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: 15 August 2024

Appointed EAP: Ms Louise-Mari van Zyl (EAPASA Reg: 2019/1444)
Assisting Candidate EAP: Mr Francois Byleveld (EAPASA Reg: 2023/6770)
Appointed EAP E-mail: louise@cape-eaprac.co.za
Assisting Candidate EAP E-mail: francois@cape-eaprac.co.za

Report Reference: BIT794/10
Department Reference: 16/3/3/1/D1/13/0024/24
Case Officer: Steve Kleinhans

Cape EAPrac
Cape Environmental Assessment Practitioners

Tel: +27 44 874 0365 PO Box 2070, George 6530
Fax: +27 44 874 0432 17 Progress Street, George

www.cape-eaprac.co.za

APPOINTED ENVIRONMENTAL ASSESSMENT PRACTITIONER:

***Cape EAPrac* Environmental Assessment Practitioners**

PO Box 2070

George

6530

Tel: 044-874 0365

Fax: 044-874 0432

Appointed 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.

Assisted By - Candidate EAP: **Mr Francois Byleveld** (MSc Geology [University of the Free State] (Candidate EAPASA Registration Number: **2023/6770**) in assistance to the Appointed EAP.

PURPOSE OF THIS REPORT:

Draft Basic Assessment Report

APPLICANT:

Plett Lagoon Estate (Pty) Ltd

CAPE EAPRAC REFERENCE NO:

BIT794/10

SUBMISSION DATE

15 August 2024

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 PO Box 2070
17 Progress Street
Web: www.cape-eaprac.co.za George 6530

ORDER OF REPORT

Draft Basic Assessment Report

Appendix A1: **Locality Maps**

Appendix A2: **Coastal Risk Zones**

Appendix B1: **Site Development Plan**

Appendix B2: **Environmental Sensitivities Map**

Appendix C: **Photographs**

Appendix D: **Biodiversity Overlay Maps**

Appendix E1: **Final Comment From HWC**

Appendix E2: **Comment From Cape Nature**

Appendix E3: **Comment From BOCMA**

Appendix E5: **Comment From DFFE**

Appendix E7: **Comment From Department of Agriculture**

Appendix E12: **Comment From DEA&DP**

Appendix E15: **Comment From Bitou Municipality**

Appendix E16: **Confirmation of Services**

Appendix E17: **Comment From District Municipality**

Appendix E21: **Zoning Map**

Appendix F1: **Registered I&AP List**

Appendix F2: **Adverts and Site Notices (to be updated for Final BAR)**

Appendix F3: **Stakeholder Notifications**

Appendix F4: **Stakeholder Comments**

Appendix F5: **Comments and Response Report**

Appendix G1: **Aquatic Biodiversity Impact Assessment**

Appendix G2: **Terrestrial Animal Species Specialist Assessment**

Appendix G3: **Terrestrial Plant Species Specialist Assessment**

Appendix G4: **Terrestrial Biodiversity Compliance Statement**

Appendix G5: **Agricultural Compliance Statement**

Appendix G6: **Heritage BID and NID**

Appendix G7: **Specialist Planning Report**

Appendix G8:	**Engineering Services Report With Traffic Impact Assessment**
Appendix G9:	**Electricity Capacity Investigation**
Appendix H:	**Environmental Management Programme**
Appendix I:	**Screening Tool Report**
Appendix L:	**Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) Confirmation of the designation of RE/6503**
Appendix M:	**Plett Lagoon Estate Open Space Trail Map**
Appendix N:	**Engineering Services Layout**
Appendix O:	**WULA Technical Report With Appendices**

CONTENTS

TABLE OF FIGURES

Western Cape Government

Department of Environmental Affairs and Development Planning

DRAFT BASIC ASSESSMENT REPORT

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

APRIL 2024

Western Cape Government

BASIC ASSESSMENT REPORT

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

APRIL 2024

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

GENERAL PROJECT DESCRIPTION

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

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

This property is approximately 19.1129ha in size and is located in Plettenberg Bay (north), east of the N2 and Plett Primary School, closely bordering the Keurbooms Estuary (Figure 1).

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

The property is bordered by Plett Resort (North), Plettenberg Bay Primary School (West), Checkers Centrum (South-West corner), Poortjies residential area (partial Southern boundary) separated by Erf 6504, and Erf 449 (East) that separates the property from the Keurbooms Estuary.

All of the properties surrounding the site are privately owned.

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

DEVELOPMENT PROPOSAL:

The development is proposed as a gated, security village. It is proposed to upgrade and maintain the current access as the primary access for the development (refer to Figures 1 & 2).

The preferred development proposal entails the following:

- Forty-one (41) x **Group housing erven** (Residential Zone II) (~4.07ha)
- Nine (9) x **Single residential erven** (Residential Zone I) (~2.27ha).
- Sixteen (16) x **Garage units** in the north-western corner of the single residential portion.
- **Entrance gate/road access** with security and fencing.
- **Internal access roads** between erven (Transport Zone III; up to 5.5m wide brick paved roads).
- Nine (9) internal x **Open Space Zone II** erven (~0.37ha).
- One (1) x **Open Space Conservation Zone III** erf (~10.58ha) making up the bulk of the untransformed, remnant natural coastal buffer. This area will be managed as a private nature reserve.
- **Temporary** on-site **Wastewater Treatment Plant** (to be decommissioned once capacity at the Municipal Ganse Vallei WWTW is made available).

In total, the preferred proposal is for **50 residential opportunities** on 8.54ha (~6 units per hectare, amounting to approximately 45% development of the site). The private conservation area takes up approximately 55% of the total site area and acts as a buffer between the development and the Keurbooms Estuary.

- The existing primary dwelling and outbuildings on the property (occupied by the current owner of the property), will ultimately also occupy the centre plot in the layout proposal (Figure 1 and Figure 2).

- The proposed additional single residential erven, surrounding the primary dwelling erf, will form a separate gated area from the remaining General Residential Zone II erven, within the greater development.
    - A right of way servitude will be registered along the internal western access road, in favour of the single residential component of the proposed development in the Northern portion of the development.

The current zoning of the property **Agricultural Zone I** and in the event the development application is approved by the Competent Authority, it is proposed to rezone the development site into:

- **Residential Zone I and II;**
- **Open Space Zone II and III;**
- with the internal access roads being rezoned to **Transport Zone III**.

The internal Open Space Zone II erven (approximately 0.3717ha) are functional open spaces and will consist of:

- a communal parking area at the entrance;
- maintenance and admin buildings; and
- communal pedestrian walkways that connect the development area with the private nature reserve/conservation area.

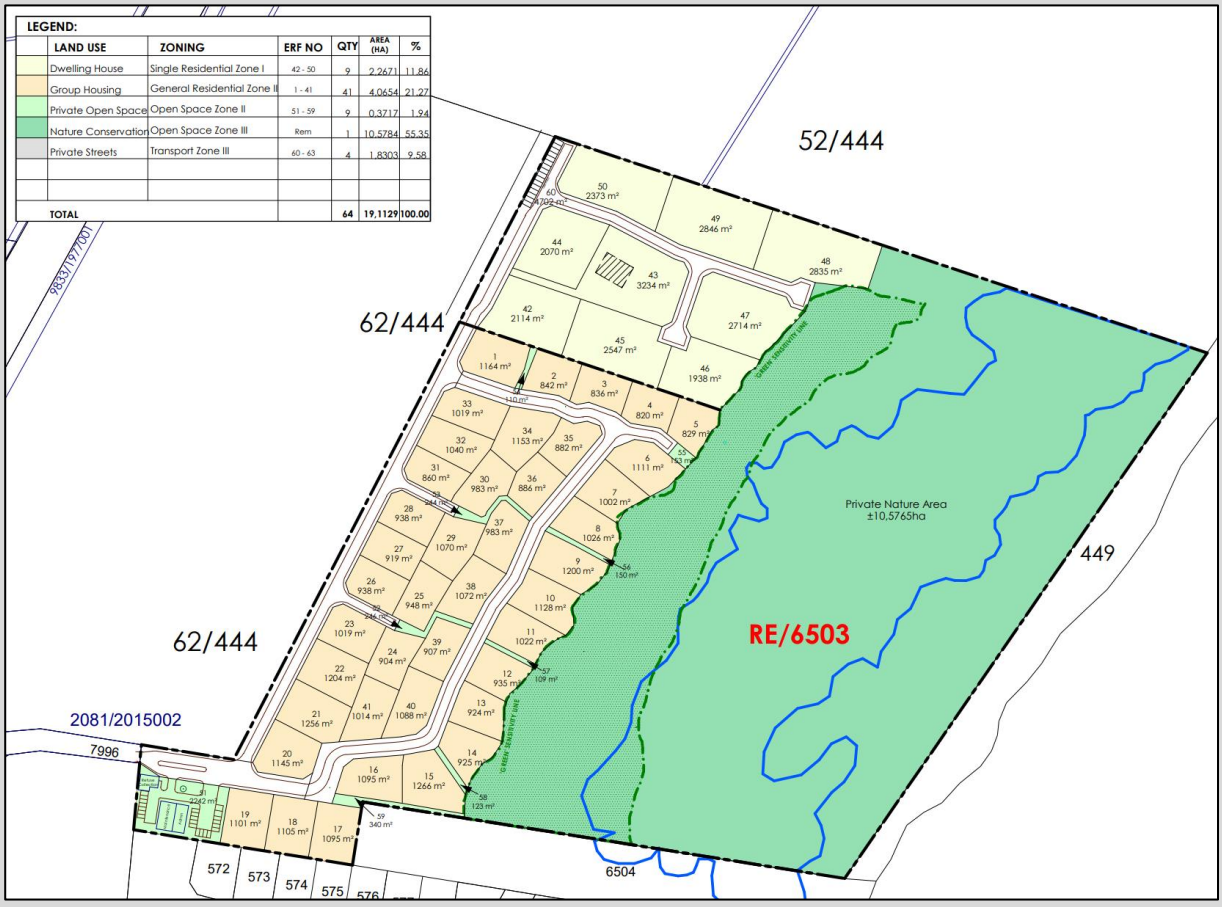


Figure 2: Site development plan indicating medium density residential dwellings (orange shade), low density residential dwellings (yellow shade) as well as proposed open space areas (green shade) (Marike Vreken Town and Regional Planners, 2024).

As a security development, fencing is proposed to be installed on the eastern side of the conservation area to ensure safe access to residents to this area. By securing this area, future

residents are more likely to take 'ownership' and 'responsibility' for this area (compared to excluding the conservation area from fencing).

Strict conditions-of-use must be enforced in this area considering its conservation outcome being a priority. This area may be accessed through existing pathways and walkways only. Fencing must be in line with the CapeNature policy document on *Fencing & Enclosures of Game, Predators & Dangerous Animals in the Western Cape* (installation methods, maintenance methods etc). Fire breaks must be maintained, but clearing methods of fire breaks, must be adhered to, to ensure minimal disturbance of the on-site wetland habitat and thicket vegetation containing protected tree species.

The development of all the proposed dwellings, maintenance building, admin building and parking garages are purposefully limited to the existing, **disturbed secondary grassland area.** By clearly following the impact hierarchy approach in this design, this layout **avoids the sensitive estuarine area** containing **wetland and natural, intact thicket vegetation**, thus creating a sizeable coastal buffer along the Keurbooms Estuary that will act to conserve a large habitat intact (Figure 2).

Services:

Stormwater:

Stormwater infrastructure will be managed on site. The design has been informed by input from the aquatic specialist considering the presence of a large on-site wetland in the sensitive natural eastern portion of the site.

Internal roads will be designed with formal kerbs/edgings and roadside channels to enable a formal stormwater drainage network that will discharge into 1.5m wide swales.

The 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 where the wetland is, provision has been 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 final road level.

Water:

Extract from Civil Engineering Report compiled by Vita Consulting Engineers 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*".

GLS Consulting Engineers (on behalf of the Bitou Municipality), provided the following temporary solution as part of their master planning:

- Installation of a temporary 160Ømm bulk main off the existing 160mm distribution main in the N2 road reserve, will free up 860kl/day[1] water supply.

[1] There are two existing water pipelines in the servitude. One meant to supply the reservoir of water and the other meant to distribute water from the reservoir out into the water network. One of the lines however is defunct and has not been functioning resulting in the Municipality having to rely on a single line for both supply (filling the reservoir with water) and distribution (getting water from the reservoir into the water network). The fact that one of the existing lines cannot be used requires the Municipality to use the one remaining line to fill the reservoir at night (associated with less to no demand) and then stopping supply to switch

- This capacity rectification will accommodate the development demand for Farm 444/38, Farm 304/32 and RE/6503 (this application).

According to Vita Consulting Engineers, implementation of this temporary solution is to be undertaken by the developer of Erf Portion 19 and 27 of Farm 444 (construction on this development commenced June 2024).

The 160mm diameter pipeline of approximately 460m in length, is to be installed as a temporary measure till the Municipality has its bulk water supply network capacity funding for further upgrades. It will be installed above ground, following the existing water servitude that runs from the Goose Valley Reservoir to the existing distribution main in the N2 road reserve (Figure 3).

The existing servitude already contains a 200mm and 250mm diameter underground pipelines (of which one is defunct).

The temporary pipeline is to be installed in short 2.4m sections that will be welded together on site. The implementation of the temporary solutions does not entail earthworks, or the removal of vegetation, although trimming of vegetation to clear the route is anticipated.

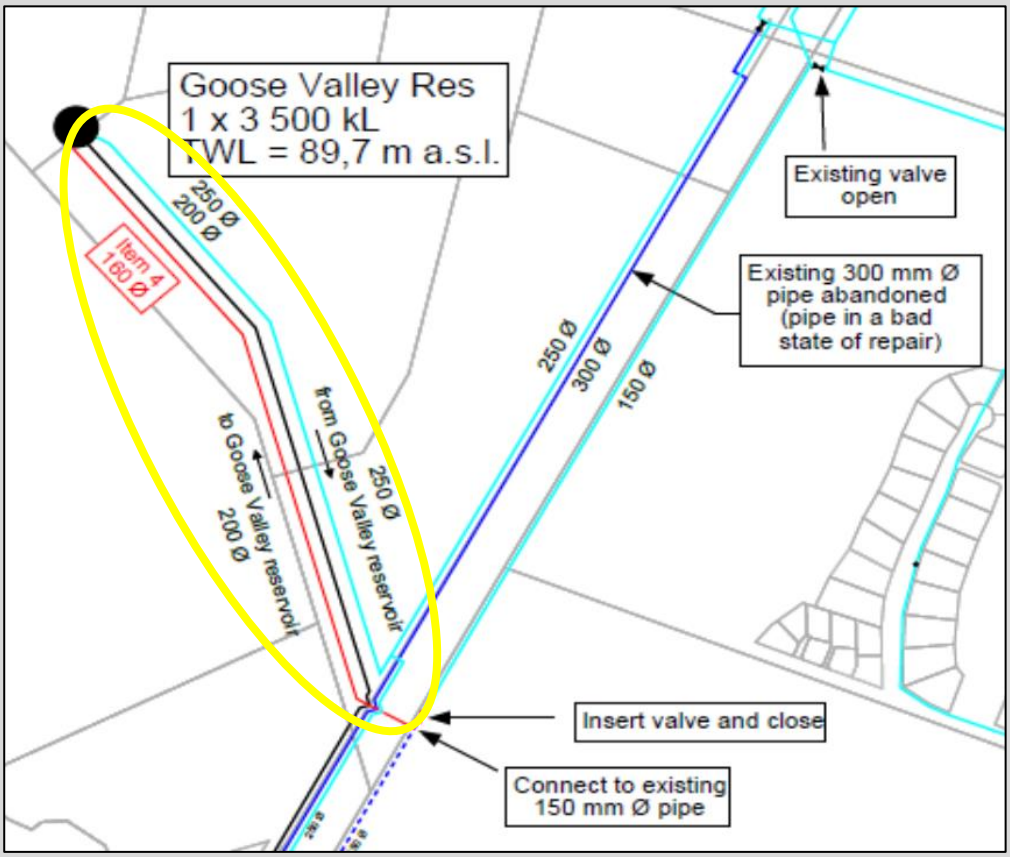


Figure 3: 160mm diameter water pipeline to be installed aboveground from the Goose Valley Reservoir to the existing distribution main in the N2 road reserve (red line) (GLS Consulting, 2023).

Link services BPW14.1 (~70m x 200mm diameter water pipeline) as seen in Figure 4 is required to connect the internal reticulation network of the proposed development to the existing municipal water network.

the same line to distribution during day hours (when there is continuous demand). As a result, there is always insufficient time to fill the reservoir completely resulting in water restriction. By installing the temporary surface line, the function of supply and distribution can be re-started again, hence the 860kl/day 'capacity' created in this manner, stems from the reservoir being able to be filled completely (to provide in distribution demands) coupled with no interruption between supply to the reservoir and distribution to the network.

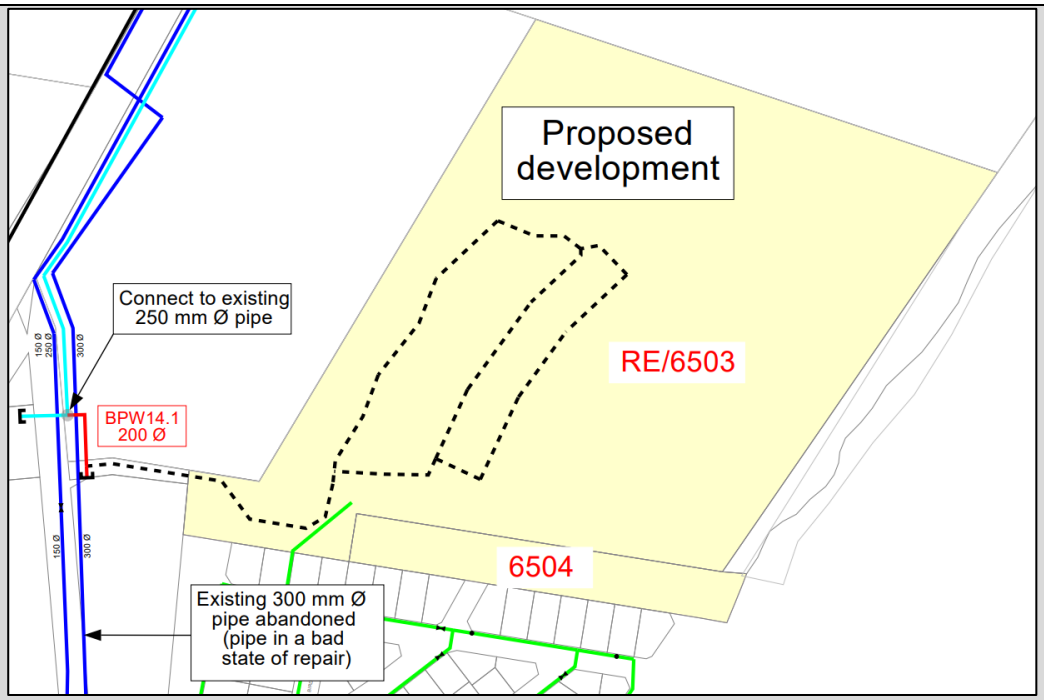


Figure 4: Water pipeline layout for internal water reticulation (extract from GLS Consulting, 2023).

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).

Electricity:

The proposed development is located in the Plettenberg Bay town area which is currently supplied by Substation – 1 Ferdinand. The substation is shared with Eskom by Bitou Municipality and has an installed capacity of 20MVA with 2 x 10MVA transformers.

The Notified Maximum Demand for the substation is 15.5MVA and therefore it has sufficient capacity to accommodate the additional 800 kVA (maximum demand) of the proposed development on the Remainder of Erf 6503.

Sewage:

The Municipal Ganse Vallei Wastewater Treatment Works (WWTW) has an effluent discharge capacity of 6Ml per day and is currently at an average daily discharge volume of 5.8Ml.

According to Bitou Municipality the remaining 0.2Ml is reserved for approved developments.

Upgrades to the Ganse Vallei WWTW is therefore required to accommodate future developments.

Due to the fact that said upgrade of the WWTW may take an unknown time still (considering approvals / funding / delays etc), the proposal for this development is for the installation of a temporary on-site package plant within the confines of the development.

Confirmation of the use of such a temporary WWTP has been obtained from Bitou Municipality on 02 July 2024 on condition that the plant will be decommissioned once Bitou Municipality finished upgrades to the Ganse Vallei WWTW and the proposed Plett Lagoon Estate can be connected to the municipal system.

The temporary on-site package plant (fully enclosed) is proposed to be installed inside a 12m container directly adjacent to the proposed maintenance building at the entrance of the proposed development (Figure 6).

The temporary package plant will have a treatment capacity of 40m^3 per day and will use a combination of conventional treatment (natural bacteria) and membrane technology (microfiltration) to treat the household sewage to comply with general water limits stipulated by the Department of Water Affairs.

For the duration of the package plant being in operation, all *treated* effluent is to be irrigated within the estate open space areas. Dedicated irrigation storage tanks (4 x 10Kl) forms part of the design and will be located next to the container. This measure is to ensure that open space areas are not saturated unnecessarily, or that unwanted treated effluent enters the sensitive wetland system.

Figure 5: Typical design/look for an Alveo package plant as proposed (Source: https://alveowater.co.za/)

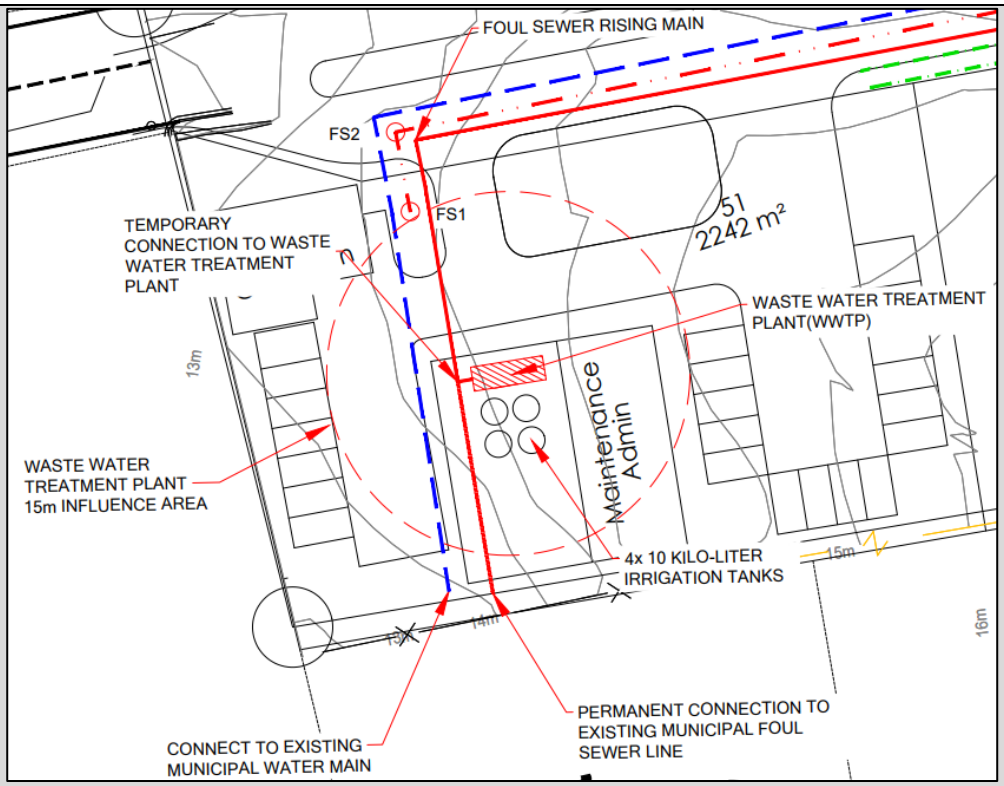


Figure 6: Proposed location of the temporary WWTP (Vita Consulting Engineers, 2024).

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 5 and 6 of the development, from which sewage will be **pumped** along the eastern boundary of the development footprint through a **75mm diameter rising main** towards the temporary package plant.

Once the Municipal Ganse Vallei WWTW has been upgraded to capacity to accommodate the proposed Plett Lagoon Estate development (and the package plant decommissioned), sewage will be pumped towards the existing 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserve on the southern boundary of RE/6503. To enable this switch-over in future, this connection line to the municipal sewer system will be installed as part of the project services installation already.

The internal sewage network will be within the regulated 500m from the on-site wetland in the conservation area, in the eastern portion of RE/6503 and a Water Use License (WULA) is covering this aspect in parallel to the Basic Assessment process application in an integrated manner.

Solid Waste:

A communal **refuse collection area** is proposed at the **entrance gate** inside the proposed development perimeter, near the main security access. Bitou Municipality has confirmed that there is sufficient capacity for Waste Disposal for the proposed development on 03 June 2024.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations

when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

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

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

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

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

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

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

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

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

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

MAPS

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

	○ Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); ○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

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

ATTACHMENTS

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

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	✓
	~~**Appendix A3:**~~	~~**Map with the GPS co-ordinates for linear activities**~~	**x**
Appendix B:	**Appendix B1:**	**Site development plan(s)**	✓
	Appendix B2	**A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;**	✓
Appendix C:	**Photographs**		✓
Appendix D:	**Biodiversity overlay map**		✓
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	✓
	Appendix E2:	**Copy of comment from Cape Nature**	✓
	~~**Appendix E3:**~~	~~**Final Comment from the DWS**~~	**x**
	~~**Appendix E4:**~~	~~**Comment from the DEA: Oceans and Coast**~~	**x**
	Appendix E5:	**Comment from the DAFF**	✓
	~~**Appendix E6:**~~	~~**Comment from WCG: Transport and Public Works**~~	**x**
	Appendix E7:	**Comment from WCG: DoA**	✓
	~~**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	✓
	~~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 (Bitou Municipality)	✓
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	✓
	Appendix E17:	Comment from the District Municipality	✓
	~~Appendix E18:~~	~~Copy of an exemption notice~~	x
	~~Appendix E19~~	~~Pre-approval for the reclamation of land~~	x
	~~Appendix E20:~~	~~Proof of agreement/TOR of the specialist studies conducted.~~	x
	Appendix E21:	Proof of land use rights	✓
	~~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:	EMPr		✓
Appendix I:	Screening tool report		✓
Appendix J:	The impact and risk assessment for each alternative		✓
Appendix K:	Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline		✓
Appendix L:	Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) Confirmation of the designation of RE/6503		✓
Appendix M:	Plett Lagoon Estate Open Space Trail Map		✓

Appendix N:	**Engineering Services Layout**	✓
Appendix O:	**WULA Technical Report With Appendices**	✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	~~CAPE TOWN OFFICE: REGION 1~~		GEORGE OFFICE: BEGION 3
	~~(City of Cape Town, West Coast District~~	~~(Cape Winelands District & Overberg District)~~	(Central Karoo District & Garden Route District)
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	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)		
Appointed EAP name:	Ms Louise-Mari van Zyl		
Assisting Candidate EAP name:	Mr Francois Byleveld		
Postal address:	PO Box 2070, George		
		Postal code: 6530	
Telephone:	044 874 0365	Cell: 071 603 4132	
Appointed EAP E-mail:	louise@cape-eaprac.co.za	~~Fax: ( )~~	
Assisting Candidate EAP E-mail:	francois@cape-eaprac.co.za		
Appointed EAP Qualifications:	MA Geography & Environmental Science (US)		
Assisting Candidate EAP Qualifications:	MSc Geology (UFS)		
Appointed EAP registration no:	2019/1444		
Assisting Candidate EAP registration no:	2023/6770		
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:	( )	Cell: 082 551 7073
E-mail:	bcookza@gmail.com	~~Fax: ( )~~
Name of Person in control of the land:	Plett Lagoon Estate (Pty) Ltd	
Name of contact person for person in control of the land:	Mr Paul Burton	
Postal address:	PO Box 1055, Cape Town	
		Postal code: 8000
Telephone:	( )	Cell: 083 700 8216
E-mail:	pbu@maynards.co.za	~~Fax: ( )~~

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Bitou Municipality	
Contact person:	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	

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 Municipal 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 pastures.

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 currently 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):	~4826m²
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:	~8.54ha
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 the transformed areas of Remainder of Erf 6503, Plettenberg Bay.

This property is approximately 19.1129ha in size and is located in Plettenberg Bay (north), east of the N2 and Plett Primary School, bordering the Keurbooms Estuary (Figure 1).

Access to the site is gained from an existing Municipal road (Beacon Way) in the south-west corner of the site, between the Checkers Centrum and Plettenberg Bay Primary School. The property is bordered by Plett Resort (North), Plettenberg Bay Primary School (West), Checkers Centrum (South-West corner), Poortjies residential area (partial Southern boundary) separated by Erf 6504, and Erf 449 (East) that separates the property from the Keurbooms Estuary. All of these properties surrounding the site are privately owned.

DEVELOPMENT PROPOSAL:

The preferred development is proposed as a gated, security village. It is proposed to upgrade and maintain the current access as the primary access for the development (refer to Figures 1 & 2).

The proposed development entails the following:

- Forty-one (41) x **Group housing erven** (Residential Zone II) (~4.07ha)
- Nine (9) x **Single residential erven** (Residential Zone I) (~2.27ha).
- Sixteen (16) x **Garage units** in the north-western corner of the single residential portion.
- **Entrance gate/road access** with security and fencing.
- **Internal access roads** between erven (Transport Zone III; up to 5.5m wide brick paved roads).
- Nine (9) internal x **Open Space Zone II** erven (~0.37ha).
- One (1) x **Open Space Conservation Zone III** erf (~10.58ha) making up the bulk of the untransformed, remnant natural coastal buffer. This area will be managed as a private nature reserve.
- **Temporary** on-site Wastewater Treatment Plant (to be decommissioned once capacity at the Ganse Vallei WWTW is made available by the Municipality).

In total, the development is proposed for **50 residential opportunities** on 8.54ha (~6 units per hectare, amounting to approximately 45% development of the site). The conservation area takes up approximately 55% of the total site area.

- The existing primary dwelling and outbuildings on the property (occupied by the current owner of the property), will ultimately also occupy the centre plot in the layout proposal (Figure 1 and Figure 2).
- The proposed additional single residential erven, surrounding the primary dwelling erf, will form a separate gated area from the remaining General Residential Zone II erven, within the greater development.
    - A right of way servitude will be registered along the internal western access road, in favour of the single residential component of the proposed development in the Northern portion of the development.

The current zoning of the property **Agricultural Zone I** and in the event the development application is approved by the Competent Authority, it is proposed to rezone the development site into:

- **Residential Zone I and II;**
- **Open Space Zone II and III;**
- with the internal access roads being rezoned to **Transport Zone III**.

The internal Open Space Zone II erven (approximately 0.3717ha) are functional open spaces and will consist of:

- a communal parking area at the entrance;
- maintenance and admin buildings; and

- communal pedestrian walkways that connect the development area with the private nature reserve.

As a security development, **fencing** is proposed to be installed on the eastern side of the conservation area to ensure safe access to residents to this area. By securing this area, future residents are more likely to take 'ownership' and 'responsibility' for this area (compared to excluding the conservation area from fencing).

Strict conditions-of-use must be enforced in this area considering its conservation outcome being a priority.

- This area may be accessed through existing pathways and walkways only.
- Fencing must be in line with the CapeNature policy document on *Fencing & Enclosures of Game, Predators & Dangerous Animals in the Western Cape* (installation methods, maintenance methods etc).
- Fire breaks must be maintained, but clearing methods of fire breaks, must be adhered to, to ensure minimal disturbance of the on-site wetland and thicket vegetation.
- The area must be kept free of invasive alien vegetation species.
- Forestry Permits must be obtained for trimming of protected trees in the event of fire break clearing and/or installation of the fence, where applicable.
- New structures may not be erected inside this conservation area and the wetland may not be infilled or drained.
- Vehicle access into the area (with the exception of the wetland during wet periods / breeding season) is to be restricted to enable alien clearing / maintaining fire breaks.

The development of all the proposed dwellings, maintenance building, admin building and parking garages are purposefully limited to the existing, **disturbed secondary grassland area.** By clearly following the impact hierarchy approach in this design, this layout avoids the sensitive estuarine area containing wetland and natural, intact thicket vegetation, thus creating a sizeable coastal buffer along the Keurbooms Estuary (Figure 2).

Services:

Stormwater:

Stormwater infrastructure will be managed on site. The design has been informed by input from the aquatic specialist considering the presence of a large on-site wetland in the sensitive natural eastern portion of the site.

Internal roads will be designed with formal kerbs/edgings and roadside channels to enable a formal stormwater drainage network that will discharge into 1.5m wide swales.

The 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 where the wetland is located, provision has been 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 final road level.

Water:

Extract from Civil Engineering Report compiled by Vita Consulting Engineers 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*".

GLS Consulting Engineers (on behalf of the Bitou Municipality), provided the following temporary solution as part of their master planning:

- Installation of a temporary 160Ømm bulk main off the existing 160mm distribution main in the N2 road reserve, will free up 860kl/day water supply.
- This capacity rectification will accommodate the development demand for Farm 444/38, Farm 304/32 and RE/6503 (this application).

According to Vita Consulting Engineers, implementation of this temporary solution is to be undertaken by the developer of Erf Portion 19 and 27 of Farm 444 (construction on this development commenced June 2024).

The 160mm diameter pipeline of approximately 460m in length, is to be installed as a temporary measure till the Municipality has its bulk water supply network capacity funding. It will be installed above ground, following the existing water servitude that runs from the Goose Valley Reservoir to the existing distribution main in the N2 road reserve (Figure 3).

The existing servitude already contains a 200mm and 250mm diameter underground pipelines (of which one is defunct).

The temporary pipeline is to be installed in short 2.4m sections that will be welded together on site. The implementation of the temporary solutions does not entail earthworks, or the removal of vegetation, although trimming of vegetation to clear the route is anticipated.

Link services BPW14.1 (~70m x 200mm diameter water pipeline) as seen in Figure 4 is required to connect the internal reticulation network of the proposed development to the existing municipal water network.

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).

Electricity:

The proposed development is located in the Plettenberg Bay town area which is currently supplied by Substation – 1 Ferdinand. The substation is shared with Eskom by Bitou Municipality and has an installed capacity of 20MVA with 2 x 10MVA transformers.

The Notified Maximum Demand for the substation is 15.5MVA and therefore it has sufficient capacity to accommodate the additional 800 kVA (maximum demand) of the proposed development on the Remainder of Erf 6503.

Sewage:

The Ganse Vallei Wastewater Treatment Works (WWTW) has an effluent discharge capacity of 6Ml per day and is currently at an average daily discharge volume of 5.8Ml.

According to Bitou Municipality the remaining 0.2Ml is reserved for approved developments.

Upgrades to the Ganse Vallei WWTW is therefore required to accommodate new developments.

Due to the fact that said upgrade of the WWTW may take some (unknown) time (considering approvals / funding / delays etc), the proposal for this development is for the installation of an on-site package plant.

Confirmation of the use of such a temporary WWTP has been obtained from Bitou Municipality on 02 July 2024 on condition that the plant will be decommissioned once Bitou Municipality finished upgrades to the Ganse Vallei WWTW and the proposed Plett Lagoon Estate can be connected to the municipal system.

The temporary on-site package plant (fully enclosed) is proposed to be installed inside a 12m container directly adjacent to the proposed maintenance building at the entrance of the proposed development (Figure 6).

The temporary package plant will have a treatment capacity of 40m^3 per day and will use a combination of conventional treatment (natural bacteria) and membrane technology (microfiltration) to treat the household sewage to comply with general water limits stipulated by the Department of Water Affairs.

For the duration of the package plant being in operation, all treated effluent will be irrigated on open land (early phase of the development) and then onto the remaining internal open space erven. Dedicated irrigation storage tanks (4 x 10Kl) forms part of the design and will be located next to the container. Importantly the conservation/private reserve area may not receive any treated effluent at any point in time and the aquatic specialist recommends that shallow spikes be installed in the internal open space areas for testing to ensure that infiltration of treated effluent does not impact on the wetland in the conservation area. Although chances are slim (due to the sandy soils that acts as a further filtering system), a conservative approach is necessary to avoid negatively impacting this feature.

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 5 and 6 of the development, from which sewage will be **pumped** along the eastern boundary of the development footprint through a **75mm diameter rising main** towards the temporary package plant.

Once the Municipal Ganse Vallei WWTW is sufficiently upgraded to capacity to accommodate the future developments in Plettenberg Bay (and the package plant decommissioned), sewage will be pumped towards the existing 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserve on the southern boundary of RE/6503. To enable this switch-over in future, this connection line to the municipal sewer system will be installed as part of the project services installation.

The internal sewage network extends into the 500m regulated area around the wetland, in the eastern portion of RE/6503 and is the subject of a Water Use License application.

Solid Waste:

A communal **refuse collection area** is proposed at the **entrance gate** inside the proposed development perimeter, near the main security access. Bitou Municipality has confirmed that there is sufficient capacity for Waste Disposal for the proposed development on 03 June 2024.

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

Access to the proposed development is via the existing access along Beacon Way, between the Checkers Centrum and Plettenberg Bay Primary School (Figure 7). This access is to be upgraded with a new **traffic turning circle** that is proposed at the **Beacon Way/School intersection** (Figure 8).

Bitou Municipality approved the proposed traffic roundabout in this position on 14 February 2024. The development and associated costs of the turning circle is the responsibility of the developer of the Remainder of Erf 6503.

The alternative access via the Poortjies residential suburb was considered as an option, but eliminated due to concerns regarding through-traffic in this suburb at the time of the pre-application BAR.

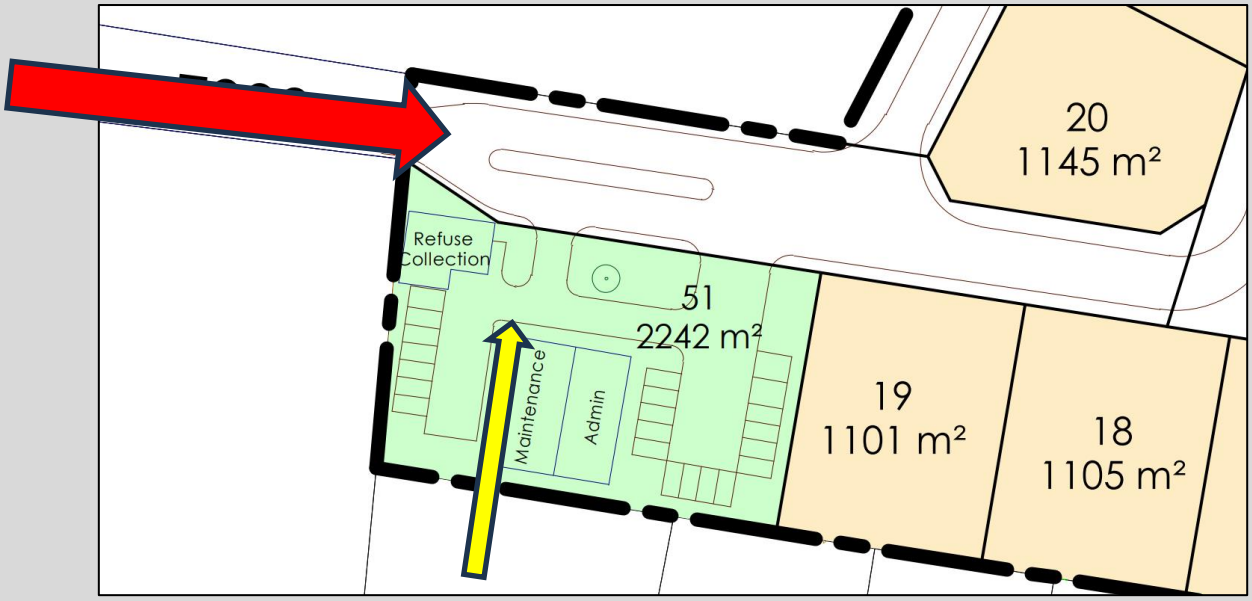


Figure 7: Primary access via the existing access to the site (between the Checkers Centrum and Plettenberg Bay Primary School) indicated with the RED arrow, connecting directly to a proposed new traffic circle in Beacon Way. The YELLOW arrow marks the initial point of access proposal, since eliminated (Marike Vreken Town and Regional Planners, 2024).

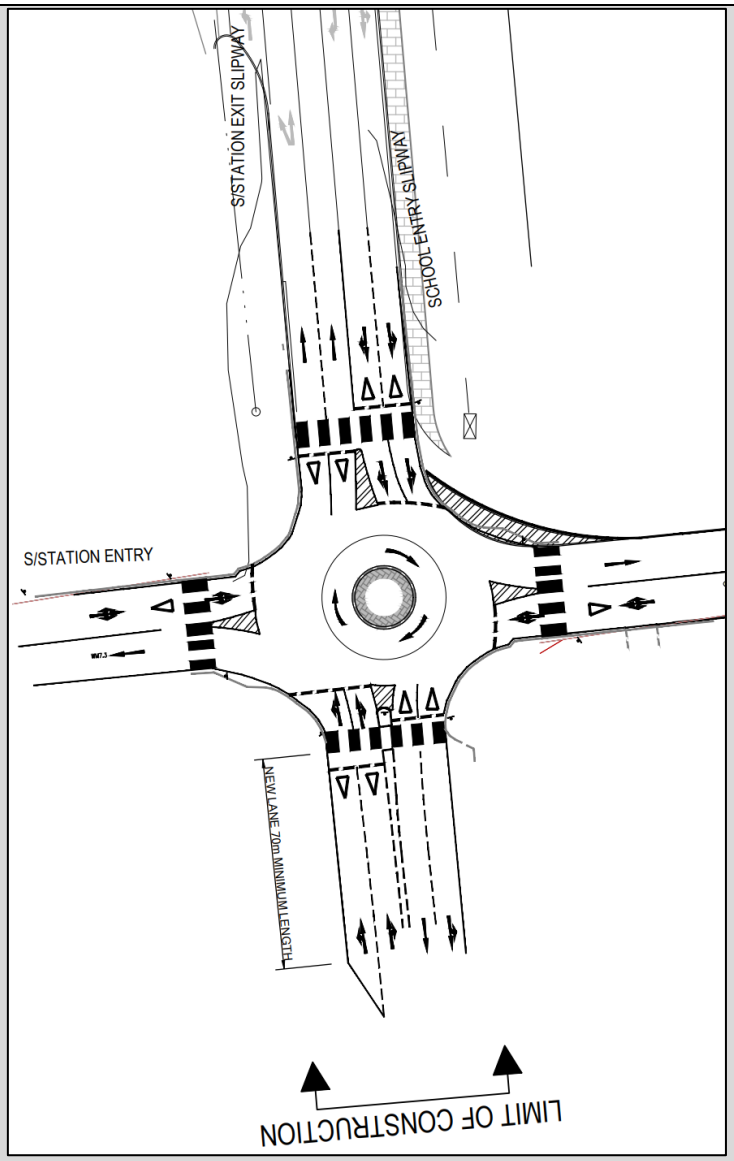


Figure 8: Proposed new traffic circle at the Beacon Way intersection connecting to the Municipal road located between the Checkers Centrum and Plett Primary School (Vita Consulting Engineers, 2024).

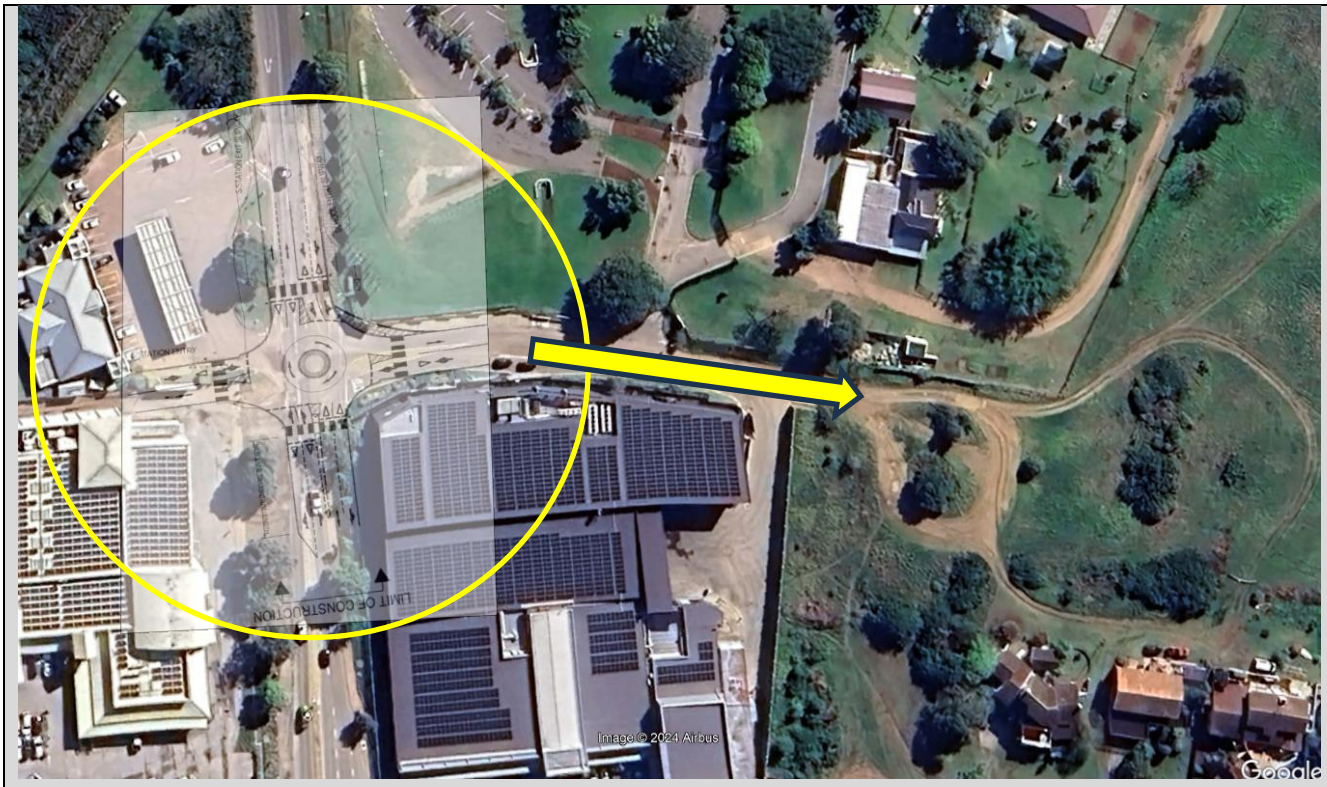


Figure 9: Image overlay (not to scale) of the proposed new traffic circle required to enable the primary access to function with the primary access to be upgraded from the status quo.

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)	34o	02‘	24.90“
	Longitude (E)	23o	22‘	33.16“

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 and II** as well as **Open Space Zone II and III** with the internal access roads being rezoned to **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:
        - Forty-one (41) x Group housing erven (Residential Zone II, medium density). **10 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 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 (High Sensitivity) - 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 RE/6503, Plettenberg Bay was included in the Knysna, Wilderness and Plettenberg Bay Regional Structure Plan. This portion was designated as **'Recreational'** and **'Township development'**. **RE/6503 is therefore exempt from the provisions of the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970).** The Department of Agriculture remains a registered stakeholder and stipulated in comment on the Pre-Application Draft Basic Assessment Report that from an agricultural perspective, that the Western Cape department of Agriculture has no objection to the development of the Plett Lagoon Estate.

Animal Species (High Sensitivity) – 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** was undertaken and forms part of this BAR.

Aquatic Biodiversity (Very High Sensitivity) – The proposed development site is located in close proximity to the Keurbooms Estuary as well as an on-site wetland within the conservation area. 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 a parallel/integrated **Water Use License** runs parallel to this BAR process.

Archaeological and Cultural Heritage (Very High Sensitivity) - 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 (High Sensitivity) – 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 (Low Sensitivity) – 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 (Medium Sensitivity): 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 (Medium Sensitivity) – The DFFE screening tool report indicated the site sensitivity for plant species to be **Medium**. Sites identified by the screening tool as being of medium sensitivity must submit either a Terrestrial Plant Species Assessment Report or 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 within the Basic Assessment Report.

Terrestrial Biodiversity Theme (Very High Sensitivity) – A site sensitivity verification undertaken by Biodiversity Africa, determined that the western portion of RE/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 — ~~(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or~~	Although the physical development footprint falls **outside 32 metres** measured from the edge of the watercourse, **portions of stormwater discharge infrastructure / structures / pipelines** will be located within 32 metres of the watercourse.

	(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs — (a) within a watercourse; ~~(b) in front of a development setback; or~~ (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding — ~~(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;~~ ~~(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;~~ ~~(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;~~ (dd) where such development occurs within an urban area; ~~(ee) where such development occurs within existing roads, road reserves or railway line reserves; or~~ ~~(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of the development and where indigenous vegetation will not be cleared.~~	A security fence is also proposed on the eastern side of the conservation area, with the majority of the fence being located within 32 metres of the delineated wetland habitat in the Conservation area and Estuary. The fence will be installed along existing footpaths and installation measures are proposed.
17	Development — ~~(i) in the sea;~~ ~~(ii) in an estuary;~~ (iii) within the littoral active zone; ~~(iv) in front of a development setback; or~~ (v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an	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/security fence is within 100 metres inland of the high-water mark of the Keurbooms Estuary. The security fence on the eastern side of the conservation area, will be

	estuary, whichever is the greater; in respect of — ~~(a) fixed or floating jetties and slipways;~~ ~~(b) tidal pools;~~ ~~(c) embankments;~~ ~~(d) rock revetments or stabilising structures including stabilising walls; or~~ (e) infrastructure or structures with a development footprint of 50 square metres or more — but excluding — ~~(aa) the development of infrastructure and structures within existing ports or harbours that will not increase the development footprint of the port or harbour;~~ ~~(bb) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;~~ ~~(cc) the development of temporary infrastructure or structures where such structures will be removed within 6 weeks of the commencement of development and where coral or indigenous vegetation will not be cleared; or~~ (dd) where such development occurs within an urban area.	located within 100 metres from the high-water mark of the Keurbooms Estuary but will be installed along existing footpaths with construction implementation measures as per the specialist recommendations (aquatic and fauna).
19A	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from — ~~(i) the seashore;~~ (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; or ~~(iii) the sea;~~ — but excluding where such infilling, depositing , dredging, excavation, removal or moving —	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/fencing 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. A security fence is proposed to be developed on the eastern side of the conservation area, which will be located within 100 metres from the high-water mark of the Keurbooms Estuary. The fence will be installed along existing footpaths and must adhere to CapeNature Guidelines

	~~(f) will occur behind a development setback;~~ ~~(g) is for maintenance purposes undertaken in accordance with a maintenance management plan;~~ ~~(h) falls within the ambit of activity 21 in this Notice, in which case that activity applies;~~ ~~(i) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or~~ ~~where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.~~	document to minimise impact/excavations/disturbances.
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for — ~~(i) the undertaking of a linear activity; or~~ ~~(ii) maintenance purposes undertaken in accordance with a maintenance management plan.~~	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; or ~~(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;~~	Development **footprint of approximately ~8.54ha** within an urban area. The proposed development site indicates historic grazing activities.

	excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	
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** i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas; (aa) Areas containing indigenous vegetation. (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined or; iii. Inside urban areas: (aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.	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 purposes undertaken in accordance with a maintenance management plan. **(i) Western Cape** (i) Within any critically endangered or **endangered** ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (ii) Within **critical biodiversity areas** identified in bioregional plans; (iii) Within the **littoral active zone or 100 metres inland from the high water mark of the sea or an estuarine functional zone**, whichever distance is the greater, excluding where such removal will occur	The study site contains a designated critical biodiversity area, specifically a **CBA2 (Terrestrial**, western portion of the property) and **CBA1 (Estuary**, eastern 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. However taking a risk averse

	behind the development setback line on erven in urban areas. ~~iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or~~ ~~v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.~~	approach this listed activity remains part of the application. Although the physical development footprint falls outside 100 metres measured from the edge of the estuary, portions of stormwater discharge/sewer infrastructure will be located within 100m from the estuary. A security fence is proposed to be developed on the eastern side of the conservation area, which will be located within 100 metres from the high-water mark of the Keurbooms Estuary. The fence will be installed along existing footpaths.
14	The development of — ~~(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or~~ (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs — (a) within a watercourse; ~~(b) in front of a development setback; or~~ (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. **i. Western Cape** i. Outside urban areas: ~~(aa) A protected area identified in terms of NEMPAA, excluding conservancies;~~ ~~(bb) National Protected Area Expansion Strategy Focus areas;~~ ~~(cc) World Heritage Sites;~~ ~~(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act~~	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. A security fence is proposed to be developed on the eastern side of the conservation area, with the majority of the fence being located within 32 metres of the delineated wetland habitat. The fence will be installed along existing footpaths.

	~~and as adopted by the competent authority;~~ ~~(ee) Sites or areas listed in terms of an international convention;~~ (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; ~~(gg) Core areas in biosphere reserves; or~~ (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.	

Note:

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

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

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

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

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

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

Preferred Alternative:

The Applicant proposes to develop a residential estate, on the transformed areas of Remainder of Erf 6503, Plettenberg Bay.

This property is approximately 19.1129ha in size and is located in Plettenberg Bay (north), east of the N2 and Plett Primary School, bordering the Keurbooms Estuary (Figure 1).

Access to the site is gained from an existing Municipal road (Beacon Way) in the south-west corner of the site, between the Checkers Centrum and Plettenberg Bay Primary School. The property is bordered by Plett Resort (North), Plettenberg Bay Primary School (West), Checkers Centrum (South-West corner), Poortjies residential area (partial Southern boundary) separated by Erf 6504, and Erf 449 (East) that separates the property from the Keurbooms Estuary. All of these properties surrounding the site are privately owned.

DEVELOPMENT PROPOSAL:

The development is proposed as a gated, security village. It is proposed to upgrade and maintain the current access as the primary access for the development (refer to Figures 1 & 2).

The proposed development entails the following:

- Forty-one (41) x **Group housing erven** (Residential Zone II) (~4.07ha)
- Nine (9) x **Single residential erven** (Residential Zone I) (~2.27ha).
- Sixteen (16) x **Garage units** in the north-western corner of the single residential portion.
- **Entrance gate/road access** with security and fencing.
- **Internal access roads** between erven (Transport Zone III; up to 5.5m wide brick paved roads).
- Nine (9) internal x **Open Space Zone II** erven (~0.37ha).
- One (1) x **Open Space Conservation Zone III** erf (~10.58ha) making up the bulk of the untransformed, remnant natural coastal buffer. This area will be managed as a private nature reserve.
- **Temporary** on-site Wastewater Treatment Plant (to be decommissioned once capacity at the Ganse Vallei WWTW is made available by the Municipality).

In total, the development is proposed for **50 residential opportunities** on 8.54ha (~6 units per hectare, amounting to approximately 45% development of the site). The conservation area takes up approximately 55% of the total site area.

- The existing primary dwelling and outbuildings on the property (occupied by the current owner of the property), will ultimately also occupy the centre plot in the layout proposal (Figure 1 and Figure 2).
- The proposed additional single residential erven, surrounding the primary dwelling erf, will form a separate gated area from the remaining General Residential Zone II erven, within the greater development.
    - A right of way servitude will be registered along the internal western access road, in favour of the single residential component of the proposed development in the Northern portion of the development.

The current zoning of the property **Agricultural Zone I** and in the event the development application is approved by the Competent Authority, it is proposed to rezone the development site into:

- **Residential Zone I and II;**
- **Open Space Zone II and III;**
- with the internal access roads being rezoned to **Transport Zone III**.

The internal Open Space Zone II erven (approximately 0.3717ha) are functional open spaces and will consist of:

- a communal parking area at the entrance;
- maintenance and admin buildings; and
- communal pedestrian walkways that connect the development area with the private nature reserve.

As a security development, fencing is proposed to be installed on the eastern side of the conservation area to ensure safe access to residents to this area. By securing this area, future residents are more likely to take 'ownership' and 'responsibility' for this area (compared to excluding the conservation area from fencing).

Strict conditions-of-use must be enforced in this area considering its conservation outcome being a priority. This area may be accessed through existing pathways and walkways only. Fencing must be in line with the CapeNature policy document on *Fencing & Enclosures of Game, Predators & Dangerous Animals in the Western Cape* (installation methods, maintenance methods etc). Fire breaks must be maintained, but clearing methods of fire breaks, must be adhered to, to ensure minimal disturbance of the on-site wetland and thicket vegetation.

The development of all the proposed dwellings, maintenance building, admin building and parking garages are purposefully limited to the existing, **disturbed secondary grassland area.** By clearly

following the impact hierarchy approach in this design, this layout avoids the sensitive estuarine area containing wetland and natural, intact thicket vegetation, thus creating a sizeable coastal buffer along the Keurbooms Estuary (Figure 2).

Services:

Stormwater:

Stormwater infrastructure will be managed on site. The design has been informed by input from the aquatic specialist considering the presence of a large on-site wetland in the sensitive natural eastern portion of the site.

Internal roads will be designed with formal kerbs/edgings and roadside channels to enable a formal stormwater drainage network that will discharge into 1.5m wide swales.

The 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 where the wetland is located, provision has been 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 final road level.

Water:

Extract from Civil Engineering Report compiled by Vita Consulting Engineers 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*".

GLS Consulting Engineers (on behalf of the Bitou Municipality), provided the following temporary solution as part of their master planning:

- Installation of a temporary 160Ømm bulk main off the existing 160mm distribution main in the N2 road reserve, will free up 860kl/day water supply.
- This capacity rectification will accommodate the development demand for Farm 444/38, Farm 304/32 and RE/6503 (this application).

According to Vita Consulting Engineers, implementation of this temporary solution is to be undertaken by the developer of Erf Portion 19 and 27 of Farm 444 (construction on this development commenced June 2024).

The 160mm diameter pipeline of approximately 460m in length, is to be installed as a temporary measure till the Municipality has its bulk water supply network capacity funding. It will be installed above ground, following the existing water servitude that runs from the Goose Valley Reservoir to the existing distribution main in the N2 road reserve (Figure 3).

The existing servitude already contains a 200mm and 250mm diameter underground pipelines (of which one is defunct).

The temporary pipeline is to be installed in short 2.4m sections that will be welded together on site. The implementation of the temporary solutions does not entail earthworks, or the removal of vegetation, although trimming of vegetation to clear the route is anticipated.

Link services BPW14.1 (~70m x 200mm diameter water pipeline) as seen in Figure 4 is required to connect the internal reticulation network of the proposed development to the existing municipal water network.

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).

Electricity:

The proposed development is located in the Plettenberg Bay town area which is currently supplied by Substation – 1 Ferdinand. The substation is shared with Eskom by Bitou Municipality and has an installed capacity of 20MVA with 2 x 10MVA transformers.

The Notified Maximum Demand for the substation is 15.5MVA and therefore it has sufficient capacity to accommodate the additional 800 kVA (maximum demand) of the proposed development on the Remainder of Erf 6503.

Sewage:

The Ganse Vallei Wastewater Treatment Works (WWTW) has an effluent discharge capacity of 6Ml per day and is currently at an average daily discharge volume of 5.8Ml.

According to Bitou Municipality the remaining 0.2Ml is reserved for approved developments.

Upgrades to the Ganse Vallei WWTW is therefore required to accommodate new developments.

Due to the fact that said upgrade of the WWTW may take some unknown time still (considering approvals / funding / delays etc), the proposal for this development is for the installation of an on-site package plant.

Confirmation of the use of such a temporary WWTP has been obtained from Bitou Municipality on 02 July 2024 on condition that the plant will be decommissioned once Bitou Municipality finished upgrades to the Ganse Vallei WWTW and the proposed Plett Lagoon Estate can be connected to the municipal system.

The temporary on-site package plant (fully enclosed) is proposed to be installed inside a 12m container directly adjacent to the proposed maintenance building at the entrance of the proposed development (Figure 6).

The temporary package plant will have a treatment capacity of 40m^3 per day and will use a combination of conventional treatment (natural bacteria) and membrane technology (microfiltration) to treat the household sewage to comply with general water limits stipulated by the Department of Water Affairs.

For the duration of the package plant being in operation, all treated effluent is then to be used for irrigation within the estate (not in the conservation area). Dedicated irrigation storage tanks (4 x 10Kl) forms part of the design and will be located next to the container.

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 5 and 6 of the development, from which sewage will be **pumped** along the eastern boundary of the development footprint through a **75mm diameter rising main** towards the temporary package plant.

Once the Municipal Ganse Vallei WWTW has been upgraded to capacity to accommodate the proposed Plett Lagoon Estate development (and the package plant decommissioned), sewage

will be pumped towards the existing 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserve on the southern boundary of RE/6503. To enable this switch-over in future, this connection line to the municipal sewer system will be installed as part of the project services installation.

The internal sewage network will **not encroach into the sensitive thicket** in the eastern portion of RE/6503 but is subject to a Water Use License (WULA) considering its proximity within the regulated area (within 500m from the on-site wetland).

Solid Waste:

A communal refuse collection area is proposed at the entrance gate inside the proposed development perimeter, near the main security access. Bitou Municipality has confirmed that there is sufficient capacity for Waste Disposal for the proposed development on 03 June 2024.

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.

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** with the internal access roads being rezoned to **Transport Zone III**.

It was confirmed by the Department of Environmental Affairs and Development Planning that RE/6503, Plettenberg Bay was included in the Knysna, Wilderness and Plettenberg Bay Regional Structure Plan. This portion was designated as **'Recreational'** and **'Township development'**. **RE/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.

Not applicable.

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

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:
    - Forty-one (41) x Group housing erven (Residential Zone II, medium density). **10 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.

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 various income groups, at low and medium 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 edge** 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 10). Please also refer to **Appendix E15** for comment received from Bitou Municipality Town Planners regarding the consistency with the 2021 Bitou SDF.

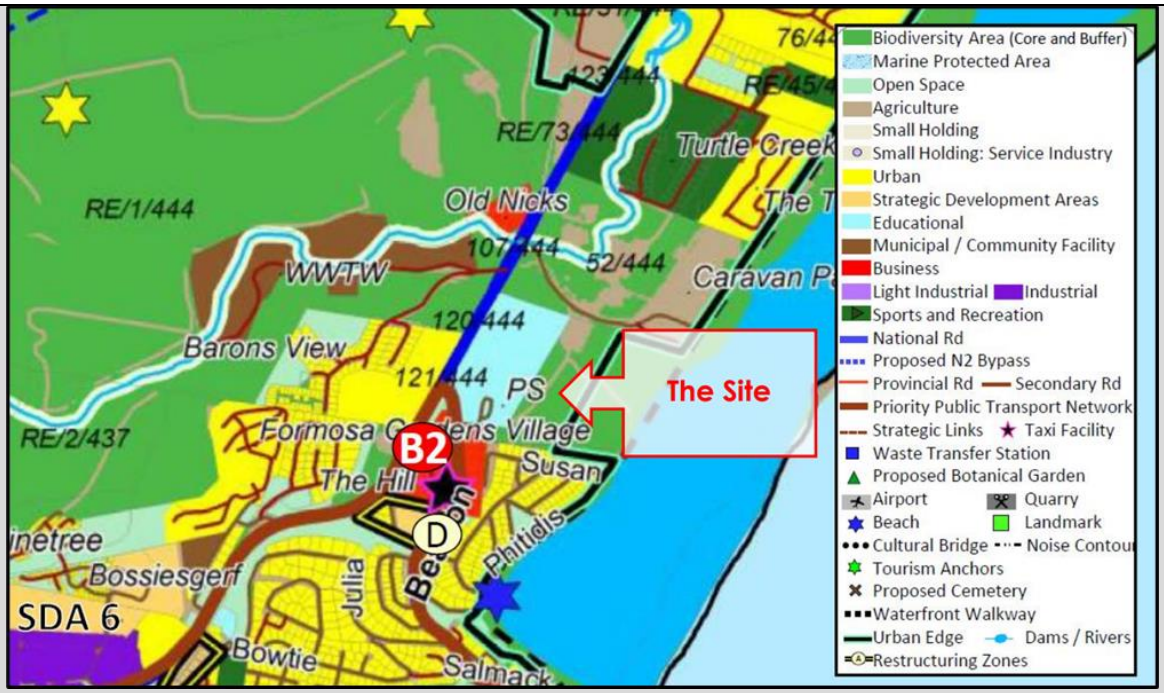


Figure 10: Extract of Bitou Municipal SDF.

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 RE/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.
- Fencing along the eastern boundary of the property: Preferred option is the fence line located closest to the estuary (Alternative 1, Figure 21) due to the construction and maintenance impacts that will likely be much lower in terms of water quality and habitat disturbance than for the alternative fence line (Alternative 2, Figure 22) route the crosses into the delineated wetland habitat.
    - Mitigation: The **preferred fence line route** included in this proposal is the route located closest to the estuary (Figure 21) in order to avoid as much as possible of the delineated wetland habitat. All recommendations regarding design and mitigation methods made in the Aquatic Impact Assessment Report is included in the preferred proposal.
- Maintenance of **fire breaks** where it affects the delineated wetland is important and the methodology for mowing/clearing of vegetation is stipulated alongside corridor width recommendations.

- The **South Cape Fire Protection Agency** must provide input on the specialist recommendations to ensure that potential fire risk (to surrounding urban developments) is not compromised by having restrictions in place for long-term fire break maintenance;
- **BOCMA** must provide input on the specialist recommendations to ensure that any specifications they may have ito the WULA conditions are aligned with that of the BAR outcome/recommendations.

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 stipulates the following:

- The western portion of RE/6503 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 RE/6503, with the **portion of Goukamma Dune Thicket** (eastern portion of RE/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 with a positive impact resulting from the long-term conservation of the remaining thicket and wetland habitat in the designated open space/private reserve.

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 RE/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/fire break maintenance when needed).
  - Fencing must be erected in accordance with the preferred fence routing that follows existing pathways along the Eastern portion of the site. The necessary **Forestry Permits** must be obtained prior to the trimming of any protected tree species that may need to be cut when the fence is erected. Minimum area to be cleared for installation/maintenance of the fence.

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

therefore applying avoidance mitigation by avoiding any development in the eastern portion of RE/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 RE/6503) will be avoided (avoidance mitigation), with proposed development limited to the western portion of RE/6503. Development in areas with a Medium SEI (western portion of RE/6503) is permissible provided that all mitigation measures are adhered to.
- **Fencing** along the Eastern border of the property must be implemented along the **preferred route** and the **CapeNature Fencing guidelines** must be adhered to, to ensure continued animal movement for noted species of concern likely to move between the Estuary and the Thicket area;
- **Minimal disturbance for fence installation and maintenance** is important, but allowing **access** along the fence line to **monitor** for any small mammal species/reptiles that may get caught in the fence unintendedly (such animals must be released if uninjured, alternatively any injured animals must be reported to the local veterinary and taken for treatment;
- If the proposed recommendations listed in the Terrestrial Animal Species Specialist Assessment are implemented, the significance of the impacts associated with the proposed security fence can be reduced to **LOW**.
- Activities of low impact are deemed acceptable in areas classified as HIGH SEI.

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 11)**.**

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.

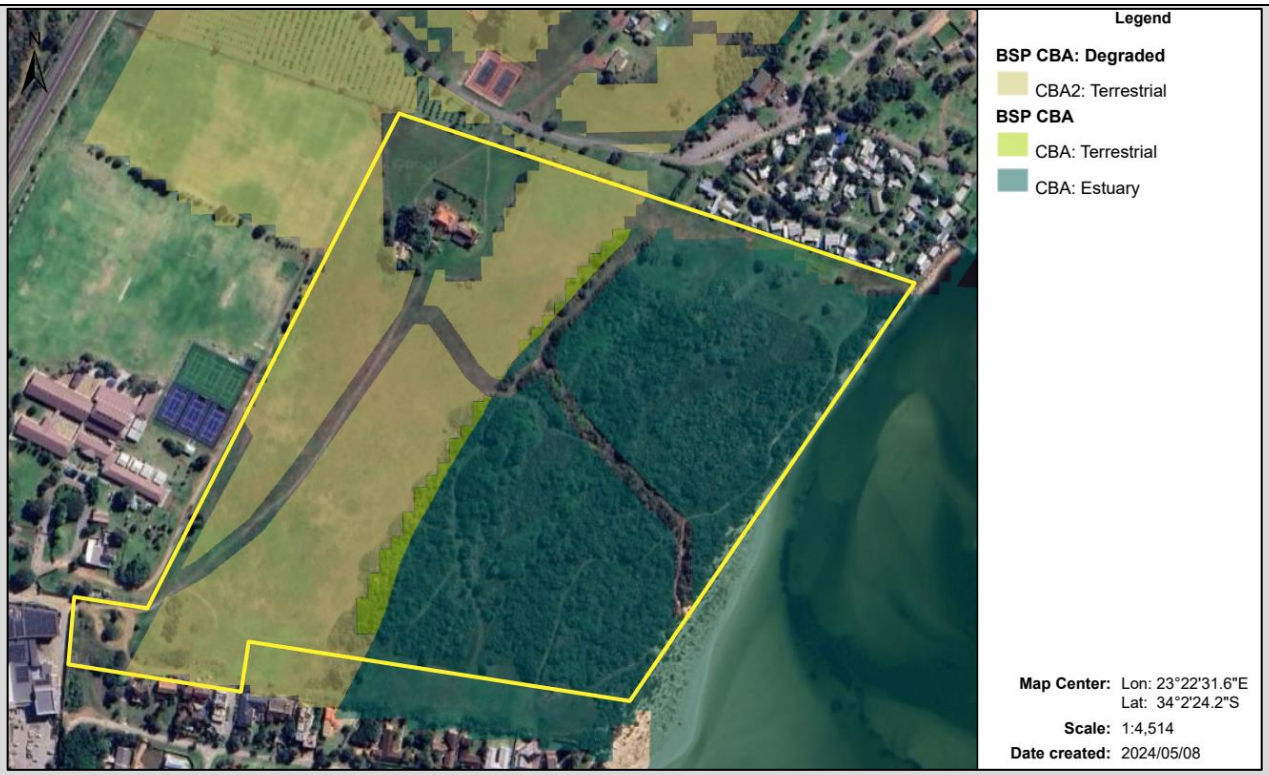


Figure 11: Critical Biodiversity Areas map of the proposed development site (CapeFarmMapper, 2023).

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 12).

Figure 12: 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 privately owned land and a private, secure 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 is proposed to be located from Beacon Way (**existing road**), between the Checkers Centrum and Plettenberg Bay Primary School (Figure 7).

A new traffic turning circle is proposed to be developed at the Beacon Way/School intersection (Figure 8). Bitou Municipality approved the proposed traffic circle on 14 February 2024. The development and associated costs of the turning circle is the responsibility of the development of the Remainder of Erf 6503.

Electricity will be connected to **existing municipal services**.

The internal sewage pipes will drain towards a small **underground pump station** located between Erf 5 and 6 of the development, from which sewage will be **pumped** along the eastern boundary of the development footprint through a **75mm diameter rising main** towards the temporary WWTP. Once the Ganse Vallei WWTW has been upgraded to have sufficient capacity to accommodated the proposed Plett Lagoon Estate development, sewage will be pumped towards an **existing 160mm underground municipal bulk sewer pipe** connection in the Susan Road Reserve on the southern boundary of RE/6503, however this connection to the municipal sewer system will be installed as part of the initial services installation.

Link services BPW14.1 (~70m x 200mm diameter water pipeline) as seen in Figure 4 is required to connect the internal reticulation network of the proposed development to the existing municipal water network.

Please refer to **Appendix O** 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).

Water:

Extract from Civil Engineering Report compiled by Vita Consulting Engineers 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*".

GLS Consulting Engineers (on behalf of the Bitou Municipality), provided the following temporary solution as part of their master planning:

- Installation of a temporary 160Ømm bulk main off the existing 160mm distribution main in the N2 road reserve, will free up 860kl/day water supply.
- This capacity rectification will accommodate the development demand for Farm 444/38, Farm 304/32 and RE/6503 (this application).

According to Vita Consulting Engineers, implementation of this temporary solution is to be undertaken by the developer of Erf Portion 19 and 27 of Farm 444 (construction on this development commenced June 2024).

The 160mm diameter pipeline of approximately 460m in length, is to be installed as a temporary measure till the Municipality has its bulk water supply network capacity funding. It will be installed above ground, following the existing water servitude that runs from the Goose Valley Reservoir to the existing distribution main in the N2 road reserve (Figure 3).

The existing servitude already contains a 200mm and 250mm diameter underground pipelines (of which one is defunct).

The temporary pipeline is to be installed in short 2.4m sections that will be welded together on site. The implementation of the temporary solutions does not entail earthworks, or the removal of vegetation, although trimming of vegetation to clear the route is anticipated.

Link services BPW14.1 (~70m x 200mm diameter water pipeline) as seen in Figure 4 is required to connect the internal reticulation network of the proposed development to the existing municipal water network.

Electricity:

The proposed development is located in the Plettenberg Bay town area which is currently supplied by Substation – 1 Ferdinand. The substation is shared with Eskom by Bitou Municipality and has an installed capacity of 20MVA with 2 x 10MVA transformers.

The Notified Maximum Demand for the substation is 15.5MVA and therefore it has sufficient capacity to accommodate the additional 800 kVA (maximum demand) of the proposed development on the Remainder of Erf 6503.

Sewage:

The Ganse Vallei Wastewater Treatment Works (WWTW) has an effluent discharge capacity of 6Ml per day and is currently at an average daily discharge volume of 5.8Ml.

According to Bitou Municipality the remaining 0.2Ml is reserved for approved developments.

Upgrades to the Ganse Vallei WWTW is therefore required to accommodate new developments.

Due to the fact that said upgrade of the WWTW may take some months/years still (considering approvals / funding / delays etc), the proposal for this development is for the installation of an on-site package plant.

Confirmation of the use of such a temporary WWTP has been obtained from Bitou Municipality on 02 July 2024 on condition that the plant will be decommissioned once Bitou Municipality finished upgrades to the Ganse Vallei WWTW and the proposed Plett Lagoon Estate can be connected to the municipal system.

The temporary on-site package plant (fully enclosed) is proposed to be installed inside a 12m container directly adjacent to the proposed maintenance building at the entrance of the proposed development (Figure 6).

The temporary package plant will have a treatment capacity of 40m^3 per day and will use a combination of conventional treatment (natural bacteria) and membrane technology (microfiltration) to treat the household sewage to comply with general water limits stipulated by the Department of Water Affairs.

For the duration of the package plant being in operation, all treated effluent is to be used for irrigation within the estate(all open space areas excluding the conservation area). Dedicated irrigation storage tanks (4 x 10Kl) forms part of the design and will be located next to the container.

The aquatic specialist recommended spikes in the internal open space areas to monitor groundwater quality to ensure that unwanted infiltration of treated effluent does not reach the on-site wetland.

Once the Municipal Ganse Vallei WWTW has been upgraded to capacity to accommodate the proposed Plett Lagoon Estate development (and the package plant decommissioned), sewage will be pumped towards the existing 160mm underground municipal bulk sewer pipe connection in the Susan Road Reserve on the southern boundary of RE/6503. To enable this switch-over in future, this connection line to the municipal sewer system will be installed as part of the project services installation.

Solid Waste:

A communal refuse collection area is proposed at the entrance gate inside the proposed development perimeter, near the main security access. Bitou Municipality has confirmed that there is sufficient capacity for Waste Disposal for the proposed development on 03 June 2024.

Confirmation of Services (Appendix E16):

Bitou Municipality has confirmed bulk infrastructure capacity in its network that can accommodate the proposed development of Plett Lagoon Estate on Remainder of Erf 6503 subject to the following conditions:

- *That the developer enters and sign a Service Level Agreement with Bitou Municipality.*

- *That the developer makes payment of the prescribed Augmentation contributions in order for the municipality to implement the bulk upgrade of services as detailed and required in the GLS network analysis report, dated 3 October 2022.*
- *That the developer implements and maintain a temporary wastewater treatment plant until the upgrades to the Ganzevallei WWTW has been completed. The temporary wastewater treatment plant must be approved by the relevant authorities as part of the civil engineering services for the development. A bulk connection to the Bitou sewer network must be commissioned once the Ganzevallei WWTW has been upgraded and the temporary WWTP must be decommissioned and removed from site. All costs will be for the account of the developer.*
- *That the developer duly communicate point 3 above with all future owners/Homeowners Associates and or Body corporate.*

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).
- Minimum disturbance for installation of the fence (along agreed route by the aquatic and faunal specialist) as well as for long-term maintenance of the fence;

- Fire break maintenance must take note of input from the South Cape Fire Protection Agency with regards to the ideal width and maintenance thereof to ensure that fire risk to surrounding properties are not increased;
- Maintenance of fire breaks must be done in accordance with the recommendations of the aquatic specialist specifically for the areas where the wetland is i.e. limit vehicle movement, restore unnecessarily wide fire breaks and adhere to wetland vegetation trimming methodology (by hand where possible, stipulated heights of reed cutting);
- Ongoing alien invasive clearing practices for the conservation area;
- Permitting for trimming of any protected trees along existing trails (maintenance), fencing (installation/maintenance) and fire breaks.

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 and restored where indicated.
- 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 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 has been updated with comments received during the public participation period of the Pre-Application DBAR.

- **Neighbouring property owners** were identified using CapeFarmMapper.
- Adjacent 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/WULA.**
- **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 was considered and added to the Stakeholder Register and all submissions were incorporated and reflected in this Draft Basic Assessment Report.

The following additional public participation process was followed for this Draft Basic Assessment Report:

- **Site Notices** were once-more placed at three separate locations on 14 August 2024 on the site calling for I&APs to register and review the Draft BAR.
- **Written notifications** were sent to all registered I&APs via email/post informing of the availability of the Draft BAR.
- **Written notifications** were sent to all direct neighbours via email/post call for I&APs to register and review the Draft BAR.
- **Advert** appeared in the *Knysna-Plett Herald* on 15 August 2024 for I&APs to register and submit comment on the Draft BAR.

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 Fisheries, Forestry and the Environment
- Department of Agriculture
- CapeNature
- Garden Route District Municipality
- Breede-Olifants Catchment Management Agency
- Department of Health
- SACAA
- Heritage Western Cape
- South Cape Fire Protection Agency

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.

State Department Approached For Comment During Pre-Application Public Participation	Request For Comment Date	Follow-up on Request For Comment Date	Comment Received
Bitou Municipality	10 November 2023		01 February 2024
Provincial Roads	10 November 2023		08 November 2023
SANRAL	10 November 2023	09 February 2024	X
Oceans and Coast	10 November 2023	DEA&DP: Coastal Management Requested to be added to the stakeholder register to provide comment during the next Public Participation Period on 22 February 2024.	X
Department of Fisheries, Forestry and the Environment	10 November 2023		03 February 2024
Department of Agriculture	10 November 2023		17 January 2024
Cape Nature	10 November 2023	09 February 2024	21 February 2024

Garden Route District Municipality	10 November 2023		21 November 2023
Breede-Olifants Catchment Management Agency	10 November 2023		29 February 2024
Department of Health	10 November 2023		21 November 2023
SACAA	10 November 2023		X
South Cape Fire Protection Agency	15 August 2024		
Heritage Western Cape	10 November 2023		X (Comment on NID Received on 15 August 2023)

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 Draft BAR.

The following input/comment was received during the Pre-Application Public Participation Period:

- The proposed Nature Conservation Areas be formally declared as Protected Environment in terms Section 28 of the National Environmental Management: Protected Areas Act (NEM:PAA, Act 57 of 2003) to be able to give legal recognition of the sensitivity of the site. As such, Open Space Zone IV in the Bitou Zoning Scheme (2023) would be the appropriate zoning to apply for.
    - The environmental application stipulates that the remaining natural area is a No-Go area (irrespective of the final zoning) and it must be managed as a conservation area in any event.
    - Apart from the already existing walkways/paths, pedestrian routes and dedicated vehicle routes for fire management and invasive alien management, the open space area must be managed by the applicant and in the future, the Managing Agent or Body Corporate / Homeowners Association of the proposed Plett Lagoon Estate as a conservation area irrespective of the zoning.
    - The long-term responsibilities of the applicant / HOA will be as follows (irrespective of the open space area being zoned Open Space III or IV):
        - Invasive alien clearing to ensure that the area remains free of invasive alien vegetation (both as a fire risk and environmental management strategy).
        - Maintenance of all walkways/paths/vehicle access routes in status quo with no addition structures/infilling. This includes ensuring that no new paths are created apart from what is already present. Managing vehicular access for only the purposes of invasive alien clearing and fire management. Ensuring that the necessary educational signage is put up and remains in place informing of the importance of the wetland/thicket habitat.
        - Access control measures as per the Estate's protocols and EA specifications (the property remains private, therefore the manner of security control i.e., CCTV cameras, security guard patrol etc.).
    - The land use description for Open Space Zone III is as follows: "nature conservation area" means the use and management of land with the objective of preserving the natural biophysical characteristic of that land, including fauna and flora.

- It is evident from the proposal, that the objective of the proposed open space area will be in line with the land use description of Open Space Zone III and additional zoning (as a formal Nature Reserve) is not deemed necessary.

- The top eastern boundary of the property adjacent to the Keurbooms Estuary is prone to erosion due to tidal action and adjacent hardened structures (rock riprap) at the Keurbooms Caravan park.
  - The Remainder of Erf 6503 (proposed development property) is separated from the Keurbooms Estuary by a privately owned property (Farm 449) and it is therefore not feasible to include any recommendations for coastal erosion as the developer of the Remainder of Erf 6503 has no say regarding Farm 449(which is the property exposed to coastal erosion).
  - However, the entire remaining 10,58ha natural vegetation will remain intact. No development (apart from fencing/fire breaks/pathways) is proposed within this important buffer between the development and the estuary. All applicable coastal risk management lines and datasets have been taken into account and forms part of the parameters that have informed the decision not to encroach into the remaining natural vegetated area on the property at all.
  - In the event that erosion from the estuary becomes a problem in the future on the Remainder of Erf 6503, the owner must follow the correct procedure to obtain approval to implement any additional preventative measures, should the owner of Farm 449 not have done so already.
- Concern regarding the entrance of the proposed development from the Poortjies Residential neighbourhood.
  - The Developer would prefer to have the access to this site via the existing gravel road situated between the Plettenberg Bay Primary School and the Checkers Centrum. The Developer consulted with the Bitou Municipality at the inception stage of the project and was advised by the Bitou Municipality that the intersection at that point is not suitable, hence the alternative of coming in via Susan/Cuthbert Street. The concern about through traffic has been noted and the Developer has again approached the Bitou Municipality to discuss their preferred access. The project engineer subsequently engaged with the SANRAL Roads Authority who will be starting work on the large traffic roundabout on the N2/Beacon Drive intersection in the near future and based on this upgrade, were able to establish that a smaller traffic circle at the intersection between Beacon Drive and the road between the Plettenberg Bay Primary School and Checkers Centrum is potentially viable.
  - The preferred Site Development Plan has been amended, and the proposed entrance is now located between the Plettenberg Bay Primary School and the Checkers Centrum. The initial proposal to have the access come via Poortjies residential area is therefore eliminated.
- Concern regarding sewage overflows in the Poortjies Residential neighbourhood.
  - The current (pipeline) capacity of the gravity sewer lines in Poortjies is designed to accommodate approximately 500 residential properties. The current number of households in Poortjies is less and according to the Engineer the additional units proposed at Plett Lagoon development will therefore not increase the sewer volumes beyond the current design capacity because there is sufficient spare capacity in this part of the sewer reticulation network. However that said, he has indicated that the spills are likely due to (a) blockages in the gravity pipelines, or (B) sinking of the pipeline. Because it is gravity lines (no pumping in some of the lines) the moment there is a blockage, or if the elevation of the pipeline changes i.e. a tree root grows underneath or over the line and causes it to move, it results

in sewage 'pooling' at specific areas. When this 'pooling' reaches a manhole, it will overflow until such time as the flow volume reduces (typically outside of 'peak' hours when most people are at home instead of at work for instance).
    - The Engineer has confirmed that it will be necessary for this existing sewage problem to be resolved by the Municipality before the Plett Lagoon Estate can connect (contribute) to this network. However considering that the development will have its own on-site package plant no sewage from this development will be put into the municipal system until such time as the Municipal WWTW at Ganse Vallei is upgraded to have sufficient capacity.
    - The Ganse Vallei Wastewater Treatment Works (WWTW) has an effluent discharge capacity of 6Ml per day and is currently at an average daily discharge volume of 5.8Ml. According to Bitou Municipality the remaining 0.2Ml is reserved for approved developments. Upgrades to the Ganse Vallei WWTW is therefore required to accommodate new developments. Due to the fact that said upgrade of the WWTW may take an unknown period still (considering approvals / funding / delays etc), the proposal for this development is for the installation of an on-site package plant. Confirmation of the use of such a temporary WWTP has been obtained from Bitou Municipality on 02 July 2024 on condition that the plant will be decommissioned once Bitou Municipality finished upgrades to the Ganse Vallei WWTW and the proposed Plett Lagoon Estate can be connected to the municipal system.
- Forestry request that should protected Milkwood and Cheesewood trees occur within the western part of the property it should be GPS'd and incorporated within the proposed development design as no-go areas.
    - There is only one single Milkwood tree identified in the western portion of the property. This Milkwood tree has been marked with GPS coordinates and incorporated in the site development plan as a no-go area. The Milkwood tree is accommodated in the Site Development Plan and will be on an island within the communal parking area near the entrance of the proposed development. Although care has been taken to avoid the protected tree, it is still recommended at the time of construction (since this can be over a period of 5 – 10 years) to ensure that units/roads/structures and/or infrastructure do not result in the damage or removal of protected trees found across the study site.
- Forestry supports that the eastern portion of the property be conserved (remain undisturbed) and request that this portion be indicated as a green belt and a no-go area for all future development proposals.
    - The eastern portion of the proposed development property is marked as a no-go area (for development) to be managed as a conservation area and no infrastructure is proposed on this portion apart from the existing walkways, pedestrian routes, dedicated vehicle routes for fire management and invasive alien management) and security fence (fencing must be in line with the CapeNature policy document on Fencing & Enclosures of Game, Predators & Dangerous Animals in the Western Cape (installation methods, maintenance methods etc). Fire breaks must be maintained, but clearing methods of fire breaks, must be adhered to, to ensure minimal disturbance of the on-site wetland and thicket vegetation). This area must be managed by the Applicant and down the line the Managing Agent or Body Corporate or Home Owners Association as a private conservation area. The necessary Forestry Permits must be obtained for any trimming of protected trees should it become necessary for pathway maintenance, fencing installation/maintenance or maintenance of fire breaks.
- Concern regarding electrical capacity of existing infrastructure.

  - The proposed development is located in the Plettenberg Bay town area which is currently supplied by Substation – 1 Ferdinand. The substation is shared with Eskom by Bitou Municipality and has an installed capacity of 20MVA with 2 x 10MVA transformers.
  - The Notified Maximum Demand for the substation is 15.5MVA and therefore it has sufficient capacity to accommodate the additional 800 kVA (maximum demand) of the proposed development on the Remainder of Erf 6503.
  - Please see Appendix G9 attached to this Draft Basic Assessment Report for a full Electrical Capacity Investigation completed by GLS Consulting in 2024.
- Concern regarding urban sprawl.
  - The property falls within the urban edge of Plettenberg Bay and is designated for urban infill development in terms of the spatial development framework plan. The general planning policy of Bitou and Western Cape is for vacant land within urban edges to be optimised so as to avoid unwanted urban sprawl (beyond designated urban edges). The proposed development is deemed to be in line with the applicable planning policies and legislation in as far as the proposed land use.
- Loss of Open Space in towns in respect of current legislation.
  - The original layout plan presented to us as the outset of the development planning phase covered the entire site all the way down to the Estuary. This would have resulted in the loss of pristine thicket and a fully functional wetland with significant ecological value. The specialists brought in to assess the site put down very strict development parameters one of which was the total avoidance of the nearly 10ha of remaining intact natural habitat. This area acts as a buffer between the Estuary and the development area and has been specifically set aside as a conservation area. This property is one of the last remaining sites in the urban edge that actually contains such a beautiful intact natural area. Given the outcome of the specialist studies the developers had to withdraw from the lower lying area completely. The development proposal is therefore focussed on the transformed areas of the site only. The +/- 10ha remaining natural area will therefore continue to serve a purpose as a functional open space link with the Estuary. Care has been taken specifically to engage with the Faunal and Aquatic specialists to ensure that the security fencing that will include this remnant natural habitat enables continued animal movement between the estuary and the thicket habitat.
- Concern regarding over-development out of character with the environment in question. Concern regarding the need and desirability.
  - The way in which the site plan has avoided the remaining natural area completely and focussed development on the transformed areas only, is critical in terms of the need & desirability of the proposal. The inclusion of the property within the urban edge of the SDF further addresses the feasibility of considering development on a portion of the property. As a result of the large area deemed to not be suitable for development i.e. the remaining 10ha natural thicket, the density on the transformed area which is deemed more suitable for development, has been increased. The planning principle of densifying urban developments within urban edges is acknowledged and in general low density development is no longer supported by the planning authorities especially if a property falls within an urban edge.
- Concern regarding hydrology and impact on the health of the whole lagoon eco-system.
  - The environmental investigation included a detailed aquatic impact assessment, as well as a Water Use License investigation specifically to understand the function

and sensitivity of the large wetland that is found on the remaining 10ha of natural habitat separating the development from the Estuary. They gave very specific advise to the engineer on how to deal with stormwater runoff to ensure that no erosion/silt/pollution enters the Estuary. The remaining natural 10ha area will act as a very good buffer, not only protecting the development from future coastal erosion, but also it will help filter and prevent any unwanted impacts on the estuary and receiving eco-system. Additionally the aquatic specialist recommends that spikes be installed within the internal open space areas to monitor groundwater quality for the duration the on-site package plant is operational to ensure that infiltration of treated effluent does not cause unnecessary harm to the receiving wetland environment or estuary.

- Concern regarding emotional Impact and public disturbance associated with new developments in sensitive areas to be addressed.
    - The development footprint is contained within a transformed area and the sensitive area on this property will be avoided altogether. Construction will be regulated by means of very specific conditions and it will be continuously monitored by both an aquatic, as well as an environmental officer to ensure compliance. Applicable health and safety requirements will be applicable which will help govern construction times and phasing of the development over time. Construction activities within an urban environment is not uncommon, especially within areas designated for urban infill development. Disturbances associated with construction activities will be short term and can be mitigated through implementation of the Environmental Management Plan under supervision of an Environmental Control Officer.
- Alternative proposals considered eg Arboretum, Public Park, Camp Site Extension, New High School, Sports fields, Farm. Environmental Centre. Maritime Training Centre?
    - The property is privately owned and therefore the applicant has the right to make a submission of his/her choice as long as the proposal can be showed to not exceed environmental and social thresholds / services capacity and planning policies. The Applicant is not experienced in, neither do they have any interest in establishing camp sites or schools or sports fields of environmental / training centres. The property is earmarked for urban infill which is what they are proposal to do in order to align with the local spatial planning. Since alternatives have to be reasonable and feasible, such options are not considered to be viable.

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 Environmental (Pty) Ltd)			
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 13).

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 RE/6503 (Figure 14). 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 15).
  - 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.

- **Fire break management and maintenance** in the Northern and Southern portions of the conservation area where the wetland and associated 30m buffer around the wetland is present, is important and clearing methodologies (by hand / height specifications for reeds) includes limiting vehicle access into these areas during wet periods / breeding season to avoid damaging the sensitive aquatic habitat/animals that breed in this area.
    - SCFPA must advise on the feasibility of said recommendations to ensure that they do not create conflicting risks (fire threats) to neighbouring and surrounding residential areas. BOCMA to confirm/align recommendations for wetland/fire management and maintenance as part of the WULA process.

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.

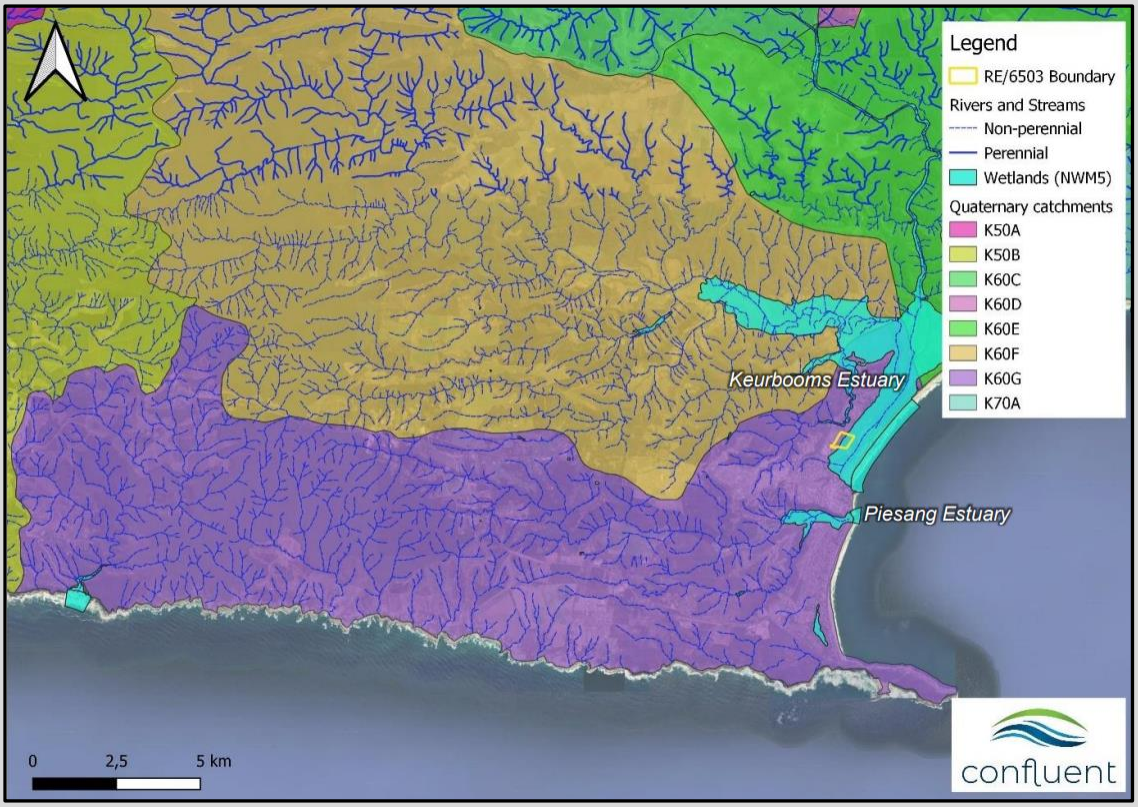


Figure 13: Location of the proposed development site in relation to quaternary catchments K60E and K60G (Confluent Consulting, 2023).

Figure 14: Delineated wetland habitat on the proposed development site (Confluent Consulting, 2023).

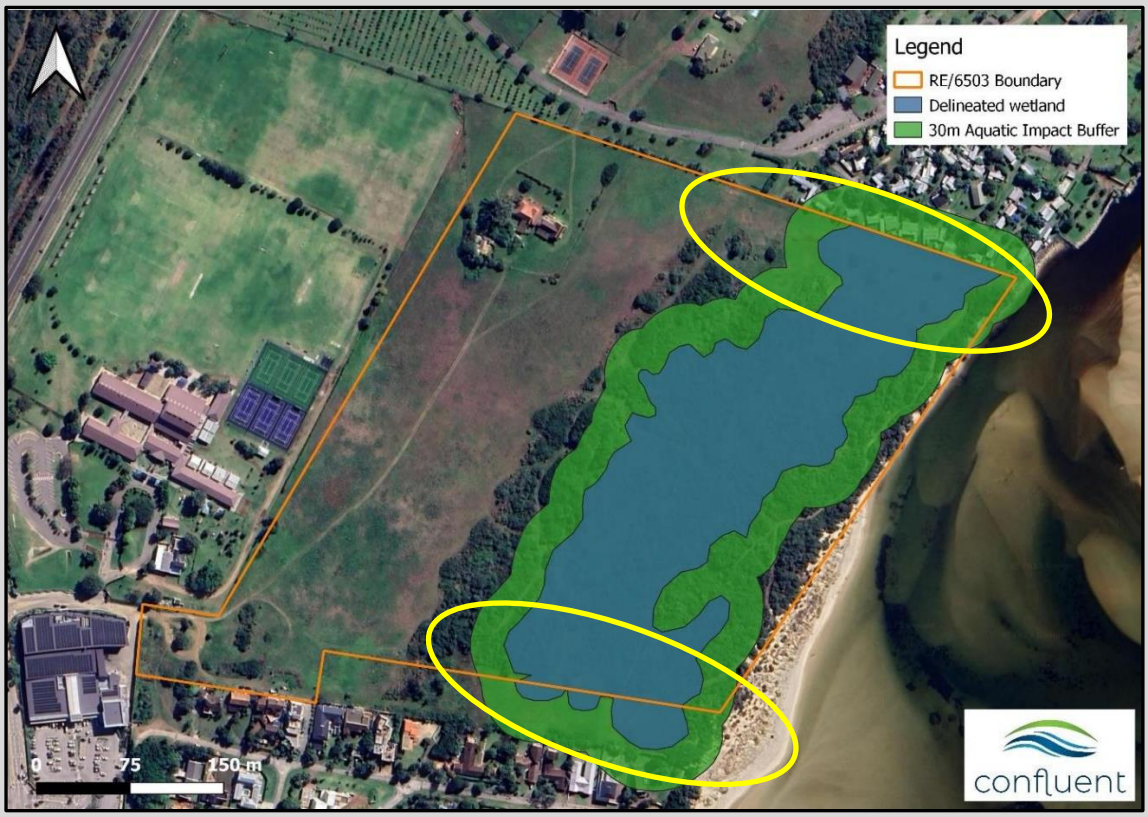


Figure 15: Delineated wetland habitat with a 30m buffer area also indicating the northern and southern areas where fire break maintenance and management is demed important (Confluent Consulting, 2023).

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 effect 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 12).
- 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: o *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 12).

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 11)**.**

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 16).

Figure 16: 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/6503 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 RE/6503, with the portion of Goukamma Dune Thicket (eastern portion of RE/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 RE/6503 containing Goukamma Dune Thicket.

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

Provided that the fenceline is located along he existing jeep track, and additional vegetation clearance is not required for the installation of the fence, it is unlikely to have an impact on the terrestrial plant species of the project area.

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.
    - The type of fencing to be installed along the Eastern boundary must adhere to the CapeNature fencing guidelines to ensure continued animal movement between the Estuary and the Thicket habitat;

- The fence (once installed) must be monitored for any unlikely snaring/catching of animals in the fence itself and the necessary measures taken to secure/treat any animals that might get caught;
- Minimal disturbance for both fence installation as well as fence maintenance must be ensured.

- Golden Mole (*Chloroalkane duthieae*) (VU), also has a high likelihood of occurring in the secondary grassy fynbos vegetation of the project area.
  - Potential for search & rescue of said mole species during construction phase in consultation with a faunal specialist.
  - Phased implementation to allow moles to relocate out of the 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 RE/6503) will be avoided (avoidance mitigation), with proposed development limited to the western portion of RE/6503. Development in areas with a **Medium** SEI (western portion of RE/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.		

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.
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.

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: • 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 for the work areas. • Temporary traffic congestion when the new traffic circle will be constructed in Beach Boulevard. **Operational Phase:**	

- No noise impact.
- No impact regarding odours considering the design of the proposed on-site package plant.
- Low impact regarding visual character and sense of place.
- Inconvenience to some residents from the adjoining Poortjies area in the South as obtained access to the backyards of their properties over this property (no record of consent from the land owner) and these owners will have to stop making use of these accesses over private land and revert to accessing their erven from their lawful accesses.

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 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 17).

Figure 17: Original site development plan (Alternative 2, not preferred and not assessed).

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

- This layout also extends beyond the property onto private property where jetty was initially proposed.
- This layout would have resulted in the total destruction of the on-site wetland habitat.

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

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

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

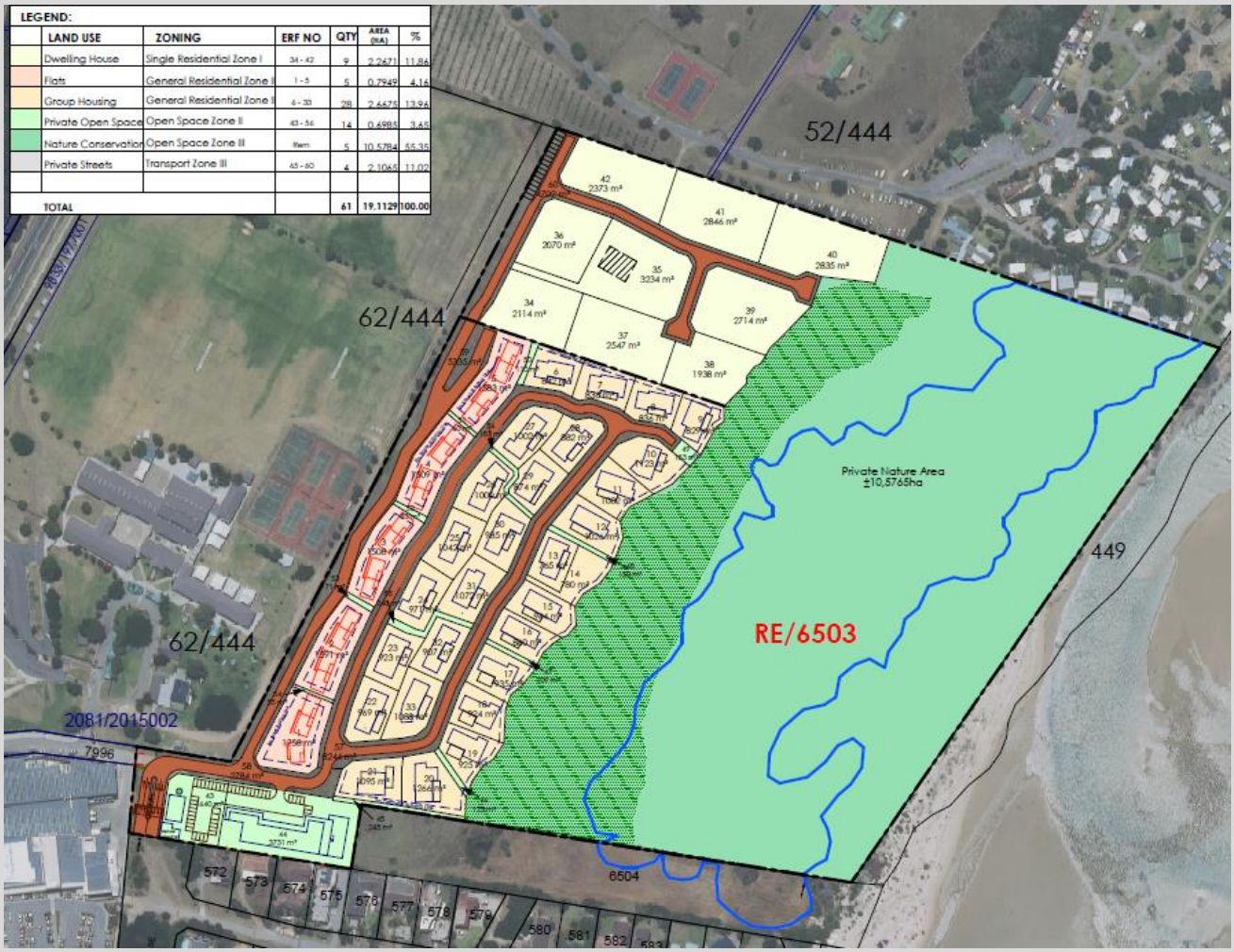


Figure 18: Third alternative considered with higher density units inclusive of apartments.

A subsequent third alternative was developed which:

- Removed the development out of the remaining natural habitat bordering the Keurbooms Estuary.
- This alternative consisted of **75 residential opportunities** inclusive of a retirement component:
    - 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).

- Primary access to the South via Poortjies;
- Fencing for this alternative was proposed directly along the houses excluding the conservation area.

Concern about traffic volumes (through Poortjies) and municipal capacity for sewage treatment resulted in this Alternative being **eliminated** and replaced with the preferred Alternative. Furthermore the alternative of moving the fencing towards the Eastern boundary was deemed more appropriate (a) for safety purposes, (b) fire management and (c) ensuring that future owners would take 'ownership' of the conservation area as oppose to it being excluded from the fenced estate.

Provide a motivation for the preferred property and site alternative including the outcome of the site selectin 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 so that it avoids the wetland.
- Botanical/Biodiversity specialists were appointed to map the habitat sensitivity of the remaining dune thicket area and amended to avoid this sensitive habitat altogether.
- An overlay was performed of the various sensitivity maps to arrive at a suitable '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.
- The original alternative also included infrastructure i.e. jetty/moorings extending into the Keurbooms Estuary and onto private land. 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.
- Access from the South (via Poortjies) was eliminated following concerns about through-traffic and the current access re-instated as the preferred primary access alongside a new traffic circle in Beach Boulevard to ensure that the additional traffic does not cause unwanted congestion.
- 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/habitat.
- 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 (once the Gansevallei WWTW is upgraded and has sufficient capacity to accommodate the proposed development).
- 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):

- Forty-one (41) x **Group housing erven** (Residential Zone II) (~4.07ha)
- Nine (9) x **Single residential erven** (Residential Zone I) (~2.27ha).
- Sixteen (16) x **Garage units** in the north-western corner of the single residential portion.
- **Entrance gate/road access** with security and fencing.
- **Internal access roads** between erven (Transport Zone III; up to 5.5m wide brick paved roads).
- Nine (9) internal x **Open Space Zone II** erven (~0.37ha).
- One (1) x **Open Space Conservation Zone III** erf (~10.58ha) making up the bulk of the untransformed, remnant natural coastal buffer. This area will be managed as a private nature reserve.
- **Temporary** on-site Wastewater Treatment Plant (to be decommissioned once capacity at the Ganse Vallei WWTW is made available by the Municipality).

Alternatives 2 & 3 were eliminated.

The (Alternative 4) **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.

The owner has pointed to ongoing poaching/snaring of small buck, as well as vagrants entering the remaining natural area for sleeping and subsequently setting fire to this sensitive area because this area is not secured under the status quo.

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 are 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.	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.

	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.	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.

The preferred alternative proposed and distributed as part of the initial Pre-Application Public Participation entailed 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).

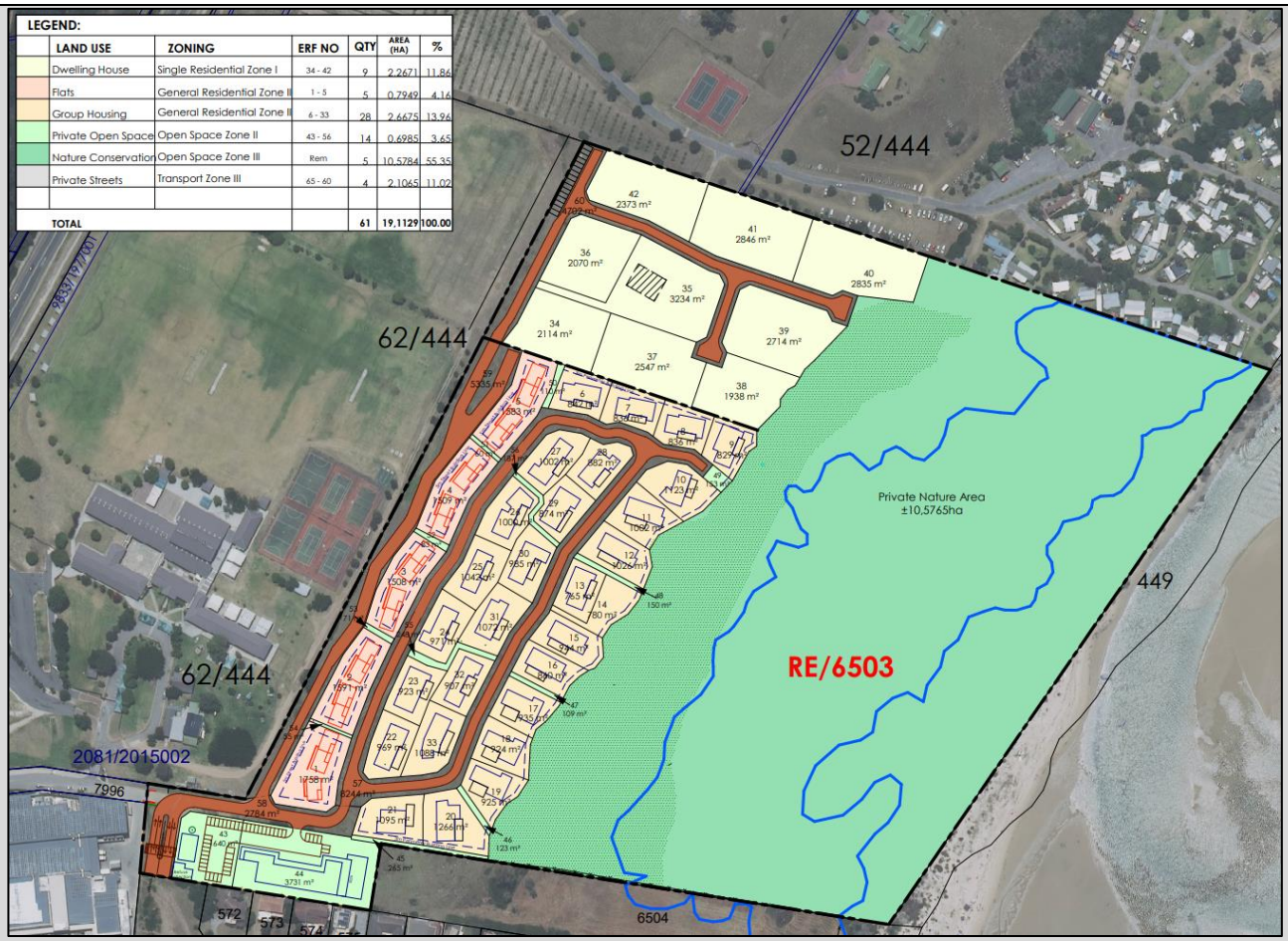


Figure 19: Site layout plan distributed as the preferred alternative in the Pre-Application Draft Basic Assessment Report.

Following input received from I&APs and authorities during the public participation period on the Pre-Application Draft Basic Assessment Report, the **preferred** alternative (**Alternative 1**) was **amended** to the following (the development footprint and project area of influence remained exactly the same as the preferred alternative used in the Pre-Application Draft Basic Assessment Report):

- Forty-one (41) x **Group housing erven** (Residential Zone II) (~4.07ha)
- Nine (9) x **Single residential erven** (Residential Zone I) (~2.27ha).
- Sixteen (16) x **Garage units** in the north-western corner of the single residential portion.
- **Entrance gate/road access** with security and fencing.
- **Internal access roads** between erven (Transport Zone III; up to 5.5m wide brick paved roads).
- Nine (9) internal x **Open Space Zone II** erven (~0.37ha).
- One (1) x **Open Space Conservation Zone III** erf (~10.58ha) making up the bulk of the untransformed, remnant natural coastal buffer. This area will be managed as a private nature reserve.
- **Temporary** on-site Wastewater Treatment Plant (to be decommissioned once capacity at the Ganse Vallei WWTW is made available by the Municipality).

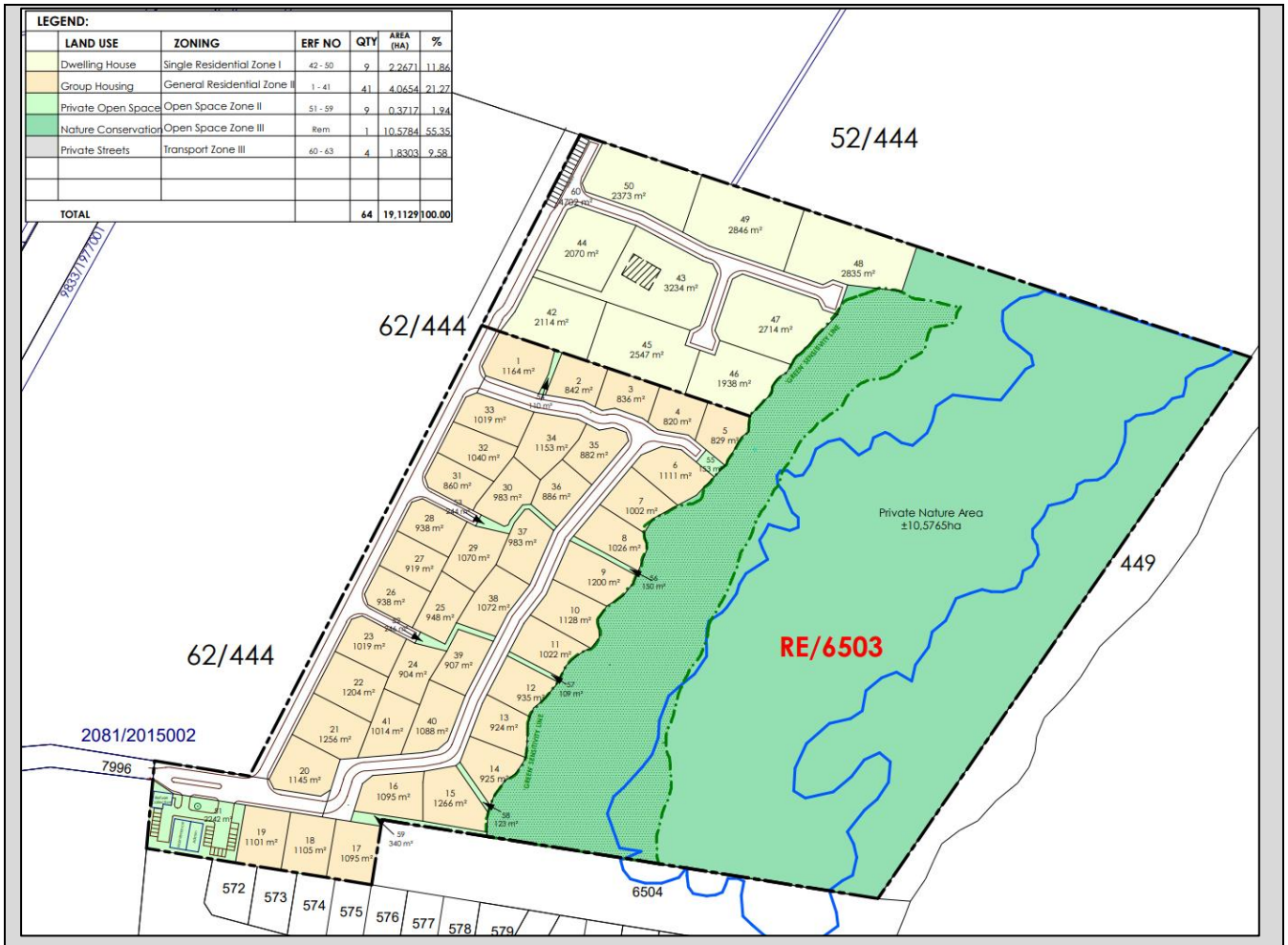


Figure 20: Alternative 1 (Preferred) Site layout plan.

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

Original Alternative 2 (not preferred and not assessed):

The original site development plan entails the following (Figure 17):

- 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.

Fence Alternatives:

Two fence line alternatives were considered and assessed in the Aquatic Biodiversity Impact Assessment and Terrestrial Animal Species Impact Assessment:

- Aquatic Biodiversity Impact Assessment Findings: Preferred option is the fence line located closest to the estuary (Alternative 1, Figure 21) due to the construction and maintenance impacts that will likely be much lower in terms of water quality and habitat disturbance than for the alternative fence line (Alternative 2, Figure 22) route the crosses into the delineated wetland habitat.

- Terrestrial Animal Species Impact Assessment Findings: **Both fence line alternatives are considered acceptable**, however fence line alternative 2 (Figure 22) is preferred as it provides a portion of unfenced thicket habitat (~1 ha in extent) adjacent to the estuary. If the proposed recommendations listed in the Terrestrial Animal Species Specialist Assessment are implemented, the significance of the impacts associated with the proposed security fence can be reduced to **LOW**. Activities of low impact are acceptable in areas classified as HIGH SEI.

It is noted that the Aquatic Biodiversity and Terrestrial Animal Species assessments have contradicting findings regarding the preferred fence line alternative, however the findings of the Aquatic Biodiversity Impact Assessment (Alternative 1, Figure 21) only slightly outweighs the findings of the Terrestrial Animal Species Assessment due to the faunal specialist stipulating that both fence line alternatives are considered acceptable if all mitigation measures stipulated in the specialist assessments are included in the Draft BAR and EMMPr to ensure continued animal movement between the Estuary and the Thicket area. All recommendations regarding design, installation methods, and mitigation measures included in the two specialist assessments are included in this Draft Basic Assessment Report as well as in the Environmental Management Programme.

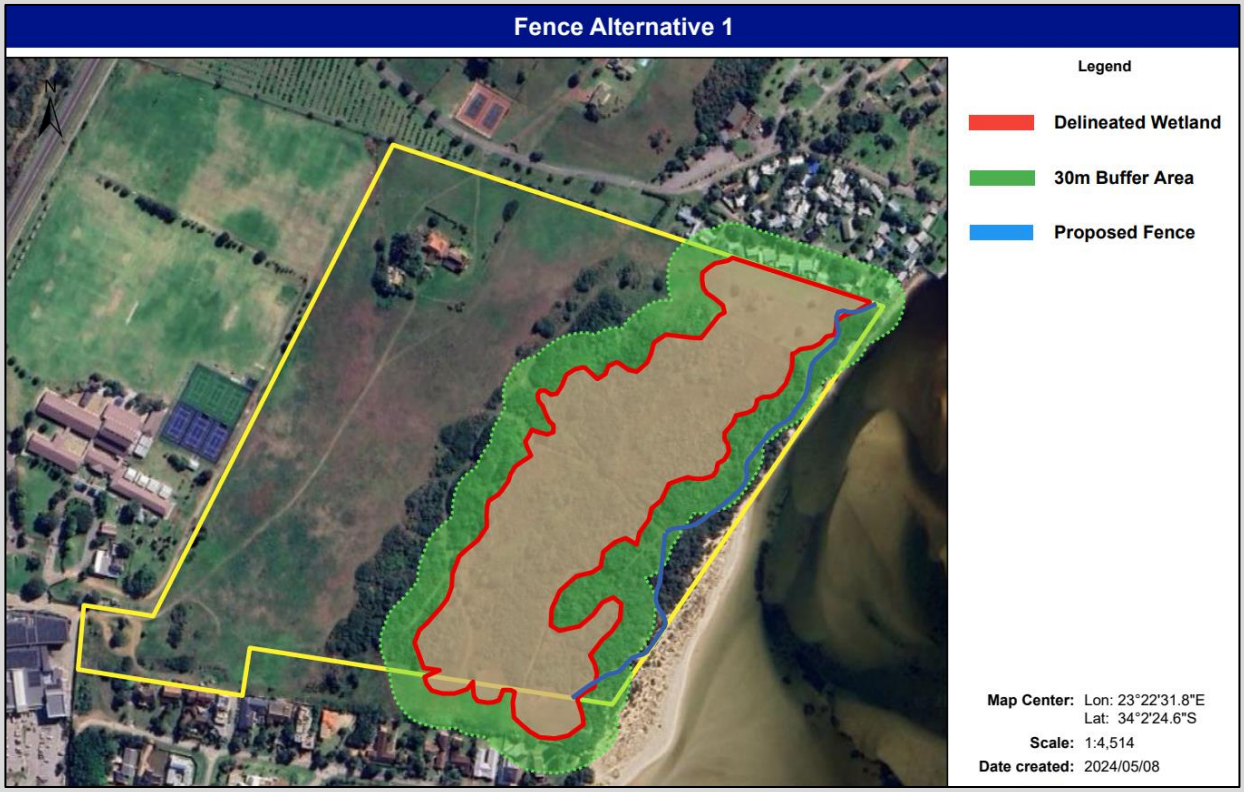


Figure 21: Fence line alternative 1 (preferred).

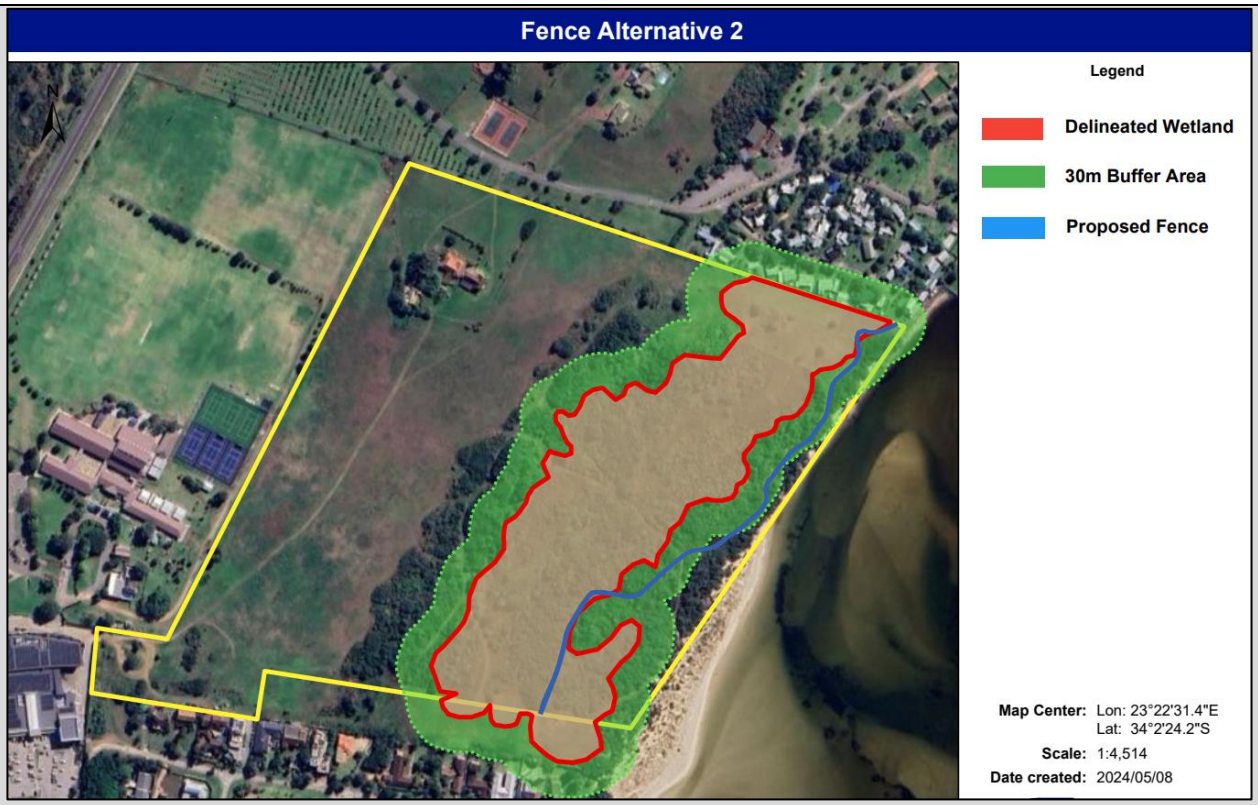


Figure 22: Fence line alternative 2 (not preferred).

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 2/3 (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:

Temporary On-Site Wastewater Treatment Plant:

The temporary on-site package plant (fully enclosed) is proposed to be installed inside a 12m container directly adjacent to the proposed maintenance building at the entrance of the proposed development (Figure 6).

The temporary package plant will have a treatment capacity of 40m^3 per day and will use a combination of conventional treatment (natural bacteria) and membrane technology (microfiltration) to treat the household sewage to comply with general water limits stipulated by the Department of Water Affairs.

For the duration of the package plant being in operation, all treated effluent is then to be used for irrigation within the estate. Dedicated irrigation storage tanks (4 x 10Kl) forms part of the design and will be located next to the container.

Provide a description of any other technology alternatives investigated.

Provide a motivation for the preferred technology alternative.

The temporary on-site wastewater treatment plant will allow the proposed development to operate until such time as upgrades to the Ganzevallei Wastewater Treatment Works are completed and have sufficient capacity to accommodate the development of Plett Lagoon Estate. There is sufficient space to accommodate all treated effluent to be used as irrigation within the estate up to 100% occupancy. The use of a WWTP will therefore not put additional pressure on the municipal wastewater treatment works.

Provide a detailed motivation if no alternatives exist.

The use of a temporary on-site wastewater treatment plant will be beneficial due to the following:

- It will allow the proposed development of Plett Lagoon Estate to continue until upgrades to the Ganzevallei Wastewater Treatment Works are completed.
- It will not put additional pressure on the Ganzevallei WWTW which is already near capacity.
- According to the engineer, there is sufficient open space (for irrigation) to accommodate the treated effluent up to a maximum occupancy of 40m^3 per day.
    - It is important to note that as the development phases are completed, available vacant land for irrigation of treated effluent will become less, which increases the volume of treated effluent that will need to be irrigated onto private open space areas within the development (as intended) – excluding the conservation area. To ensure that this volume (depending on when the Municipal WWTW will have sufficient capacity to allow this operation to cease) does not impact negatively on the on-site wetland, shallow spikes must be installed (as per the Aquatic specialist recommendations) for groundwater monitoring to be able to pick up any unwanted leaching;
    - In the even that leaching is noted in the monitoring results, additional storage tanks must be installed, alternatively the plant must be modified to improved treated effluent standards to potable standards.

- The temporary wastewater treatment plant must be decommissioned once upgrades at the Ganzevallei WWTW are completed which will allow the proposed development to connect to the main municipal system. The decommission of the WWTP will be included in the Service Level Agreement with the Bitou Municipality.

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

Impact	Temporary On-Site Wastewater Treatment Works (Preferred Alternative)
Positive	• It will allow the proposed development of Plett Lagoon Estate to continue until upgrades to the Ganzevallei Wastewater Treatment Works are completed. • It will not put additional pressure on the Ganzevallei WWTW which is already near capacity. • There is sufficient open space to accommodate the treated effluent up to a maximum occupancy of 40m^3 per day. • The temporary wastewater treatment plant will be decommissioned once upgrades at the Ganzevallei WWTW are completed which will allow the proposed development to connect to the main municipal system. The decommission of the WWTP will be included in the Service Level Agreement with the Bitou Municipality.
Negative	• Treated effluent utilised for irrigation is considered to be high in nutrients compared to natural waters and there poses a risk of eutrophication (nutrient enrichment(to the wetland habitat). o <u>Mitigation:</u> Install shallow spikes within the development area as per the Aquatic specialist report to determine baseline water quality prior to commencement of construction phase to allow monitoring of water quality throughout operation of the package plant.

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 / Status Quo 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 / poaching and wild fires.
- 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.

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 are 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.

IMPORTANT NOTE: The area indicated as No-Go is not intended to be set-aside as an area where there may be no access whatsoever. This area will be accessible to future residents for recreational use (along existing pathways/trails), alien clearing teams and/or fire management teams. Vehicle access in this area however is limited to only instances where the removal of alien vegetation biomass is required (and then it must be along existing vehicle routes only) and/or when vehicles must access for fire protection measures. Considering the presence of the on-site wetland central throughout this area however, vehicle access must only be permitted during the dry season and outside of breeding

seasons for aquatic species. This is to ensure minimal disturbance to the sensitive wetland environment and habitat at all times.

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	Minor - 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:	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:	**Greater than necessary footprint for fence line installation / Loss of vegetation, habitat disturbance, water pollution and harm to animals**
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 – Short term (Impact will last between 1 and 5 years).
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 moederately altered.

Probability of occurrence:	Without Mitigation – Almost Certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Probable (The impact has occurred here or elsewhere and could therefore occur).
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:	• Access points for delivery of material are only from the northern side along drier parts of the wetland where the area has been mowed and disturbed already. No access is permitted by vehicle along the southern edge because this has high sensitivity wetland vegetation and is very wet. • The fenceline may not be installed during the breeding season from September to February. This is to avoid disturbance or harm to dispersing wildlife which are more active and vulnerable at this time. • The limit of disturbance along the fenceline area is 2m on one side of the fenceline which should be already transformed by the jeep track. • Fencelines can be installed with the help of a small machine such as a bobcat, but should otherwise be installed by hand. No excavations or larger machines are permitted to drive along the fenceline.

	• Vegetation obstructing work on the fenceline should be cut or trimmed, and not uprooted, unless in the direct path of the fenceline. • Distrubed soil along the fenceline should be revegetated with low growing indigenous grass already found at the site. *Strenotaphrum secondatum* (buffalo grass) is recommended in wetland areas. This can create a relatively open area along the fenceline which can be monitored or patrolled on foot. • Any concrete mixing for posts must be contained in a wheelbarrow or small vehicle (e.g. Kubota), and is not permitted on the ground, especially in the wetland or buffer areas. • Excess concrete must be removed from the site and disposed of. No waste materials, dirty water, or concrete may be left in the wetland area. This must be monitored closely by the Eco with incidents immediately reported to DEA&DP and/or BOCMA. • Absolutely no washing of tools in water in the wetland. • No water from the wetland may be used to mix concrete. • Any vegetation cleared for installation of the fenceline must be removed from the site, or lightly scattered. It cannot be piled up along he fence, which creates further barriers and smothers vegetation.
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 - 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, fire-breaks 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 – Certain / definite (There are sound scientific reasons to expect that the impact will definitely occcur). 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:	• The north-eastern boundary fire-break should be maintained at 20m wide as a defensible zone for adjacent housing. Either mowing with weedeaters or limited vehicle mowers (during dry season when the water recedes, out of breeding season) can continue along the 20m strip. IF it is thought that reed growth (Phragmites) beyond the 20 m fire-break poses a serious fire risk (agreed to in writing by SCFPA), then reeds may be cut by hand/hand held machinery to 1m high for an additional 20 m with no soil disturbance by vehicles or machinery permitted. Reeds (no other vegetation) must be cut during winter to avoid disturbance to breeding birds, and removed from the wetland area to avoid smothering vegetation. • The south-western boundary between RE/6503 and neighbouring Erf 6504 can be maintained with a 5m firebreak which provides vehicle access along the fenceline to allow fire maintenance. The wetland area along this section should not be trimmed lower than 1m however and must be done by hand held machinery and preferably no vehicles unless it is in the dry season when the water recedes and out of the breeding season i.e. winter. This is to prevent disturbance to the eggs of aquatic biota which are often deposited in the base of stems and leaves close to the water. Since there are no houses in the adjacent Erf 6504 (yet) the immediate fire risk is reduced, and it is furthermore noted that the entire Erf 6504 is maintained with very low cut vegetation which reduced fire risk. Should this situation change (ie. houses built), then the SCFPA must be consulted on best practice adjustments in consultation with an aquatic specialist.

	• Currently at least two road-width pathways are maintained by mowing through the wetland/open space which provide access for fire-fighting and invasive alien clearing teams. Comment on the necessity of vehicle access must be provided by the SCFPA as it would be preferable to maintain narrower paths at a width of 3m to allow walking / jogging / small vehicle access only (e.g. kabota). Whether maintained as tracks or pathways, maintenance must include the removal of alien vegetation (previously discussed), trimming of pathways using hand-held weedeaters and no disturbance to indigenous plant roots or soil is permitted. • Use simple markers along the designated edge of paths and fire-breaks to ensure landscaping teams do not encroach further than the designated edge. • No herbicides can be used to maintain pathways or fire-breaks in the wetland area or buffer. • The existing footprint of any mowed or cleared pathways may not be enlarged. • No new pathways may be created in addition to those already existing in the open space area. • Do not plant any exotic plants that do not occur naturally at the site in any area of the wetland or buffer. ie. under no circumstances may kikuyu grass be planted in any part of the wetland or buffer. • No vehicles (tractors pulling mowers) may be used to cut vegetation in any part of the wetland, for firebreaks or pathways extending across the wetland area unless it falls outside of the wet season when the water level recedes and outside of the breeding season for aquatic species. • No fire-break may be cut along the new fenceline proposed adjacent to the estuary although it is acknowledged that an open area along this fenceline is necessary to monitor for security reasons, as well as any animals that may be trapped in the fence. • Ensure gardening / landscaping team / homeowners do not dump green waste into the open space area as this will smother indigenous plants and encourage the spread of alien and exotic plant species.
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. • 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
Potential impact and risk:	**Irrigation with treated wastewater daily resulting in eutrophication of the wetland / Seepage of treated wastewater into the wetland could result in eutrophication.**
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 – Almost Certain / Highly probable (It is most likely that the impact will occur). With Mitigation – Probable (The impact has occurred here or elsewhere and could therefore 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 – 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)	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:	High – Mitigation measures are stipulated and will notably reduce the significance of the impact.
Proposed mitigation:	• Under NO circumstances can treated wastewater be discharged to the stormwater system, as this leads directly to the wetland which has a unique water chemistry that supports a diverse assemblage of fauna and flora. • Install 2 groundwater spikes / wells at 10m depth to monitor ground water on the upland area (within the estate) near the wetland buffer. These should be located at least 200 m apart and provide easy access

	during the construction and operational phase. They should not be located in any area of significant natural vegetation, and should rather be sited in grassy areas. • Water measurements must be taken prior to the package plant being operational to establish a baseline for future monitoring. • Collect a water sample from each monitoring point on a monthly basis during operational phase and submit to a registered laboratory for the analysis of parameters indicated by DWS general limits. • Water chemistry results should not vary by more than 10% of background values as established prior to the development. Therefore, the spikes should be installed for monitoring prior to the commencement of construction, and water sampling to establish the baseline should be undertaken for 3 months prior to the package plant being operational. • If water chemistry deviates significantly from background levels and begins to indicate eutrophication (nutrient enrichment; e.g. elevated levels for > 3 months), then an alternative solution to the irrigation of water must be provided. This could involve discharging to clay-lined ponds, or irrigating on the neighbouring school's sports fields. Proactive steps to mitigate eutrophication must be taken from the first month that elevated levels are noted, so that if elevated levels persist, a solution is fully actionable by the 3rd month. • Water samples must be submitted to the Bitou Municipality, BOCMA and be reviewed by an aquatic ecologist on a quarterly basis for the first two years of operation of the estate.
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 - Negative

Terrestrial Animal Species Specialist Assessment	
Alternative:	**Alternative 1 (Preferred)**
Construction Phase	

Potential impact and risk:	**Loss of faunal habitat associated with the construction of the proposed residential development**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised - Permanent
Consequence of impact or risk:	Moderate
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:	Moderate - Negative
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:	Moderate – Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
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) associated with the construction of the proposed residential development**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Study Area – Short Term
Consequence of impact or risk:	Moderate
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:	Moderate - Negative
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:	Moderate – Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
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 associated with the construction of the proposed residential development**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Short Term
Consequence of impact or risk:	Moderate
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:	Low - Negative
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.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Low – Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
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 associated with the construction of the proposed residential development**

Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Permanent
Consequence of impact or risk:	Moderate
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:	Moderate - Negative
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:	Low – Negative The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
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 associated with the operation of the proposed residential development**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Localised – Permanent
Consequence of impact or risk:	Moderate
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:	Low - Negative
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). • The fence line along the Eastern boundary must be inspected regularly to ensure that any animals that may be trapped are rescued and if in need of veterinary attention for any injuries, must be captured and taken for medical attention whereafter it must be released. Such steps must be done in consultation with CapeNature.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Low – Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
Potential impact and risk:	**Fragmentation of faunal habitat and disruption of faunal movement.**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Study Area – Permanent
Consequence of impact or risk:	High
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:	High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Achievable
Proposed mitigation:	• The proposed fence must be designed and constructed in line with the Policy on Fencing and Enclosure of Game, Predators and Dangerous Animals in the Western Cape Province (CapeNature, 2014), particularly in terms of the following minimum requirements: • The fence must be permeable to allow for movement of small, naturally occurring wild animals. Considering the faunal species likely to utilise the project area (particularly Sensitive Species 8), the proposed fence must be constructed using a type fencing with a 120 mm gap between pales to allow movement of fauna to and from the project area and the estuary. Larger breaks in the fence approximately 40 cm high (measured from the ground surface) and 21 cm wide, must be created at regular intervals along the length of the fence to allow for faunal movement to and from the site. • A faunal specialist must be appointed to confirm the faunal corridors linking the project area and the estuary once the fence plan has been finalised. The location of faunal corridors must inform the placement of the breaks in the fencing (i.e. breaks must intercept faunal corridors to allow the continued movement of faunal species). However, a maximum spacing of 75 m between gaps in the fencing is permitted. • The straining, concern and gateposts must be sturdy and be set vertically into the ground. • All fence posts must stand erect and maintain the same height above ground level. In this way the undulations of the ground are followed. • The fence must be correctly maintained and gaps in the fencing must be inspected regularly. These gaps must be kept free of obstructions, including plant growth and debris. • Straining posts must not be too far apart. The closer they are together, the studier the fence. • The fence must be visible to animals to prevent unnecessary collisions with the fence.

	• The fence cannot be erected with inferior material. • The landowner/body corporate must make provision for damage to the fence or enclosure as a result of fires, floods, or other emergencies or disasters. • The proposed fence must follow the existing jeep track on either alternative routing and additional clearing of thicket vegetation is not permitted unless for trimming/maintenance purposes. • Electric fencing, barbed and razor wire must be avoided as this could pose a collision threat to birds and result in the electrocution and death of faunal species moving through the fence. If electric fencing is used, this must be placed on top of the fence but should not exceed the height of the surrounding thicket vegetation. • No electric strands may be within 1m of the ground as this can result in the electrocution and death of faunal species. Markers must be placed on electric fencing so that it is visible to birds. Although the fence will be erected along an existing jeep track, vegetation must not be allowed to touch the electric fencing. Where necessary, shrubs must be pruned and a gap between vegetation and electric fencing must be maintained [NB: vegetation clearance/strip clearing is not permitted, only pruning/trimming. If the pruning of any protected trees is required, the necessary permit must be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF)).
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Low- Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
Potential impact and risk:	**Faunal mortality due to collision or electrocution**
Nature of impact:	Direct - Negative
Extent and duration of impact:	Study Area – Permanent

Consequence of impact or risk:	High
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:	High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Not Applicable
Degree to which the impact can be managed:	Not Applicable
Degree to which the impact can be mitigated:	Achievable
Proposed mitigation:	• The proposed fence must be designed and constructed in line with the Policy on Fencing and Enclosure of Game, Predators and Dangerous Animals in the Western Cape Province (CapeNature, 2014), particularly in terms of the following minimum requirements: • The fence must be permeable to allow for movement of small, naturally occurring wild animals. Considering the faunal species likely to utilise the project area (particularly Sensitive Species 8), the proposed fence must be constructed using a type fencing with a 120 mm gap between pales to allow movement of fauna to and from the project area and the estuary. Larger breaks in the fence approximately 40 cm high (measured from the ground surface) and 21 cm wide, must be created at regular intervals along the length of the fence to allow for faunal movement to and from the site. • A faunal specialist must be appointed to confirm the faunal corridors linking the project area and the estuary once the fence plan has been finalised. The location of faunal corridors must inform the placement of the breaks in the fencing (i.e. breaks must intercept faunal corridors to allow the continued movement of faunal species). However, a maximum spacing of 75 m between gaps in the fencing is permitted.

	• The straining, concern and gateposts must be sturdy and be set vertically into the ground. • All fence posts must stand erect and maintain the same height above ground level. In this way the undulations of the ground are followed. • The fence must be correctly maintained and gaps in the fencing must be inspected regularly. These gaps must be kept free of obstructions, including plant growth and debris. • Straining posts must not be too far apart. The closer they are together, the studier the fence. • The fence must be visible to animals to prevent unnecessary collisions with the fence. • The fence cannot be erected with inferior material. • The landowner/body corporate must make provision for damage to the fence or enclosure as a result of fires, floods, or other emergencies or disasters. • The proposed fence must follow the existing jeep track on either alternative routing and additional clearing of thicket vegetation is not permitted unless for trimming/maintenance purposes. • Electric fencing, barbed and razor wire must be avoided as this could pose a collision threat to birds and result in the electrocution and death of faunal species moving through the fence. If electric fencing is used, this must be placed on top of the fence but should not exceed the height of the surrounding thicket vegetation. • No electric strands may be within 1m of the ground as this can result in the electrocution and death of faunal species. Markers must be placed on electric fencing so that it is visible to birds. Although the fence will be erected along an existing jeep track, vegetation must not be allowed to touch the electric fencing. Where necessary, shrubs must be pruned and a gap between vegetation and electric fencing must be maintained [NB: vegetation clearance/strip clearing is not permitted, only pruning/trimming. If the pruning of any protected trees is required, the necessary permit must be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF)). • Fencing must be of a dark colour and not blend into the surrounding vegetation so that it is visible to faunal species, particularly birds.
Residual impacts:	Not Applicable
Cumulative impact post mitigation:	Low- Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented to reduce the overall significance of the cumulative impact.
Significance rating of impact after mitigation	Low - Negative

(e.g. Low, Medium, Medium-High, High, or Very-High)	
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:	Moderate
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:	Low - Negative
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:	• 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:	Low – Negative. The applicant can only mitigate the impact associated with the proposed project. As such, it is important that the mitigation measures listed above are implemented reduce the overall significance of the cumulative impact.
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	Not Applicable	Negligible

(e.g. Low, Medium, Medium-High, High, or Very-High)		
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 (incorporated into the EMP).
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 must 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 must 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 Environmental): The Aquatic Biodiversity Impact Assessment stipulated the following:

- A wetland habitat was delineated in the eastern portion of the Remainder of Erf 6503 (Figure 14). It is considered as the last remaining natural wetland habitat on the western bank of Keurbooms Lagoon and therefore 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 15).
    - 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 e) engaging in a controlled activity identified as such in section 37 (1) or declared under section 38 (1).
- 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/6503 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 RE/6503, and

the portion of Goukamma Dune Thicket (eastern portion of RE/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 RE/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 RE/6503 (consisting of secondary grassy fynbos with a SEI of **Low**), therefore applying avoidance mitigation by avoiding any development in the eastern portion of RE/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 may 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 for the ECO during construction.
- Limit the number of construction workers and access within the thicket and foredune area during construction (construction workers should not be allowed into this area unless it is to install approved infrastructure, trim vegetation or removal invasive alien vegetation).
- 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 (incorporated with the EMP).
- No new infrastructure i.e. boardwalk may be installed within the wetland area, other outside the wetland area 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. Note that the installation of structures within 100m from the highwater mark of the sea (estuary) is 'listed' and should such structures be necessary in future the necessary approvals must be 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.
- Golden Mole (*Chloroalkane duthieae*) (VU), also has a high likelihood of occurring in the secondary grassy fynbos vegetation of the project area. Phased development must be undertaken to ensure that moles can relocate safely.
- 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 RE/6503) will be avoided (avoidance mitigation), with proposed development limited to the western portion of RE/6503. Development in areas with a **Medium** SEI (western portion of RE/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.

Mitigation Measures (including design specifications) identified in specialist reports regarding the construction and operation of a **security fence**:

Aquatic Biodiversity Impact Assessment:

- Access points for delivery of material are only from the northern side along drier parts of the wetland where the area has been mowed and disturbed already. No access is permitted by vehicle along the southern edge because this has high sensitivity wetland vegetation and is very wet.
- The fenceline may not be installed during the breeding season from September to February. This is to avoid disturbance or harm to dispersing wildlife which are more active and vulnerable at this time.
- The limit of disturbance along the fenceline area is 2m on one side of the fenceline which should be already transformed by the jeep track. This area may be maintained through trimming only.
- Fencelines can be installed with the help of a small machine such as a bobcat, but should otherwise be installed by hand. No excavations or larger machines are permitted to drive through the wetland along the fenceline.
- Vegetation obstructing work on the fenceline should be cut or trimmed, and not uprooted, unless in the direct path of the fenceline.
- Distrubed soil along the fenceline must be revegetated with low growing indigenous grass already found at the site. *Strenotaphrum secondatum* (buffalo grass) is recommended in wetland areas. This can create a relatively open area along the fenceline which can be monitored or patrolled on foot.
- Any concrete mixing for posts must be contained in a wheelbarrow or small vehicle (e.g. Kubota), and is not permitted on the ground, especially in the wetland or buffer areas.
- Excess concrete must be removed from the site and disposed of. No waste materials, dirty water, or concrete may be left in the wetland area. This must be monitored closely by the Eco with incidents immediately reported to DEA&DP and/or BOCMA.
- Absolutely no washing of tools in water in the wetland.
- No water from the wetland may be used to mix concrete.
- Any vegetation cleared for installation of the fenceline must be removed from the site, or lightly scattered. It cannot be piled up along he fence, which creates further barriers and smothers vegetation.

Terrestrial Animal Species Impact Assessment:

- The proposed fence must be designed and constructed in line with the Policy on Fencing and Enclosure of Game, Predators and Dangerous Animals in the Western Cape Province (CapeNature, 2014), particularly in terms of the following minimum requirements:
- The fence must be permeable to allow for movement of small, naturally occurring wild animals. Considering the faunal species likely to utilise the project area (particularly Sensitive Species 8), the proposed fence should be constructed using fencing with a 120 mm gap between pales to allow movement of fauna to and from the project area and the estuary. Larger breaks in the fence approximately 40 cm high (measured from the ground surface) and 21 cm wide, should be created at regular intervals along the length of the palisade fence to allow for faunal movement to and from the site.
- A faunal specialist must be appointed to establish the faunal corridors linking the project area and the estuary once the fence plan is available. The location of faunal corridors must inform the placement of the breaks in the fencing (i.e. breaks must intercept faunal corridors to allow the continued movement of faunal species). However, a maximum spacing of 75 m between gaps in the fencing is permitted.
- The straining, concern and gateposts should be sturdy and be set vertically into the ground.

- All fence posts must stand erect and maintain the same height above ground level. In this way the undulations of the ground are followed.
- The fence must be correctly maintained and gaps in the fencing must be inspected regularly for possible animals caught in the fence and minimum once a month to check on any obstruction to the gaps. These gaps must be kept free of obstructions, including plant growth and debris.
- Straining posts must not be too far apart. The closer they are together, the studier the fence.
- The fence must be visible to animals to prevent unnecessary collisions with the fence.
- The fence cannot be erected with inferior material.
- The landowner/body corporate must make provision for damage to the fence or enclosure as a result of fires, floods, or other emergencies or disasters.
- The proposed fence must follow the existing jeep track along either alternative route and additional clearing of thicket vegetation is not permitted although trimming is permitted (with the necessary Permits).
- Electric fencing, barbed and razor wire must be avoided as this could pose a collision threat to birds and result in the electrocution and death of faunal species moving through the fence. If electric fencing is used, this must be placed on top of the fence but should not exceed the height of the surrounding thicket vegetation.
- No electric strands should be within 1m of the ground as this can result in the electrocution and death of faunal species. Markers must be placed on electric fencing so that it is visible to birds. Although the fence will be erected along an existing jeep track, vegetation must not be allowed to touch the electric fencing. Where necessary, shrubs must be pruned and a gap between vegetation and electric fencing must be maintained [NB: vegetation clearance/strip clearing is not permitted, only pruning. If the pruning of any protected trees is required, the necessary permit must be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF)).
- Fencing must be of a dark colour and not blend into the surrounding vegetation so that it is visible to faunal species, particularly birds.

Mitigation Measures identified in Aquatic Biodiversity Impact Assessment for the operational aspects associated with the **temporary on-site wastewater treatment plant**:

- Under NO circumstances can treated wastewater be discharged to the stormwater system, as this leads directly to the wetland which has a unique water chemistry that supports a diverse assemblage of fauna and flora.
- Install 2 groundwater spikes / wells at 10m depth to monitor ground water on the upland area (within the estate) near the wetland buffer. These should be located at least 200 m apart and provide easy access during the construction and operational phase. They should not be located in any area of significant natural vegetation, and should rather be sited in grassy areas.
- Collect a water sample from each monitoring point on a monthly basis during operational phase and submit to a registered laboratory for the analysis of parameters indicated by DWS general limits.
- Water chemistry results should not vary by more than 10% of background values as established prior to the development. Therefore, the spikes must be installed for monitoring prior to the commencement of construction, and water sampling to establish the baseline should be undertaken for 3 months prior to operational phase of the package plant.
- If water chemistry deviates significantly from background levels and begins to indicate eutrophication (nutrient enrichment; e.g. elevated levels for > 3 months), then an alternative solution to the irrigation of water must be provided. This could involve discharging to clay-lined ponds, or irrigating on the neighbouring school's sports fields. Proactive steps to mitigate eutrophication must be taken from the first month that elevated levels are noted, so that if elevated levels persist, a solution is fully actionable by the 3rd month, this may include

additional storage tanks or alternatively the plant must be adjusted to discharge treated effluent of potable standards.
- Water samples must be submitted to the Bitou Municipality, BOCMA and be reviewed by an aquatic ecologist on a quarterly basis for the first two years of operation of the estate.

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);
- 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.

The Aquatic Biodiversity and Terrestrial Animal Species assessments have contradicting findings regarding the preferred fence line alternative, however the findings of the Aquatic Biodiversity Impact Assessment (Alternative 1, Figure 21) only slightly outweighs the findings of the Terrestrial Animal Species Assessment due to the faunal specialist stipulating that both fence line alternatives are considered acceptable if all mitigation measures stipulated in the specialist assessments are included in the Draft BAR and EMMPr.

The Alternative fence route along the Estuary is preferred to the one cutting out a piece of the thicket.

All recommendations regarding design, installation methods, and mitigation measures included in the two specialist assessments are included in this Draft Basic Assessment Report as well as in the Environmental Management Programme.

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.
    - Demarcate all No-Go areas prior to the commencement of construction activities.
2. **Minimise Impacts:**
    - Clear RE/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.
- Operational specifications for the conservation area is reasonable and feasible and with ensure recreational benefit for future residents, as well as ensure that an overall conservation outcome can be achieved.

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.

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.
- 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.
- 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.
- Faunal specialist must be appointed once the fence plan is available to give input to the design and faunal gaps.
- Minimum two spikes must be developed to allow monitoring of groundwater quality (associated with treated effluent irrigation from the package plant).

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.
- 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 within the development footprint area prior to any site clearing or development activities commencing.
- Forestry License(s) must be obtained for any trimming or removal of protected trees prior to trimming or removal of any protected trees for maintaining pathways, fire management or erection of the new fence.

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 and to allow moles to relocate safely;
- EMP must be implemented and adhered to.

OPERATIONAL:

- ECO must be appointed to conduct regular site inspections (at least once a week) 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

DECLARATION OF THE APPLICANT

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

I, PAUL MICHAEL BURTON, ID number 6083055110086, 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.

07-08-2024

Signature of the Applicant: Date:

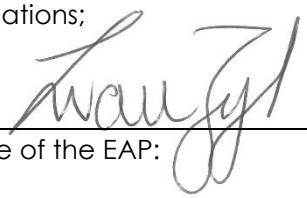
PLETT LAGOON ESTATE (PTY) LTD

Name of company (if applicable):

DECLARATION OF The environmental assessment practitioner ("eap")

I ……Louise-Mari van Zyl……, EAP Registration number ……2019/1444…….. as the appointed EAP hereby declare/affirm the correctness of the:

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



15 August 2024

Signature of the EAP: Date:

Cape Environmental Assessment Practitioners (Pty) Ltd

Name of company (if applicable):

DECLARATION OF The environmental assessment practitioner ("eap")

I ……Francois Byleveld……, EAP Registration number ……2023/6770…….. as the assisting candidate EAP hereby declare/affirm the correctness of the:

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

FByleveld

15 August 2024

Signature of the assisting candidate EAP: Date:

Cape Environmental Assessment Practitioners (Pty) Ltd

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

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

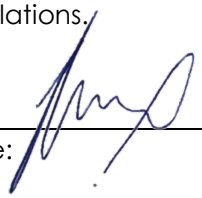
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity;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



05 August 2024

Signature: Date:

Biodiversity Africa

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

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

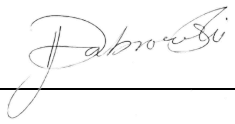
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity;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



12 August 2024

Signature: Date:

Confluent Environmental (Pty) Ltd

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I …**Lita Webley**…, as the appointed Archaeological 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.

L. C. Webley — 5 August 2024

Signature: Date:

N/A

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

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

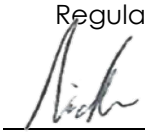
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity;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



06 August 2024

Signature: Date:

Biodiversity Africa

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I …**Stéfan Ethan de Kock**…, as the appointed Heritage 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.

05/08/2024

Signature: Date:

Perception Planning

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I …**Tarryn Martin**…, 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.

5 August 2024

Signature: Date:

Biodiversity Africa

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I …**Johann Lanz**…, as the appointed Agricultural 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.

07 August 2024

Signature: Date:

Johann Lanz

Name of company (if applicable):