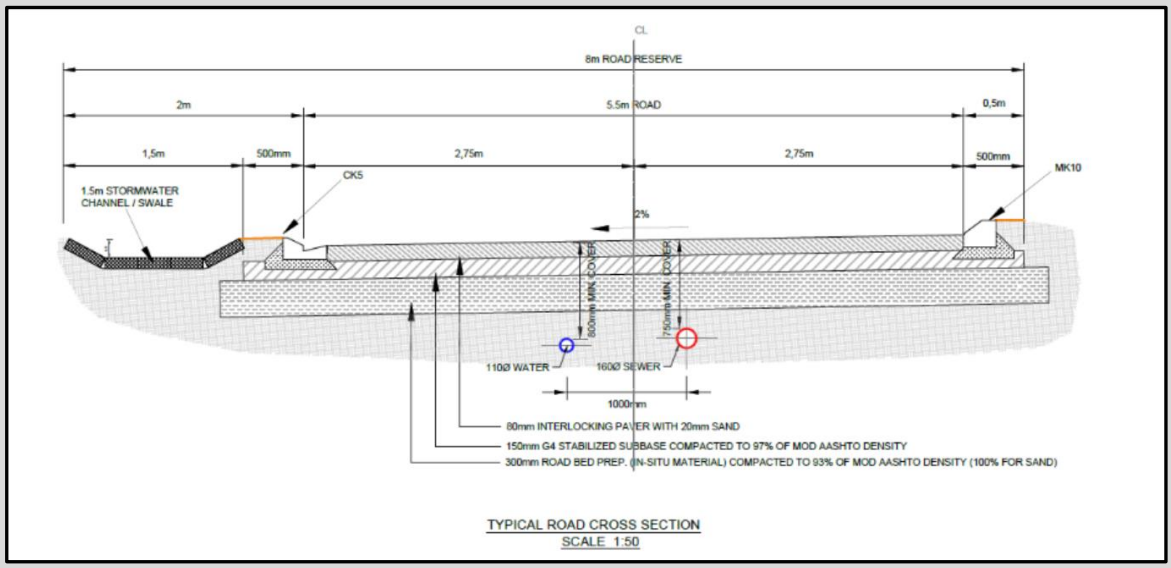


Figure 12: Typical road cross-section (Vita Consulting Engineers, 2023).

Provide a description of any other technology alternatives investigated.

Provide a motivation for the preferred technology alternative.

The internal roads and parking areas have been designed for low heavy vehicle traffic such as construction vehicles, furniture removal and refuse trucks, which will make allowance for the insitu subgrade conditions.

Provide a detailed motivation if no alternatives exist.

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

The internal roadways are designed to act as overland flow routes which will convey stormwater run-off towards the lower lying eastern portion of the property.

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

Provide a description of the preferred operational alternative.

Please also refer to Section 1.2,1.3 and 1.4 under 'Alternatives'.

Provide a description of any other operational alternatives investigated.

Provide a motivation for the preferred operational alternative.

Provide a detailed motivation if no alternatives exist.

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

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 alternative is not preferred due to the following reasons:

- The HOA will maintain invasive alien vegetation across the proposed open space areas.
- The large vacant property is not fenced and uncontrolled access is of concern potentially linked to the threat of land invasion of vacant portions of land within urban areas.
- Considering that the site does contain areas where development can be considered without compromising ecological integrity, patterns or processes, optimising vacant land within the urban edge is worth considering.
- Development rights will contribute to the economic sustainability of the Municipality through rates and taxes that is much higher than the current rates for open space.
- The development footprint is not deemed unacceptable considering that the majority of the site will still remain natural with ecological functioning, whilst increased economic benefits will arise from the preferred alternative.
- The proposed development will allow for better preservation/maintenance of the riparian area of the Keurbooms Estuary.
- Compliance with spatial planning and protocols for infill development within urban areas.

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.

Should any reasonable and feasible alternatives be proposed as part of the stakeholder engagement process, such will be considered and responded to as part of the ongoing environmental process.

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

The proposed development is deemed preferable and suitable for the proposed property for the following reasons:

- Site location is suitable within the urban context in terms of proximity to town centres, amenities and public beaches.
- Accessibility is existing with well-maintained, existing access road network (access can be gained from existing municipal / provincial roads).
- Partial development of the site is aligned with the planning principles of optimising vacant land within an urban environment.
- The development of a lifestyle village in the location is deemed compatible with the surrounding land use character which consist of single residential, apartments, resorts and other holiday accommodations.
- Highly sensitive biodiversity areas/corridors will be avoided and actively maintained.
- The development footprint is small and allows for a large Open Space area.
- Attention is given to climate change through providing for a coastal corridor that will benefit the site in the long-term by minimising potential for coastal flooding/damages associated with sea-level rise and increased storm events.

2. "NO-GO" AREAS

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

The delineated wetland habitat and 30m buffer zone located in the eastern portion of the proposed development site is considered as No-Go areas and should be avoided during the pre-construction and construction phases (Figure 13).

No-Go areas for environmentally sensitivity that have been identified, must be established/demarcated before commencement of construction. All personnel involved in the development must be briefed about the exact location of the "No-Go" areas.

The milkwood tree identified will be accommodated in the development layout plan and will not be removed. However, if any additional protected tree saplings area identified in the planning and investigation period, it will be handled accordingly by either adjusting the site layout plan or obtaining the relevant permits for replanting.

Figure 13: Delineated wetland habitat with 30m buffer area considered as No-Go areas.

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.

Criteria for Assessment

These criteria are drawn from the EIA Regulations, published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989.

These criteria include:

- **Nature of the impact**

This is the appraisal 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 / EAP 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 / EAP should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The study must attempt to quantify the magnitude of the impacts and outline the rationale used.

- **Probability of occurrence**

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

The impacts should also be assessed in terms of the following aspects:

- **Legal requirements**

The specialist / EAP should identify and list the relevant South African legislation and permit requirements pertaining to the development proposals. He / she should provide reference to the procedures required to obtain permits and describe whether the development proposals contravene the applicable legislation.

- **Status of the impact**

The specialist / EAP should determine whether the impacts are negative, positive or neutral ("cost – benefit" analysis). The impacts are to be assessed in terms of their effect on the project and the environment. For example, an impact that is positive for the proposed development may be negative for the environment. It is important that this distinction is made in the analysis.

- **Accumulative impact**

Consideration must be given to the extent of any accumulative impact that may occur due to the proposed development. Such impacts must be evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

- **Degree of confidence in predictions**

The specialist / EAP should state what degree of confidence (low, medium or high) is there in the predictions based on the available information and level of knowledge and expertise.

Based on a synthesis of the information contained in the above-described procedure, you are required to assess the potential impacts in terms of the following significance criteria:

No significance: the impacts do not influence the proposed development and/or environment in any way.

Low significance: the impacts will have a minor influence on the proposed development and/or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.

Moderate significance: the impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.

High significance: the impacts will have a major influence on the proposed development and/or environment and will result in the "No-Go" option on the development or portions of the development regardless of any mitigation measures that could be implemented. This level of significance must be well motivated.

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.

Aquatic Impact Assessment	
Alternative:	**Alternative 1 (Preferred)**
Construction Phase	
Potential impact and risk:	**Pre-construction wetland rehabilitation / Habitat degradation by alien vegetation and through mowing**
Nature of impact:	Without Mitigation – Negative With Mitigation – Positive
Extent and duration of impact:	Without Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Medium term (Impact will last between 5 and 10 years). With Mitigation: Extent – Very Limited (Limited to specific isolated parts of the site). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are slightly altered. With Mitigation: Natural and/or social functions and/or processes are majorly altered.
Probability of occurrence:	Without Mitigation – Almost certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Likely (The impact may occur).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Low (The resource is not damaged irreparably or is not scarce).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention).

	With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor – Negative
Degree to which the impact can be avoided:	High – By adhering to demarcated "No-Go" areas.
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	High – Mitigation measures are stipulated and will considerably reduce the significance of the impact.
Proposed mitigation:	• Control alien vegetation in isolated stands where it occurs. No herbicide to be used in the wetland. Large trees must be fully ring-barked, while smaller plants can be hand-pulled or removed using a tree popper. Shrubs of bramble and Lantana must be cut back with clippers until the stump is visible, which must then be removed. • All vegetation biomass must be removed from the wetland and disposed of at a green waste dump. No vegetation must be dumped in the wetland. • Follow up alien investigation must be conducted every 6 months following initial clearing to ensure emergent seedlings are consistently removed. • Cease mowing the northern area of the wetland barring one path that can be maintained for access to the lagoon and a strip large enough for a single vehicle along the boundary fence line.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor - Positive

Potential impact and risk:	**Disturbance to wetland and buffer areas / Vehicles, workers and materials active in wetland and buffer areas**
Nature of impact:	Without Mitigation – Negative With Mitigation – Negative
Extent and duration of impact:	Without Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Short term (Impact will last between 1 and 5 years). With Mitigation: Extent – Very Limited (Limited to specific isolated parts of the site). Duration – Immediate (Impact will self-remedy immediately).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are notably altered. With Mitigation: Natural and/or social functions and/or processes are slightly altered.
Probability of occurrence:	Without Mitigation – Almost certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – High (The resource is damaged irreparably and is not represented elsewhere). With Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor - Negative

Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	High – Mitigation measures are stipulated and will considerably reduce the significance of the impact.
Proposed mitigation:	• Pre-construction, temporary fencing must be erected along No-Go areas with the top of the slope leading to the wetland indicated as the sensitive feature. • Signage indicating No-Go areas must be placed on fencing. • All contractors must attend a site induction and be briefed that vehicles, workers, equipment and materials may not encroach into No-Go areas around wetlands. • Consider the termination of contracts or fines for encroachment into the No-Go area.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative
Potential impact and risk:	**Stormwater runoff from the site / Sedimentation in the wetland and creation of preferential flow paths**
Nature of impact:	Without Mitigation – Negative With Mitigation – Negative
Extent and duration of impact:	Without Mitigation: Extent – Local (Extending across the site and to nearby settlements). Duration – Medium term (Impact will last between 5 and 10 years). With Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are notably altered.

	With Mitigation: Natural and/or social functions and/or processes are somewhat altered.
Probability of occurrence:	Without Mitigation – Almost certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Low (The resource is not damaged irreparably or is not scarce).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Medium – Mitigation measures are stipulated and will notably reduce the significance of the impact.
Proposed mitigation:	• The objective of stormwater management during the construction phase is to eliminate the risk as far as possible of discharging sediment-laden water downslope into the wetland. • Daily and weekly site meetings must consider forecasted rainfall to avoid working during such periods, and to plan accordingly for predicted high rainfall events. Work on the site must cease altogether during rainfall. • The site office must have a store of materials suitable for rapid response to erosion control such as shade-cloth (silt-fencing), haybales (check-dams), wooden droppers, hessian fabric, and fencing wire. • All material stores should be kept on flat areas and bunded to prevent material loss during rainfall.

	• When construction commences in the residential area, create a compacted, low soil berm along the perimeter of the site approximately 400 mm high to retain stormwater on site and reduce runoff to surrounding areas. • Monitor the site during / following periods of rainfall and install haybale check dams at points where runoff collects and could overtop / breach the soil berm. • Following rainfall, any water that must be pumped out of pools in excavated areas must not be directed to the wetland. The soil berm system or a temporary haybale check dam can be constructed to contain water until it seeps into the ground or slowly disperses through the haybales which act as a filter.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative
Potential impact and risk:	**Excessive disturbance for construction of stormwater outflows / Loss of stabilising vegetation leading to erosion and sedimentation in the wetland**
Nature of impact:	Without Mitigation – Negative With Mitigation – Negative
Extent and duration of impact:	Without Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Medium term (Impact will last between 5 and 10 years). With Mitigation: Extent – Very Limited (Limited to specific isolated parts of the site). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are notably altered. With Mitigation: Natural and/or social functions and/or processes are moderately altered.
Probability of occurrence:	Without Mitigation – Almost certain / Highly probable (It is most likely that the impact will occur).

	With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Despite there being multiple (3 or 4) outlets, these should be aligned with existing pathways and roads, limiting the cumulative impacts.
Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Medium – Mitigation measures are stipulated and will notably reduce the significance of the impact.
Proposed mitigation:	• A maximum 2 m footprint of disturbance either side of each stormwater outlet to the wetland is acceptable. This area must be fenced off with temporary fencing or pegged, so that workers know the maximum limit of disturbance to soil or vegetation. • Where vegetation is in the way of works, it should be trimmed or cut, and the roots and soil must not be disturbed. • Where gabions / reno mattresses must be installed, excavations and installation should be undertaken by hand wherever possible, and work should preferably be done from the road / pathway-side as the primary access point. • All excavated soil and / or cut and removed vegetation must be disposed of via the residential area and not dumped in the wetland. No materials used in the construction of the stormwater outflow can be dumped in the wetland.

	• Works should commence in the direction from bottom to top, so that the stilling basin is created first and can catch any sedimentation that occurs upslope during construction of the outflow.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Despite there being multiple (3 or 4) outlets, these should be aligned with existing pathways and roads, limiting the cumulative impacts.
Significance rating of impact after mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative
Potential impact and risk:	**Greater than necessary footprint for fence line installation / Loss of stabilising vegetation habitat disturbance**
Nature of impact:	Without Mitigation – Negative With Mitigation – Negative
Extent and duration of impact:	Without Mitigation: Extent – Local (Extending across the site and to nearby settlements). Duration – Medium term (Impact will last between 5 and 10 years). With Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are notably altered. With Mitigation: Natural and/or social functions and/or processes are somewhat altered.
Probability of occurrence:	Without Mitigation – Likely (The impact may occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Low (The resource is not damaged irreparably or is not scarce). With Mitigation – Low (The resource is not damaged irreparably or is not scarce).

Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	High – Mitigation measures are stipulated and will considerably reduce the significance of the impact.
Proposed mitigation:	• The limit of disturbance along the fence line area is 2 m on the residential side of the development. • The fence line can be installed with the help of a small machine such as a bobcat but should otherwise be installed by hand. • Vegetation obstructing work on the fence line should be cut or trimmed, and not uprooted. As this could lead to soil erosion. • Disturbed soil along the fence line on the side of the residential development should be revegetated with low growing indigenous grass such as Cynodon dactylon (kweek) and / or *Stenotaphrum secondatum* (buffalo grass). This can create a relatively open area along the fence line which can be monitored or patrolled.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative

Operational Phase	
Potential impact and risk:	**Damage caused by stormwater runoff / Slope erosion and sedimentation of the wetland**
Nature of impact:	Without Mitigation – Negative With Mitigation – Negative
Extent and duration of impact:	Without Mitigation: Extent – Local (Extending across the site and to nearby settlements). Duration – Medium term (Impact will last between 5 and 10 years). With Mitigation: Extent – Very Limited (Limited to specific isolated parts of the site). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are notably altered. With Mitigation: Natural and/or social functions and/or processes are somewhat altered.
Probability of occurrence:	Without Mitigation – Likely (The impact may occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Low (The resource is not damaged irreparably or is not scarce).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High)	Minor - Negative

Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Medium – Mitigation measures are stipulated and will notably reduce the significance of the impact.
Proposed mitigation:	• The site should be assessed by an aquatic specialist 6 months following conclusion of construction to confirm that stormwater management infrastructure is functional and not causing any impacts to the wetland. • Stormwater management infrastructure such as swales, drains and culverts must be routinely monitored and maintained to ensure they are free of blockages and functional. This includes a regular inspection of all stormwater outflows to identify any emerging erosion issues, and keep the structures clear of excessive siltation and litter. • Where erosion is occurring, immediately identify and control the origin of the flow path and protect the site of erosion by replacing soil with soil from the site, and stabilising with indigenous vegetation found on the site. Where more serious interventions are required spot installations of gabions may be suitable for stabilisation provided they are not in the wetland buffer or in the wetland itself. As far as possible, flows must be attenuated, and the source of erosion controlled upslope within the residential area. • Eroded areas of the steep banks must be refilled with topsoil (from the site), reseeded with indigenous vegetation, covered with a light mulch and protected with soil saver mats. The use of silt fencing can be extended to problem areas to provide further protection.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative
Potential impact and risk:	**Alien vegetation establishment / Establishment of aliens in disturbed areas post – construction resulting in habitat degradation**
Nature of impact:	Without Mitigation – Negative

	With Mitigation – Positive
Extent and duration of impact:	Without Mitigation: Extent – Local (Extending across the site and to nearby settlements). Duration – Medium term (Impact will last between 5 and 10 years). With Mitigation: Extent – Very Limited (Limited to specific isolated parts of the site). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are moderately altered. With Mitigation: Natural and/or social functions and/or processes are slightly altered.
Probability of occurrence:	Without Mitigation – Almost certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Low (The resource is not damaged irreparably or is not scarce).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	High – Mitigation measures are stipulated and will considerably reduce the significance of the impact.

Proposed mitigation:	• Follow up inspection and control of alien vegetation in the residential development and the wetland on a 6- monthly basis. • No herbicides to be used in the wetland or wetland buffer. Sprays and / or cut-stump treatments may be used in the residential areas. • Ensure bare areas of vegetation are replanted with indigenous vegetation that occurs naturally on the site. • Under no circumstances may removed alien plants be discarded in the wetland. The HOA must inform the landscaping / gardening team that no dumping of vegetation or discarding of waste material may happen in the wetland or buffer area.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Positive
Potential impact and risk:	**Landscaping and recreational pathways maintenance / Inappropriate mowing, planting or trimming of vegetation leading to habitat degradation**
Nature of impact:	Without Mitigation – Negative With Mitigation – Positive
Extent and duration of impact:	Without Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Short term (Impact will last between 1 and 5 years). With Mitigation: Extent – Very Limited (Limited to specific isolated parts of the site). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are moderately altered. With Mitigation: Natural and/or social functions and/or processes are slightly altered.

Probability of occurrence:	Without Mitigation – Almost certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention). With Mitigation – High (The affected environment will be able to recover from the impact).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	High – Mitigation measures are stipulated and will considerably reduce the significance of the impact.
Proposed mitigation:	• Mowing of the wetland area to the north of the site must cease altogether. The only areas that can be mowed are the existing pathways and a 2m strip along the residential side of the fence line. One pathway can be maintained through the northern area of the wetland which is currently mowed. • Only existing pathways through the wetland and buffer may be maintained. Maintenance involves removal of alien vegetation (previously discussed), trimming and weed eating of pathways. No disturbance to plant roots or soil is permitted. • No herbicides can be used to maintain pathways in the wetland area or buffer. • The existing footprint of the pathways may not be enlarged. • Do not plant any exotic plants that do not occur naturally at the site in any area of the wetland or buffer i.e., under no circumstances may kikuyu grass be planted in any part of the wetland or buffer.

Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Positive
Potential impact and risk:	**Leaking, blocked or overflowing sewerage infrastructure / Pollution and eutrophication of the wetland leading to habitat degradation and impacts to biota.**
Nature of impact:	Without Mitigation – Negative With Mitigation – Negative
Extent and duration of impact:	Without Mitigation: Extent – Local (Extending across the site and to nearby settlements). Duration – Short term (Impact will last between 1 and 5 years). With Mitigation: Extent – Limited (Limited to the site and its immediate surroundings). Duration – Brief (Impact will not last longer than 1 year).
Consequence of impact or risk:	Without Mitigation: Natural and/or social functions and/or processes are notably altered. With Mitigation: Natural and/or social functions and/or processes are slightly altered.
Probability of occurrence:	Without Mitigation – Probable (The impact has occurred here or elsewhere and could therefore occur). With Mitigation – Unlikely (Has not happened yet but could happen once in the lifetime of the project).
Degree to which the impact may cause irreplaceable loss of resources:	Without Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere). With Mitigation – Medium (The resource is damaged irreparably but is represented elsewhere).
Degree to which the impact can be reversed:	Without Mitigation – Medium (The affected environment will only recover from the impact with significant intervention).

	With Mitigation – Medium (The affected environment will only recover from the impact with significant intervention).
Indirect impacts:	None Identified
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor – Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	High – Mitigation measures are stipulated and will considerably reduce the significance of the impact.
Proposed mitigation:	• All sewerage infrastructure must be well maintained and kept free of obscuring vegetation. Manholes, sewer lines, and the pump stations must be accessible, easily observed, and routinely inspected for leaks or blockages. • Emergency response measures to sewage spillages should be maintained on site, including lime to treat sewage and sand bags to contain spill and limit their dispersal. An emergency response protocol must be established by management of the HOA. • Residents should be provided with information of what can / cannot be flushed into toilets. This knowledge is often assumed but is frequently over-estimated. Even educated people treat a toilet like a rubbish bin. • Ensure sufficient backup power systems are available for the operation of pump stations during load shedding and at peak times (e.g., December).
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative

Terrestrial Animal Species Specialist Assessment	
Alternative:	**Alternative 1 (Preferred)**
Construction Phase	
Potential impact and risk:	**Loss of faunal habitat**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised - Permanent
Consequence of impact or risk:	Loss of faunal habitat
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Resource could be partially lost
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Difficult
Proposed mitigation:	• The Goukamma Dune Thicket, Cape Seashore and Wetland Habitat must be declared a No-Go.

	• Construction vehicles and machinery must not encroach into adjacent habitat and must remain within the footprint of the project. • A stormwater management plan must be compiled and implemented and ensure that the wetland downslope is not impacted on. This plan must include measures to prevent erosion.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative
Potential impact and risk:	**Loss of faunal species of conservation concern (SCC)**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Study Area – Short Term
Consequence of impact or risk:	Loss of faunal species of conservation concern (SCC)
Probability of occurrence:	May Occur
Degree to which the impact may cause irreplaceable loss of resources:	Resource could be partially lost
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative

Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Achievable
Proposed mitigation:	• A clause must be included in contracts for ALL personnel working on site stating that: "no wild animals will be hunted, killed, poisoned or captured. No wild animals will be imported into, exported from or transported in or through the province. No wild animals will be sold, bought, donated and no person associated with the development will be in possession of any live wild animal, carcass or anything manufactured from the carcass." A clause relating to fines, possible dismissal and legal prosecution must be included should any of the above transgressions occur for SCC. • The Goukamma Dune Thicket and Wetland Habitat must be declared a No-Go area.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative
Potential impact and risk:	**Disturbance of faunal species**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Short Term
Consequence of impact or risk:	Disturbance of faunal species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Resource could be partially lost

Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Difficult
Proposed mitigation:	• Slow moving species, such as tortoises that may be in harms way during construction, must be moved and placed out of harm's way in habitat immediately adjacent to the project area within the reserve. • All night lighting must be minimised and if required, only down lighting must be used and placed as low as practical and low light emitting bulbs (LED's). • Vehicles and machinery must meet best practice standards as this will minimise noise and vibrations. • Staff and contractors' vehicles must comply with speed limits of maximum of 40km/hr. • Project must start and be completed within the minimum timeframe. i.e., may not be started and left incomplete.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
Potential impact and risk:	**Mortality of faunal species**

Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Permanent
Consequence of impact or risk:	Mortality of faunal species
Probability of occurrence:	May Occur
Degree to which the impact may cause irreplaceable loss of resources:	Resource could be partially lost
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Achievable
Proposed mitigation:	• ECO (or relevant person) to walk ahead of clearing construction machinery and move slow moving species, e.g., tortoises, out of harms way and into suitable neighbouring habitat. • A snake handler should be on call to provide removal and relocation service should any snakes be found on site or entering neighbouring homes. • Speed restrictions of 40km/hr must be adhered to for all vehicles to reduce the impact of killed fauna on the project roads.
Residual impacts:	Not Applicable

Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
Operational Phase	
Potential impact and risk:	**Disturbance of faunal species**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Permanent
Consequence of impact or risk:	Disturbance of faunal species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Resource could be partially lost
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Difficult

Proposed mitigation:	• No lights must be placed on the exterior wall facing the thicket habitat. Should general lighting inside the estate be used, only down lighting must be used and placed as low as practical and low light emitting bulbs (LED's). • Vehicles and machinery must meet best practice standards as this will minimise noise and vibrations. • Staff and contractors' vehicles must comply with speed limits of maximum of 40km/hr.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
Decommissioning Phase	
Potential impact and risk:	**Disturbance of faunal species**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Short Term
Consequence of impact or risk:	Disturbance of faunal species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Resource could be partially lost
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable
Significance rating of impact prior to mitigation	Moderate - Negative

(e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Difficult
Proposed mitigation:	• All night lighting must be minimised and if required, only down lighting must be used and placed as low as practical and low light emitting bulbs (LED's). • Vehicles and machinery must meet best practice standards as this will minimise noise and vibrations. • Staff and contractors' vehicles must comply with speed limits of maximum of 40km/hr. • Decommissioning must start and be completed within the minimum timeframe. i.e., may not be started and left incomplete.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative

Terrestrial Plant Species Specialist Assessment		
Alternative:	**No Go Option**	**Alternative 1 (Preferred)**
Construction Phase		
Potential impact and risk:	**Loss of secondary grassy fynbos**	
Nature of impact:	Existing – Negative	Direct - Negative
Extent and duration of impact:	Localised – Long Term	Localised - Permanent
Consequence of impact or risk:	If the project did not proceed, the secondary grassy fynbos vegetation would remain intact with limited impacts, such as mowing occurring.	Loss of secondary grassy fynbos
Probability of occurrence:	Probable	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resource will be partly lost
Degree to which the impact can be reversed:	Not Applicable	Reversible
Indirect impacts:	Not Applicable	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable	There are no other known developments affecting secondary grassy fynbos within the broader project area. As such, the cumulative impacts associated with the loss of this vegetation type cannot be assessed.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative	Moderate - Negative

Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	• Vegetation clearance must be strictly limited to that which is necessary for the construction of the proposed residential estate and associated infrastructure. • Construction vehicles and machinery must not encroach into identified 'No-Go' areas (e.g., Goukamma Dune Thicket) or areas outside of the project footprint. • Topsoil (20 cm, where possible) must be collected and stored in areas of low (preferrable) and medium sensitivity and used to rehabilitate impacted areas that are no longer required during the operational phase (e.g., laydown areas). • Protected species should be translocated into surrounding undeveloped areas (on the same property) or rehabilitated areas. • No Alien Invasive Plant Species should be used for rehabilitation purposes. • Employees must be prohibited from making open fires during the construction phase. • Employees must be prohibited from collecting plants. It is recommended that spot checks of pockets and bags are done on a regular basis to ensure that no unlawful harvesting of plant species is occurring. • Basal plant cover must be maintained where possible to reduce the possibility of soil erosion.

		• Where excavation is required, topsoil should be removed and managed for use during rehabilitation. Topsoil often contains a large seedbank which can aid in the restoration of impact areas.
Residual impacts:	Not Applicable	Not Applicable
Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Low - Negative
Potential impact and risk:	**Loss of Goukamma Dune Thicket**	
Nature of impact:	Existing – Negative	Direct - Negative
Extent and duration of impact:	Localised – Long Term	Localised – Permanent
Consequence of impact or risk:	If the project did not proceed, there would be no potential encroachment of construction activities. However, existing impacts associated with access by the public and the infestation of alien invasive species would persist. As such, the No-Go impact is classified as moderate.	Loss of Goukamma Dune Thicket
Probability of occurrence:	Definite	May Occur
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resources will be lost
Degree to which the impact can be reversed:	Not Applicable	Irreversible
Indirect impacts:	Not Applicable	Not Applicable

Cumulative impact prior to mitigation:	Not Applicable	Portions of Goukamma Dune Thicket have already been lost along the coastline surrounding the project area due to residential development and urban expansion. As such, encroachment of construction activities into the Goukamma Dune Thicket would contribute to the cumulative loss of this vegetation type within the broader area.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative	High – Negative
Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	• Delineate the construction footprint to prevent encroachment of construction activities into intact Goukamma Dune Thicket. • If boardwalks/walkways are required, these must follow existing pathways through the thicket vegetation. These pathways cannot be made wider, and no thicket vegetation must be cleared to accommodate the construction or erection of boardwalks/walkways unless appropriate authorisation has been obtained. • Implement an Alien Invasive Management Plan/Method Statement and remove alien invasive plant species within the Goukamma Dune Thicket to increase the habitat available for indigenous plant species. • No AIP species may be used for landscaping in residents' gardens or common areas.

		• Design and implement a Stormwater Management Plan. • Design and implement an Erosion Method Statement. • Erect signs and/or notice boards informing construction staff of No-Go areas or areas of high sensitivity. • Regular toolbox talks should be presented to inform construction staff of No-Go areas or areas of high sensitivity.
Residual impacts:	Not Applicable	Not Applicable
Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Negligible
Potential impact and risk:	**Loss of plant species of conservation concern (SCC)**	
Nature of impact:	Negligible	Direct – Negative
Extent and duration of impact:	Negligible	Localised – Permanent
Consequence of impact or risk:	If the project did not proceed, the vegetation would remain intact with limited impacts occurring and no SCC will be lost.	Loss of plant species of conservation concern (SCC)
Probability of occurrence:	Negligible	Unlikely
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resources could be partly lost
Degree to which the impact can be reversed:	Not Applicable	Irreversible

Indirect impacts:	Not Applicable	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable	The proposed development is unlikely to impact on SCC and therefore will not contribute to the cumulative loss of SCC within the. As such, the cumulative impact is negligible.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Negligible
Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	• Vegetation clearance must be strictly limited that that which is necessary for the construction of the proposed residential estate and associated infrastructure. • Construction vehicles and machinery must not encroach into identified 'No-Go' areas or areas outside of the project footprint. • Protected species should be translocated into surrounding undeveloped areas (on the same property) or rehabilitated areas. • Permits must be obtained prior to the translocation/removal of protected SCC. • Should any threatened SCC be identified prior to or during vegetation clearance, infrastructure should be repositioned to avoid these individuals. If this is not possible, permits for the translocation of these species must be obtained and species should be

		translocated to the same habitat type on the same property. • Employees must be prohibited from collecting plants. It is recommended that spot checks of pockets and bags are done on a regular basis to ensure that no unlawful harvesting of plant species is occurring.
Residual impacts:	Not Applicable	Not Applicable
Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Negligible
Potential impact and risk:	**Habitat loss and fragmentation**	
Nature of impact:	Existing - Negative	Direct – Negative
Extent and duration of impact:	Localised – Long Term	Localised – Permanent
Consequence of impact or risk:	If the project did not proceed, habitat fragmentation is still likely to occur due to frequent access by the public. The impact associated with this will be low.	Habitat loss and fragmentation
Probability of occurrence:	Definite	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resources could be partly lost
Degree to which the impact can be reversed:	Not Applicable	Irreversible
Indirect impacts:	Not Applicable	Not Applicable

Cumulative impact prior to mitigation:	Not Applicable	Habitat fragmentation has already occurred due to the construction of surrounding residential developments and frequent access by the public which has caused breaks in the previously intact Goukamma Dune of the project area. Vegetation clearance will therefore contribute to the cumulative habitat loss and fragmentation.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible	Low - Negative
Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	Mitigation Measures of The Following Impacts to Be Implemented: • Loss of secondary grassy fynbos • Loss of Goukamma Dune Thicket
Residual impacts:	Not Applicable	Not Applicable
Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Low - Negative
Construction and Operation Phases		
Potential impact and risk:	**Infestation of alien plant species**	
Nature of impact:	Existing - Negative	Direct – Negative

Extent and duration of impact:	Localised – Long Term	Localised – Long Term
Consequence of impact or risk:	Alien invasive plant species have already established on site. Under the No-Go alternative these species are likely to continue multiplying if left unchecked. The current no go alternative is thus rated as moderate negative.	Infestation of alien plant species
Probability of occurrence:	Definite	May Occur
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resources will not be lost
Degree to which the impact can be reversed:	Not Applicable	Reversible
Indirect impacts:	Not Applicable	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable	Scattered alien invasive plant species are already present on site and within the surrounding area. If unmanaged, these species could spread, contributing to the cumulative establishment of alien invasive plant species and the displacement of indigenous plant species within the broader area.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Moderate - Negative	Moderate - Negative
Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	• The site must be checked regularly for the presence of alien invasive species.

		• All alien invasive species, that establish as a result of project activities, must be removed and disposed of as per the Working for Water Guidelines. • An Alien Invasive Management Plan/Method Statement must be compiled and implemented for all phases of the proposed development.
Residual impacts:	Not Applicable	Not Applicable
Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Low - Negative
Operational Phases		
Potential impact and risk:	**Loss of indigenous vegetation due to increased access by residents**	
Nature of impact:	Existing - Negative	Direct – Negative
Extent and duration of impact:	Localised – Long Term	Localised – Long Term
Consequence of impact or risk:	If the project did not proceed, existing impacts associated with access by the public and the infestation of alien invasive species would persist. As such, the No-Go impact is classified as low.	Loss of indigenous vegetation due to increased access by residents
Probability of occurrence:	Definite	May Occur
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resources could be party lost
Degree to which the impact can be reversed:	Not Applicable	Irreversible
Indirect impacts:	Not Applicable	Not Applicable

Cumulative impact prior to mitigation:	Not Applicable	Portions of Goukamma Dune Thicket (LC) and Cape Seashore Vegetation have already been lost along the coastline surrounding the project area due to residential development and urban expansion. As such, the further loss of indigenous vegetation would contribute to the cumulative loss of these vegetation types within the broader area.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative	Moderate - Negative
Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	• Residents should be made aware of the sensitivity of the Goukamma Dune Thicket and the foredune which supports Cape Seashore Vegetation through the erection of notice boards at strategic access points to and from the beach. • Access should be restricted to existing pathways and the most direct paths used. Pathways must be demarcated using environmentally friendly markers and paths off the main path, that should not be used by residents, should be cordoned off to prevent people accidentally using these. • No pruning or clearing of the Goukamma Dune Thicket is permitted unless the relevant permits have been obtained.
Residual impacts:	Not Applicable	Not Applicable

Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Low - Negative
Decommission Phases		
Potential impact and risk:	**Loss of re-established indigenous vegetation**	
Nature of impact:	Not Applicable	Direct – Negative
Extent and duration of impact:	Not Applicable	Localised – Long Term
Consequence of impact or risk:	If the proposed development does not proceed, there would be no decommissioning required and therefore no loss of indigenous vegetation.	Loss of re-established indigenous vegetation
Probability of occurrence:	Not Applicable	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable	Resources could be party lost
Degree to which the impact can be reversed:	Not Applicable	Reversible
Indirect impacts:	Not Applicable	Not Applicable
Cumulative impact prior to mitigation:	Not Applicable	Indigenous vegetation has already been lost within the surrounding area due to residential development and urban expansion. As such, should the decommissioning phase lead to the loss of indigenous vegetation, this would contribute to the cumulative loss of indigenous vegetation within the broader area. However, given the development footprint of the houses and the limited space available for the reestablishment of vegetation, the cumulative impact is likely to be low.

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Low - Negative
Degree to which the impact can be avoided:	Not Applicable	Not Applicable
Degree to which the impact can be managed:	Not Applicable	Not Applicable
Degree to which the impact can be mitigated:	Not Applicable	Achievable
Proposed mitigation:	Not Applicable	Mitigation Measures of The Following Impacts to Be Implemented: • Loss of secondary grassy fynbos • Loss of Goukamma Dune Thicket
Residual impacts:	Not Applicable	Not Applicable
Cumulative impact post mitigation:	Not Applicable	Not Applicable
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Not Applicable	Low - Negative

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

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

All impact management measures identified in the specialist studies have been stipulated in Section H) 4.

Aquatic Biodiversity Impact Assessment (Confluent Consulting): The Aquatic Biodiversity Impact Assessment stipulated the following:

- A wetland habitat was delineated in the eastern portion of Erf 6503 (Figure 8). It is considered as the last remaining natural wetland habitat on the western bank of Keurbooms Lagoon and therefor has a great significance.
    - Mitigation: The proposed development layout was amended to avoid the entire delineated wetland habitat in the eastern portion of the property. Development infrastructure will be focussed in the higher lying western portion of the property.
- A wetland buffer of 30 is recommended (Figure 9).
    - Mitigation: The 30m wetland buffer will be adhered to as this will protect the wetland from residential development and will provide a level of connectivity between the terrestrial and wetland areas of the Keurbooms Estuary.
- The SUDS-type interventions that are proposed provide confidence that stormwater can be effectively managed on site, with minimal risk to the wetland habitat and water quality.

The aquatic impact assessment determined most of the construction and operational phase impacts to be a **Negligible-Negative** with some impacts being **Negligible-Positive**.

A Water Use Licence Application (WULA) is required for the development due to the installation and connection to sewage pipelines that will be necessary within the regulated area of a wetland (defined as 500m from a wetland). The relevant water uses will be:

- Section 21 c) impeding or diverting the flow of water in a watercourse.
- Section 21 i) altering the bed, banks, course or characteristic of a watercourse.
- Section 21 g) disposing of waste in a manner which may detrimentally impact on a water resource.

The proposed development of the Plett Lagoon Estate is supported, provided that the residential areas are planned outside the wetland and buffer area with the wetland habitat being conserved and well maintained.

Terrestrial Biodiversity Compliance Statement (Biodiversity Africa): The Terrestrial Biodiversity Compliance statement stipulated the following:

- The western portion of RE/325 in which the Garden Route Shale Fynbos (endangered) historically occurred, has been disrupted by the prolonged exclusion of fire, mowing and historical grazing. The plant composition present is no longer representative of Garden Route Shale Fynbos and will therefore not contribute to the terrestrial biodiversity sensitivity and will not be affected by the proposed development.
    - Mitigation: The proposed development will be concentrated in the historically disturbed western portion of the property.
- Analysis of the features contributing to the classification of the critical biodiversity and ecological support areas within the proposed development area concludes that provided the proposed development is limited to the previously disturbed western portion of Erf 6503,

and the portion of Goukamma Dune Thicket (eastern portion of Erf 6503) being conserved, these features will not be impacted by the proposed development.

- Mitigation: The proposed development will be concentrated in the historically disturbed western portion of the property.

The proposed development will be limited to the secondary grassy fynbos with a **Low** sensitivity. The proposed development will therefore have a **Negligible impact** on the biodiversity theme features.

Terrestrial Plant Species Specialist Report (Biodiversity Africa): The Terrestrial Plant Species Specialist Report stipulated the following:

- The Goukamma Dune Thicket was found to have a **High** sensitivity due to the likelihood of two vulnerable species (*Erica glandulosa* subsp., and *Erfica glumiflora*) occurring which contributes to the conservation importance of the vegetation type.
  - Mitigation: Avoidance mitigation will be applied by the developer by avoiding any development in the eastern portion of Erf 6503 containing Goukamma Dune Thicket.
- No threatened species of conservation concern were identified in the project area.

The specialist confirms and supports the preferred development layout, with development being limited to the western portion of Erf 6503 (consisting of secondary grassy fynbos with a SEI of **Low**), therefore applying avoidance mitigation by avoiding any development in the eastern portion of Erf 6503 (Goukamma Dune Thicket Vegetation with a SEI of **High**).

The following conditions are stipulated in the Terrestrial Plant Species Specialist Report to be included in the EMMPr and EA:

- All mitigation measures listed for each impact must be incorporated into the EMMPr and implemented during the relevant phases of the development.
- All necessary plant permits must be obtained prior to the commencement of any construction activities for the following species:
  - *Carpobrotus edulis*
  - *Delosperma inconspicuum*
  - *Tetragonia decumbens*
  - *Tetragonia fruticose*
  - *Carpobrotus deliciosus*
  - *Brunsvigia orientalis*
  - *Aloe arborescens*
  - *Aloiampelos ciliaris*
  - *Chasmanthe aethiopica*
  - *Gladiolus gueinzii*
  - *Sideroxylon inerme*
  - *Agathosma apiculate*
- If present, protected species should be translocated into surrounding undeveloped areas (on the same property) or rehabilitated areas.
- No alien invasive plant species must be used for rehabilitation or landscaping.
- Implement an alien invasive management plan/method statement and remove alien invasive plant species for the Goukamma Dune Thicket to increase the habitat available for indigenous plant species.
- Design and implement a Stormwater Management Pan.
- Design and implement an Erosion Method Statement.
- Limit the number of construction workers and access within the thicket and foredune area.
- Should any threatened SCC be identified prior to, or during, vegetation clearance, infrastructure should be repositioned to avoid these individuals. If this is not possible, permits for the translocation of these species must be obtained and species should be translocated to the same habitat type on the same property.

- An Alien Invasive Management Plan/Method Statement must be compiled and implemented for all phases of the proposed development.
- If boardwalks/walkways are required, these must follow existing pathways through the thicket vegetation. These pathways cannot be made wider and no thicket vegetation must be cleared to accommodate the construction or erection of boardwalks/walkways unless the appropriate authorisation has been obtained.
- Erect signs and/or notice boards informing construction staff of No-Go areas or areas of high sensitivity.
- Residents should be made aware of the sensitivity of the Goukamma Dune Thicket and the foredune which supports Cape Seashore Vegetation through the erection of notice boards at strategic access points to and from the beach.

Terrestrial Animal Species Specialist Report (Biodiversity Africa):

The DFFE screening tool report identified seven bird SCC, one amphibian species and two mammal species.

- Sensitive Species 8 (VU), Duthie's Golden Mole (*Chloroalkane duthieae*) (VU), Black Harrier (*Circus maurus*) (EN) and Knysna Warbler (*Bradypterus sulvaticus*) (VU) have a high likelihood of occurring in the Goukamma Dune Thicket vegetation of the project area.
- Duthie's Golden Mole (*Chloroalkane duthieae*) (VU), also has a high likelihood of occurring in the secondary grassy fynbos vegetation of the project area.
- Marsh Harrier (*Circus ranivorus*) (EN) and the Knysna Leaf Folding Frog (*Afrixalus knysnae*) (EN) have a high and medium likelihood of occurrence in the wetland habitat area respectively.
- The Caspian Tern (*Hydroprogne caspia*) has a high likelihood of occurrence in the Cape Seashore habitat.
- The Martial Eagle (*Polemaetus bellicosus*), Crowned Eagle (*Stephanoaetus coronatus*), and Denham's Bustard (*Neotis denhami*) all have a low likelihood of occurrence in the proposed development site.

The site ecological importance of the Goukamma Dune Thicket, Cape Seashore and the wetland habitat for faunal species of conservation (SCC) is identified to be **High**. The secondary grassy fynbos was identified as **Medium**.

Areas with a **High** SEI (eastern portion of Erf 6503) will be avoided (avoidance mitigation), with proposed development limited to the western portion of Erf 6503. Development in areas with a **Medium** SEI (western portion of Erf 6503) is permissible provided that all mitigation measures are adhered to.

Agricultural Compliance Statement (Johann Lanz):

The Agricultural Compliance Statement concluded that the property has no agricultural production potential due to the property being located in an area that is not and highly unlikely to ever be utilised for agricultural production. Therefore, the development will not result in a change to the agricultural production potential of the land.

The agricultural impact of the proposed development on RE/6503 is assessed as being of no significance and acceptable.

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

All impact management measures that were identified by all specialists and described above (Section H, 4. and Section I, 1.) are included in the EMMPr.

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.

All impact management measures and specialist findings have been accommodated in the preferred alternative.

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

Development of a lifestyle estate, in this particular area is unlikely to deter from the character/value of the greater area.

The proposed development will contribute to the socio-economic value of Bitou Municipality in the following ways:

- Create temporary employment opportunities during pre-construction and construction phase.
- Create permanent employment opportunities during operational phase.
- Create temporary employment opportunities for contractors, small businesses and suppliers during construction and operational phases.
- Increase in the attraction of Bitou Municipality.
- Improve the holistic financial sustainability of the local municipality due to additional rates and taxes being generated.

There will be mostly temporary impacts associated with the construction phase, namely noise and potentially dust pollution.

The following key mitigation measures are submitted as part of the BAR (refer to the EMMPr (Appendix H) for more details):

- Construction activities must be limited to Mondays – Fridays (07:00 – 18:00) and Saturdays (08:00 – 13:00).
- Work may not take place on Sunday's or public holidays.
- Vegetation clearing must be done in phases to avoid large pieces of land being exposed to wind (which could result in unnecessary dust pollution).
- Make use of wetting agents should dust be a problem.
- Rehabilitation of work areas to take place as soon as possible to minimise dust pollution;
- An ECO must be appointed to oversee construction and must keep record of any complaints regarding noise/dust pollution.
- Construction material must be stored on-site, and construction vehicles must not obstruct traffic flows.

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.

- Water will become a very scares resource as periods of drought will be longer. Therefore, the use of rainwater collection tanks is important at the communal buildings as well as residential erven to provide additional water supply for landscaping and irrigation.
- Rainfall intervals will become less, but downpours may be more severe. Therefore, stormwater management on the site is important to prevent unnecessary erosion and/or flooding. The use of SUDS throughout the development, coupled with rainwater tanks at communal buildings, as well as road and parking deign will reduce the chances of erosion caused by stormwater runoff.
- Longer, drying periods will impact on plant growth and keeping landscaped areas presentable requires irrigation/watering. Planting only indigenous, endemic plants in landscaped areas will reduce the need for irrigation and also ensure that landscaped areas are more resilient during periods of drought.

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

There are no conflicting recommendations between the specialists.

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.

All the findings and recommendations have been incorporated into the proposal.

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

1. **Avoid Impacts:**
   - Avoid protected indigenous tree species. Avoidance mitigation has been applied to the preferred alternative.
   - Survey the recommended 30m buffer area from the wetland habitat prior to construction commencement to ensure that no development encroaching into this sensitive area.
   - Demarcate all protected trees prior to any vegetation clearing/development commencing to ensure that contractors do not cause harm/damage to such sensitive features in the landscape.
2. **Minimise Impacts:**
   - Clear Erf 6503 of all NEMBA listed invasive alien vegetation species prior to any site clearing/development to ensure that indigenous vegetation can recover and rehabilitate more easily.
   - Limit construction activities to specified days and times.
   - Clear the site in a phase manner to reduce dust pollution.
   - Only indigenous vegetation permitted in the place of the loss of remaining on-site natural vegetation/habitat.
   - Appointing an ECO to oversee construction to further minimise the potential for unnecessary direct or indirect impacts during the construction as well as the operational phase of the development.
   - Implement resource conservation measures as part of the design, construction and operational phases.
   - Implement Environmental Maintenance and Management Plan under ECO supervision.
3. **Rectify**
   - None necessary.
4. **Reduce**
   - Ensure that an ECO inspects the property regularly during its lifespan to monitor for (A) invasive alien vegetation and (B) encroachment into the remaining natural areas i.e. development creep.
5. **Off-Site**
   - None necessary.

SECTION J: GENERAL

1. ENVIRONMENTAL IMPACT STATEMENT

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

- From a spatial planning perspective, the development proposal is deemed to be in line with Western Cape SDF, Bitou Municipal SDF and IDP, particularly considering development of vacant land within the urban context.
- The development proposal is likely to contribute to positive socio-economic impacts through income generation as part of the residential erven sales, employment opportunities during the construction and operational phases.

- The site layout design avoids all highly sensitive areas identified and assessed by specialists.
- The development proposal is in character with surrounding developments as a residential development of mixed densities.
- Services are available through existing municipal supply.
- All specialist findings and mitigation measures have been considered and incorporated into the preferred alternative.

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)

The preferred alternative is representative of an overlay of the environmentally sensitive features (only features of concern) with the development proposal avoiding it.

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	Negative
Optimising vacant land in an urban context.	Temporary noise, dust and safety impacts associated with the movement of heavy vehicles.
Temporary employment opportunities during construction (to semi-skilled and un-skilled workers mostly).	Loss of secondary grassy fynbos vegetation and habitat albeit regarded as already disturbed with Low sensitivity.
Temporary and permanent employment opportunities during the operational (to skilled and semi-skilled workers mostly).	Temporary risk of increased crime during construction.
Support for local economic development.	Temporary increase in construction vehicle traffic.
Creation of business opportunities for locals.	Continued maintenance cost (alien clearing, access control, clearing of dumped materials).
Areas of highest biodiversity value on the preferred site will be retained.	Additional pressure on non-renewable services.
Invasive alien species will be continuously managed.	Increased operational traffic during peak periods impacting on Poortjies residential neighbourhood.

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

- Pre-construction clearing must be done with joint input from the ECO as well as a Botanist to ensure that new germinated protected tree/plant species, or trees that have grown in size between the date of EA and implementation, are identified.
- Ensure that the study site is cleared of all NEMBA listed invasive alien vegetation prior to any occupation of any units to help remnant indigenous habitat restore and rehabilitate.

- Rezoning all of the remaining natural areas to an appropriate Conservation Zoning to prohibit unwanted development creep or encroachment into remaining natural areas.
- Survey and demarcate the 30m buffer area on the wetland habitat prior to development commencing to ensure that development does not encroach beyond this buffer (the exception being stormwater and sewer infrastructure).
- Implement and adhere to an approved Environmental Maintenance and Management Plan.
- Implement and adhere to ongoing invasive alien management during construction as well as operational phases.
- Apply for Forestry Permits if any trimming/roots/removal may be required during construction or operational phases (layout plans avoid the on-site protected trees).
- Units must be fitted with rainwater tanks to be used for irrigation of landscaped areas.
- All landscaping must be indigenous vegetation in replacement of the loss of secondary vegetation/habitat.
- Restrict working times and hours to minimise noise/dust pollution.
- Employ minimum 50% local labour.
- Source minimum 50% construction materials locally.
- Resource conservation measures must be implemented.
- ECO must be appointed for the duration of the construction phase to (A) monitor invasive alien vegetation and (B) encroachment into the remaining natural areas and (B) ECO must evaluate house plans and landscaping plans to ensure no encroachment into no-go areas as well as to prevent unwanted invasive species in the landscaping.
- Annual audits must be undertaken to verify that the conservation area is in fact managed and maintained as a private nature reserve with the necessary care taken to protect and conserve this sensitive area into the operational phase.

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.

Please refer to Section J) 2.1, 2.3, 3, 4 and 5 below.

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.

The proposed activity can be considered for environmental authorisation for the following reasons:

- The western portion of the site is not deemed sensitive overall, therefore limiting development to the western portion is not likely to result in an unacceptable environmental loss;
- The loss of approximately 8.5ha of vegetation (excluding protected tree) within the proposed property is deemed acceptable on condition that the prescribed pre-construction, construction and operational conditions are adhered to.

PRE-CONSTRUCTION:

- Development may not proceed until such time as all approvals are obtained.
- An ECO must be appointed prior to construction to oversee site preparation, vegetation removal and construction.
- DAFF permits must be obtained prior to removal/trimming/cutting of any protected trees and/or on the property.
- Pre-construction clearing must be done with joint input from the ECO as well as a Botanist to ensure that new germinated protected tree/plant species, or trees that have grown in size between the date of EA and implementation, are identified.
- 30m buffer area along the wetland habitat must be surveyed and demarcated prior to any site clearing/development commencing to ensure that no encroachment happens into this sensitive area.

- All NEMA listed invasive alien vegetation must be removed from the site prior to development commencing – ECO to verify.
- ECO to demarcate all protected trees prior to any site clearing or development activities commencing.
- Forestry License(s) must be obtained for any trimming or removal of protected trees (fence is an exception ito the Fencing Act unless fence can be erected around a protected tree) prior to trimming or removal of any protected tree.

CONSTRUCTION:

- ECO must be appointed for the duration of the construction phase and must inspect site activities on a regular basis to ensure compliance with the EA and EMP;
- ECO must evaluate house plans and landscaping plans of individual erven to ensure no encroachment and the correct use of plants in gardens.
- Clearing of vegetation must be planned in phases to avoid large open areas that will be vacant for periods of time and that could result in unwanted dust pollution;
- EMP must be implemented and adhered to.

OPERATIONAL:

- ECO must be appointed to conduct regular site inspections (at least once a year) to (A) monitor invasive alien species and (B) any encroachment into the remaining natural areas beyond the approved development footprint.

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

The EAP assumes that the necessary approvals such as planning approvals / building plan approvals and contracts i.e., service level agreements, will be finalised within the initial five (5) year commencement period.

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.

Five (5) year validity period for the EA from date of authorisation to commence with construction.

Ten (10) year implementation period from date of commencement to completion of project (inclusive of individual homes/units).

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.

Residential units as well as all communal buildings must be fitted with rainwater tank collection systems for the operational phase to supplement municipal potable water for landscaping and irrigation.

Potable water may not be used during the construction phase.

4. WASTE

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

The contactor must provide recycle bins on the property during construction and must ensure that staff is aware of what products can be recycled/reused.

At-source separation of waste must be implemented during the operational phase.

5. ENERGY EFFICIENCY

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

Only LED lights must be used within the development.

Heat and/or solar pumps and/or gas geysers (or similar) must be used throughout the development.

SECTION K: DECLARATIONS

TO BE SIGNED FOR FINAL BASIC ASESSEMENT REPORT

1. DECLARATION OF THE APPLICANT

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

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

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

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

2023/11/10

Signature of the Applicant: Date:

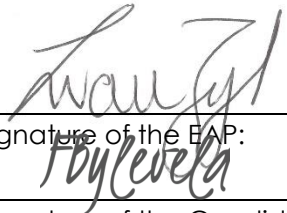
Name of company (if applicable):

2. DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I, **Ms Louise-Mari van Zyl**, EAPASA Registration number **……2019/1444……** as the appointed EAP hereby declare/affirm the correctness of the information provided or to be provided as part of this Pre-Application Draft Basic Assessment Report, and that:

I, **Mr Francois Byleveld**, EAPASA Registration number **……2023/6770……** as the appointed Candidate EAP hereby declare/affirm the correctness of the information provided or to be provided as part of this Pre-Application Draft Basic Assessment Report, and that:

- 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;



	2023/11/10
Signature of the EAP:	Date: 2023/11/10
Signature of the Candidate EAP:	Date:

Cape Environmental Assessment Practitioners (Cape EAPrac)
Name of company (if applicable):

3. DECLARATION OF THE REVIEW EAP

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

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

Click or tap to enter a date.

Signature of the EAP: Date:

Name of company (if applicable):

4. DECLARATION OF THE SPECIALIST

TO BE SIGNED FOR FINAL BASIC ASESSEMENT REPORT

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

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

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

Click or tap to enter a date.

Signature of the EAP: Date:

Name of company (if applicable):

5. DECLARATION OF THE REVIEW SPECIALIST

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

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

Click or tap to enter a date.

Signature of the EAP: Date:

Name of company (if applicable):