



**THE PROPOSED DEVELOPMENT OF A NEW
DWELLING ON ERF 3806 (PORTION OF ERF 2916)
SEA VISTA, ST FRANCIS BAY, WITHIN THE KOUGA
LOCAL MUNICIPALITY, EASTERN CAPE.**

DEDEAT REF: EC08/C/LN1/M/41-2026

Prepared on behalf of: Mr. Pearton

Submitted in support of an application for Environmental Authorisation in terms of Section 24(5) of the National Environmental Management Act, Act 107 of 1998, as amended 07 April 2017



HORTCOUTURE
LANDSCAPE ARCHITECTURE & PLANNING

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Basic Assessment Report Checklist

(1) <i>“A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include- “</i>		
(a) details of-	Compiler	Reviewer
(i) the EAP who prepared the report; and	✓	✓
(ii) the expertise of the EAP, including a curriculum vitae;	✓	✓
(b) the location the activity, including:	✓	✓
(i) the 21-digit Surveyor General code of each cadastral land parcel;	✓	✓
(ii) where available, the physical address and farm name;	✓	✓
(iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	N/A	N/A
(c) a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale, or, if it is	✓	✓
(i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or	N/A	N/A
(ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	N/A	N/A
(d) a description of the scope of the proposed activity, including-	✓	✓
(i) all listed and specified activities triggered and being applied for; and	✓	✓
(ii) a description of the activities to be undertaken including associated structures and infrastructure;	✓	✓
(e) a description of the policy and legislative context within which the development is proposed including;	✓	✓
(i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and	✓	✓
(ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments;	✓	✓
(f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	✓	✓
(g) a motivation for the preferred site, activity and technology alternative;	✓	✓
(h) a full description of the process followed to reach the proposed preferred alternative within the site, including -	✓	✓
(i) details of all the alternatives considered;	✓	✓

(ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;	✓	✓
(iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	✓	✓
(iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	✓	✓
(v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;	✓	✓
(vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with alternatives;	✓	✓
(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	✓	✓
(viii) the possible mitigation measures that could be applied and level of residual risk;	✓	✓
(ix) the outcome of the site selection matrix;	✓	✓
(x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and	N/A	N/A
(xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity	✓	✓
(i) full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including;	✓	✓
(i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and	✓	✓
(ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	✓	✓
(j) an assessment of each identified potentially significant impact and risk, including-	✓	✓
(i) cumulative impacts;	✓	✓

(ii) the nature, significance and consequences of the impact and risk;	✓	✓
(iii) the extent and duration of the impact and risk;	✓	✓
(iv) the probability of the impact and risk occurring;	✓	✓
(v) the degree to which the impact and risk can be reversed;	✓	✓
(vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and	✓	✓
(vii) the degree to which the impact and risk can be avoided, managed or mitigated;	✓	✓
(k) where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report;	✓	✓
(l) an environmental impact statement which contains-	✓	✓
(i) a summary of the key findings of the environmental impact assessment:	✓	✓
(ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and	✓	✓
(iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;	✓	✓
(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of proposed impact management outcomes and the development for inclusion in the EMPr;	✓	✓
(n) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	✓	✓
(o) a description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed;	✓	✓
(p) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	✓	✓
(q) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;	✓	✓
(r) an undertaking under oath or affirmation by the EAP in relation to-	✓	✓
(i) the correctness of the information provided in the reports;	✓	✓
(ii) the inclusion of comments and inputs from stakeholders and I & APs;	✓	✓

(iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and	✓	✓
(iv) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;	✓	✓
(s) where applicable, details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	N/A	N/A
(t) any specific information that may be required by the competent authority; and	✓	✓
(u) any other matter required in terms of section 24(4)(a) and (b) of the Act.	✓	✓
APPENDICES	✓	✓
Appendix A – Site Plan	✓	✓
Appendix B – Site Photographs	✓	✓
Appendix C – Preliminary Plan	✓	✓
Appendix D – Specialist Reports	✓	✓
Appendix E – PPP & C&R Trail	✓	✓
Appendix F – CEMPR	✓	✓
Appendix G – Other	✓	✓
Environmental Screening Report	✓	✓
Site Sensitivity Verification Report	✓	✓
Other	N/A	N/A
(2) Where a government notice gazetted by the Minister provides for the basic assessment process to be followed, the requirements as indicated in such notice will apply.		

Details of the EAP

Contact Person

Mr Warren Lange

Email: warren@hortcouture.co.za

EAP's expertise and qualifications

Hort Couture is a consulting company offering holistic solutions in the disciplines of Environmental Planning & Consulting, and Landscape Architecture. We undertake a variety of specialized projects in the Residential, Commercial, Institutional and Industrial spheres, and have competency in all aspects of environmental planning and consulting. Our main areas of expertise include:

Environmental Planning and Consulting, including Environmental Impact Assessment (EIA), Public Participation Processes (PPP), Environmental Management Programme (EMPr), Protected Area Management Plans (PAMP), Feasibility Studies, Visual impact assessment (VIA), Environmental Auditing, Environmental Control Officer (ECO) and specialist environmental studies.

Urban Design, including Masterplanning, Urban Planning, Urban Design Frameworks (UDF), urban open space and land-use assessment and planning.

Landscape Architectural Services, including spatial assessment and full tailored landscape design package solutions for private, commercial, industrial and institutional clients.

Warren Lange is a principle member of Hort-Couture Landscape Architects and Planners.

Warren Lange holds a Bachelor of Landscape Architecture degree obtained from the University of Pretoria in 1994 and is registered as a professional member with the Environmental Assessment Practitioners of South Africa (EAPASA) as well as the South African Council for the Landscape Architectural Profession (SACLAP). His professional EAPASA registration number is 2020/1503 and SACLAP registration number is 20244. Warren is also registered with ILASA (the institute of Landscape Architects of South Africa, as well as IAASA (Institute of Environmental Assessment Practitioners of South Africa). Warren is also further registered a professional Natural Scientist with SACNASP (South African Council for Natural Scientific Professions) in the field of practice Environmental Science with registration number 147880.

Warren Lange has been involved in several environmental and terrestrial ecology specialist studies over the past several years. He currently resides in Port Alfred and is intimately knowledgeable about local environmental conditions within the Ndlambe Municipality as well as the Eastern Cape coast. His specialist skills further cover master planning and design with relation to environmental and social sustainability.

Matthew Knowles is a recent addition to Hort-Couture Landscape Architects and Planners.

Matthew Knowles holds a Bachelor of Science degree in Botany and Zoology obtained from the University of South Africa in 2023 and is registered as a Candidate Natural Scientist with SACNASP (South African Council for Natural Scientific Professions) in the field of practice of Ecological science with registration number 168122. Matthew is registered as a candidate environmental assessment practitioner under EAPASA (Environmental Assessment Practitioners of South Africa) Registration number 2024/8108.

Matthew is passionate about the protection of the environment with an interest in biodiversity and sustainability.

**Environmental Assessment
Practitioners Association
of South Africa**



Registration No. 2020/1503

Herewith certifies that

WARREN LANGE

is registered as an

Environmental Assessment Practitioner

**Registered in accordance with the prescribed criteria of Regulation 15. (1)
of the Section 24H Registration Authority Regulations
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the
National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).**

Effective: 01 April 2026

Expires: 31 March 2027

Chairperson

Registrar





REGISTRATION CERTIFICATE

THIS IS TO CERTIFY THAT

Warren Wayne Lange

IS REGISTERED AS A

Professional Landscape Architect

In terms of the regulations of Section 19(2)(a) of the Landscape Architectural Profession Act, 2000 (Act No.45 of 2000)

REGISTER PARTICULARS

REGISTRATION NUMBER: 20244
ID NUMBER: 7101295105083
REGISTRATION RENEWAL DATE: 1 August 2030
CERTIFICATE SERIAL NUMBER: PRCL 2008026
CERTIFICATE DATE OF ISSUE: 2020-08-24

CONTACT DETAILS

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PROMOTE - GROW - TRANSFORM - SUSTAIN

Mr Ngwako Edward Hutamo
PRESIDENT

Mrs C. E. Chinga
REGISTRAR



SACLAP has confirmed the above information, for digital certification and sharing by PrivySeal Limited, at 14:14 PM (Africa/Johannesburg) on 20 Mar 2026



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**Environmental Assessment
Practitioners Association
of South Africa**



Registration No. 2023/6415

**Herewith certifies that
ANASTASIA ROXANE DOYLE
is registered as an
Candidate Environmental Assessment Practitioner**

**Registered in accordance with the prescribed criteria of Regulation 15. (1)
of the Section 24H Registration Authority Regulations
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the
National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).**

Effective: 01 April 2026

Expires: 31 March 2027

Chairperson

Registrar



List of abbreviations

BA Basic Assessment

BAR Basic Assessment Report

BSP Biodiversity Sector Plan

CA Competent Authority

CBA Critical Biodiversity Area

DEDEAT Department of Economic Development Environmental Affairs and Tourism

DAFF Department of Agriculture, Forestry and Fisheries

EA Environmental Authorisation

EAP Environmental Assessment Practitioner

ECO Environmental Control Officer

EIA Environmental Impact Assessment

EMPr Environmental management programme

IDP Integrated Development Plan

IEM Integrated Environmental Management

I&APs Interested and/or affected parties

MPA Marine Protected Area

NEMA National Environmental Management Act, 1998 (Act 107 of 1998)

PP Public Participation

PPP Public Participation Process

SANBI South African National Biodiversity Institute

SDF Spatial Development Framework

ECBCP Eastern Cape Biodiversity Conservation Plan

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BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

NEAS Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014 as amended, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for. This report is current as of 4 May 2026. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority **unless indicated otherwise by the Department.**
7. No faxed or e-mailed reports will be accepted **unless indicated otherwise by the Department.**
8. The report must be compiled by an independent environmental assessment practitioner (EAP). The EAP must satisfy conditions 11 below.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

11.1 The Environmental Assessment Practitioner (EAP) must be registered in terms of S24H Regulations with the Registration Authority EAPASA as from 8 August 2022.

11.2. S24H (14) states that "only a person registered as an Environmental Assessment practitioner may perform tasks in connection with an application for an environmental authorisation contemplated in

(a) Chapter 5 of the Act read with the Environmental impact Assessment Regulations.

(b) Section 24G of the Act

(c) Chapter 5 of the National Environmental Management Waste Act 2008 (Act No 59 of 2008) read with the Environmental Impact Assessment Regulations

11.3. Tasks in regulation 14 may only be conducted by an EAP that is registered

11.4. Regulations 20 of S24H indicates the offences and penalties as indicated below:

"20. Offences and penalties

(1) A person is guilty of an offence if that person-

(a) contravenes regulation 14 of the Regulations; or

(b) pretends to be a registered environmental assessment practitioner or registered candidate environmental assessment practitioner.

(2) A person convicted of an offence in terms of subregulation (1) is liable to the penalties contemplated in section 49B(3) of the Act."

Section 49B(3) of the Act states:

"A person convicted of an offence in terms of section 49A(1)(h), (l), (m), (n), (o) or (p) is liable to a fine or to imprisonment for a period not exceeding one year, or to both a fine and such imprisonment."

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

☒	NO
-------------------------------------	----

If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

1.1. Activity description

The proposed activity entails the development of a new private residential dwelling and associated infrastructure on Erf 3806, St Francis Bay.

The development components are anticipated to include the following:

- A multi storey brick and mortar residential dwelling with a total floor area of approximately 500 square metres.
- Associated decks, patios and external entertainment areas linked to the dwelling and canal frontage.
- A swimming pool and associated hard landscaped areas.
- An enclosed pergola or similar covered structure along the canal frontage.
- Solar power generation and backup infrastructure.
- Rainwater harvesting tanks and associated water storage infrastructure.
- Connection to existing Kouga Local Municipality bulk services, including water, electricity, sewerage or approved sanitation infrastructure and municipal solid waste services, where applicable.
- Landscaping, garden rehabilitation, access, parking and service areas associated with the residential use of the property.
- The total development footprint, inclusive of the dwelling footprint, decks, patios, pool, pergola, access, services, hard landscaping and associated external areas, is anticipated to be approximately 600 square metres.

Vegetation clearing is expected to be limited, as the site consists predominantly of maintained landscaped garden areas rather than intact natural coastal vegetation. No unnecessary removal of indigenous vegetation will be undertaken. Any disturbed areas will be stabilised and rehabilitated through appropriate landscaping, erosion control and environmental management measures.

The proposed development will be assessed through a Basic Assessment process, during which potential impacts on the estuarine environment, canal frontage, stormwater management, biodiversity, visual character and broader receiving environment will be identified and addressed through appropriate avoidance, mitigation and management measures.

1.2. Project Location

The approximate central coordinates of the study area are:

Latitude: 34°08'46.5"S

Longitude: 24°50'13.4"E

The subject property comprises Erf 3806, St Francis Bay, situated within the Kouga Local Municipality, Eastern Cape Province. The locality map below (Figure 1) further indicates the position of the study area in relation to the immediate and broader geographical surrounding.



Figure 1 Locality Map

1.3. Listed Activities applied for:

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1 (GN R327)	Describe the portion of the proposed project to which the applicable listed activity relates.
GN R 327 (LISTING NOTICE 1):		
17(v)(e)	The development of infrastructure or structures with a development footprint of 50 square metres or more, where such development occurs within 100 metres inland of the high-water mark of the sea or an estuary, where no development setback line has been adopted.	This activity is applicable as the proposed residential dwelling and associated infrastructure will exceed 50 square metres and will occur within 100 metres of the high-water mark of the estuary or canal system.
19A(ii)	The infilling or depositing of any material of more than 5 cubic metres, or the excavation, removal or moving of soil, sand, pebbles or rock of more than 5 cubic metres from within 100 metres inland of the high-water mark of the sea or an estuary.	This activity is anticipated to be triggered by site preparation, excavation, foundation preparation, service installation, pool construction, landscaping, stormwater infrastructure and other associated earthworks required for the proposed development within the regulated coastal or estuarine proximity zone.
GN R 324 (LISTING NOTICE 3):		

2. Biophysical environment

2.1. Climate

According to the NCCIS (2018) the Eastern Cape has a highly varied climate which is influenced by its proximity to the ocean, extensive mountain ranges and changes in altitude. For example, Barkley East, situated at an elevation of 1800m, often sees winter minimum temperatures around 0 °C, and snowfall is fairly common. In contrast, Port St Johns experiences winter temperatures over 10 °C warmer. The region's prominent east-west mountain ranges contribute to sharp differences in rainfall patterns. Willomore, for instance, receives about 240 mm of mostly summer rainfall annually, while Tsitsikamma, only 120 km to the south, gets approximately 720 mm of rainfall spread throughout the year.

Rainfall in the Eastern Cape is driven by three main mechanisms. Cold fronts moving across the southern part of the country bring rain during winter along the coast and coastal mountains. As these fronts move inland, their influence fades and summer rainfall (mainly from surface heating and convective thunderstorms) becomes more dominant. In the summer moist air moving inland from the ocean is forced

upward by the coastal mountains, resulting in significant rainfall.

The climate of the Kouga Municipality is subtropical which makes the area beneficial for outdoor activities and agricultural production. Rainfall varies between 650 mm per year (St Francis Bay area) to 400 mm (Gamtoos River Valley). The area is generally described as windy. (Kouga Municipality, 2024). St Francis Bay is located in the southern hemisphere and is characterised by a warm, temperate climate. Rainfall occurs throughout the year with approximately 525 mm per year. St Francis Bay experiences a substantial amount of rainfall with the highest rainfall occurring during August, averaging around 62 mm, while the lowest rainfall occurs during January (26 mm). with temperatures ranging from 18.5 °C in July to 24 °C in February. The coldest month is July with temperatures dropping to a low of 8.2 °C and the warmest months being January and February. This location is classified as Cfb by Köppen and Geiger which refers to a temperate oceanic climate (Climate Data, 2024).

“An oceanic climate, also known as a marine climate, is the humid temperate climate sub-type, in Köppen classification Cfb, typical of west coasts in higher middle latitudes of continents, generally featuring cool summers and mild winters (for their latitude), with a relatively narrow annual temperature range and few extremes of temperature...Locations with oceanic climates tend to feature frequent cloudy conditions with precipitation, low hanging clouds, and frequent fronts and storms” (Skybrary, 2024).

2.2. Topography

The Kouga Municipality is an urbanised region with three topographical areas. The first ranges in an east to west direction from the Van Stadens River to the Tsitsikamma River and is characterised by various coastal towns which include St. Francis Bay. The second area is the Gamtoos River Valley which is characterised by fertile flood plains, with steep slopes on the side of the Valley. This area is bordered by agricultural farming communities. The last area is Humansdorp which features moderate slopes in the south and steeper slopes in the north and northwest (Kouga Municipality, 2024). St Francis Bay has a relatively flat terrain with a slight descent towards the Kromme and Sand River that border the region. However, deviating from the status quo an elevation profile from a point inland in the west to the intertidal zone in the east, displays a steep decline from 7 m at the mean high-water spring (MHWS) mark to 1 m just below the mean low water spring (MLWS) (Coastal and Environmental Services, 2021).

The general topography of the site area is characterized by a gentle to flat gradient of approximately 4.95%, with the maximum height being approximately 5m (Northeast) above sea level (m.a.s.l) to a minimum height of 2m (Northern boundary). Figure 2 below indicates the elevation and gradient of the activity site.

$$= (5-2)/85.2\text{m} \times 100 = 3.52\%$$

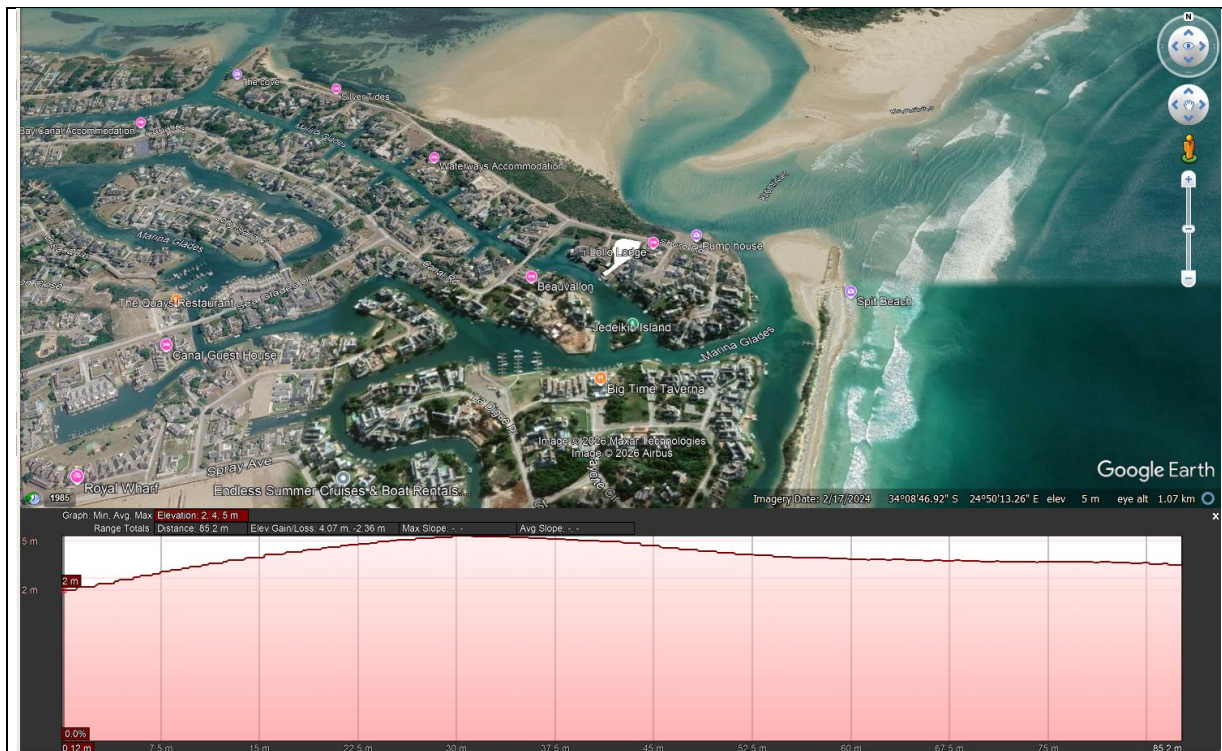


Figure 2 Site Elevation Profile

2.3. Geology and Soils

The underlying geology of the Kouga Municipality, particularly within the St Francis Bay and Cape St Francis area, is dominated by stratified formations of the Cape Supergroup, this includes the Table Mountain Group, Bokkeveld Group and the Witteberg Group (Johnson et al., 2006; Theron, 1990).

Within the Table Mountain Group, the Nardouw Formations are most prominent. These formations are primarily comprised of hard quartzites sandstones interbedded with shales, deposited in shallow marine and fluvial environments during the early Palaeozoic Era. The Nardouw Formation is highly resistant to erosion and forms prominent ridges and uplands throughout the region. Overlying this is the Bokkeveld Group, which includes the Ceres Subgroup, it is primarily composed of mudstones, shales and fine-grained sandstones deposited in a deeper marine setting. These softer rocks weather more easily, giving rise to gentler topography and supporting more fertile soils (Theron, 1990; Johnson et al., 2006).

Overlying these Palaeozoic formations are Cenozoic and Quaternary deposits belonging to the Algoa Group, which are widespread along the Kouga coastal plain (Almond, 2012). The Algoa Group consists of unconsolidated to weakly cemented calcareous sands, shelly limestones and coastal conglomerates that were deposited during successive marine transgressions and regressions associated with the breakup of Gondwana and the formation of the South Atlantic Ocean (Almond, 2012; CES, 2021). A key formation of the Algoa Group found within the Kouga area is the Schelm Hoek Formation, which is characterised by unconsolidated calcareous dune sands, locally developed paleosols and Late Stone Age middens. These features reflect repeated cycles of dune formation, soil development and human occupation during the late Quaternary (Coastal & Environmental Services, 2021; Roberts et al., 2006). The extensive dune fields and sandy plains in the St Francis Bay and Cape St Francis areas are products of these ongoing coastal and

aeolian processes.

The geology of the Kouga Municipality reflects the interaction between ancient Palaeozoic bedrock of the Cape Supergroup and the more recent Cenozoic coastal formations of the Algoa Group. This geological evolution has shaped the area's current landscape, influencing soil development, groundwater occurrence and coastal stability.

According to SANBI (2025), the underlying geology of the proposed activity site is primarily associated with the Algoa Group, with the broader surrounding area of the site falling within the Schelm Hoek Formation. Refer to the Underlying Geology map below (Figure 3).

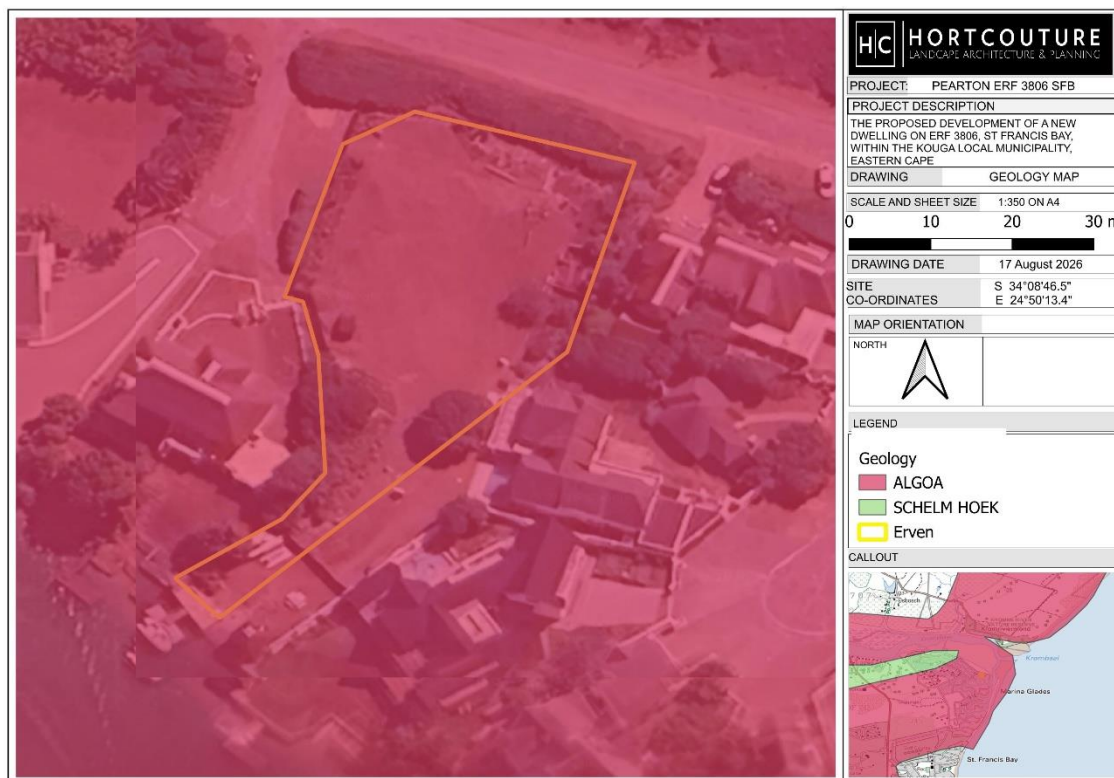


Figure 3 Underlying Geology

The common soil profiles of the Kouga Municipality include Leptosol (LP) 1 and 2 which are soils with minimal development occurring on shallow, hard or weathering rock with the presence of lime is common for LP 2 and rare for LP 1. Arenosols (AR) 2 and 3 which are considered as sandy soils the former being yellow and red with a high base status and the former being Greyish, sandy excessively drained soils (Food and Agriculture Organization of The United Nations, 2005). Planosol (PL)2 soils are described by the SANBI as soil with a clay accumulation, strongly structured and a non-reddish colour. They may occur associated with one or more of vertic, melanic and plinthic soils (SANBI, 2024). According to IUSS Working Group WRB (2022), Plinthosol (PT) soils are strongly weathered soils rich in iron (and sometimes manganese) that contain plinthite, which can harden into petroplinthite or pisoliths upon repeated wetting and drying, often forming hard layers or nodules. They typically occur in areas with fluctuating groundwater, show poor natural fertility, present challenges for agriculture due to waterlogging or shallow, hard

subsurface layers and commonly exhibit red, yellow or mottled brown and grey colors.

According to SANBI (2024) the soils specific to the activity site are Arenosols 3 (AR 3 soils), these are sandy soils that are greyish in colour. These soils do not generally retain water well and are easily eroded. Refer to the soil map (Figure 4) below.

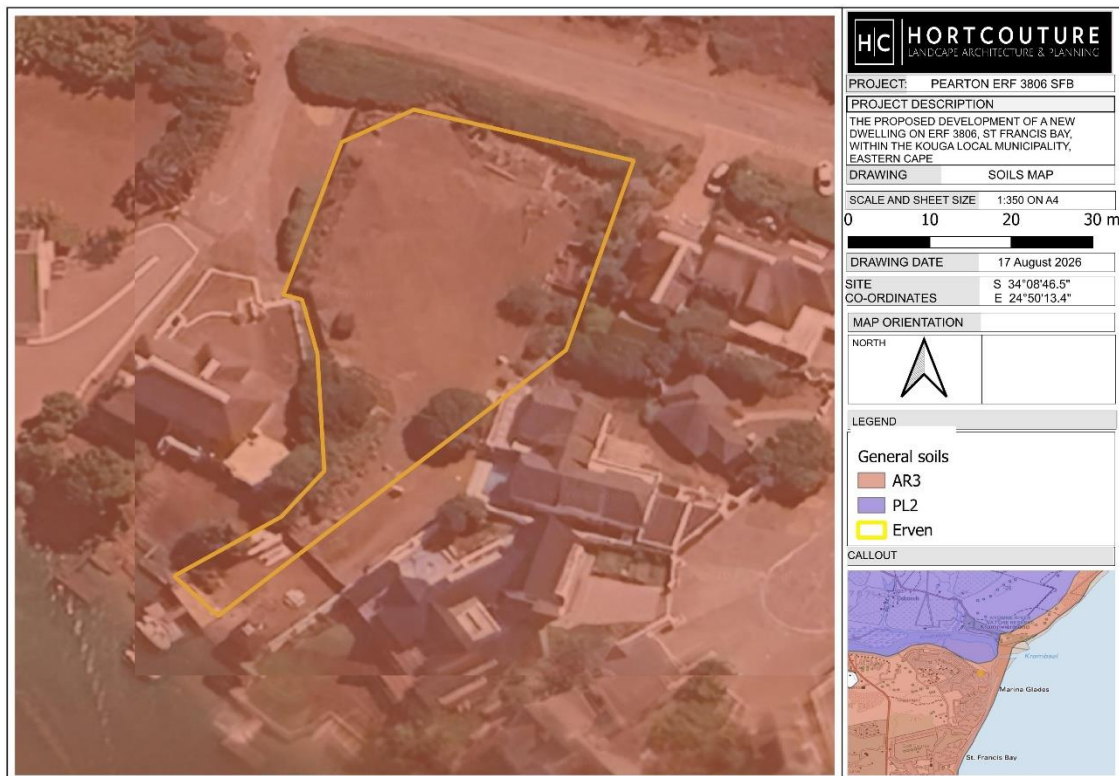


Figure 4 Dominant soils Map

2.4. Hydrology

There are four rivers in the Kouga Municipality which include the Kromme, Seekoei, Kabeljous and Gamtoos. All of the rivers are subject to tidal fluctuations with the Gamtoos and Kromme rivers being main sources of water supply in the region. Aquifers are also utilised in the agricultural sector for irrigation. Adjacent to the rivers and coastal regions in the area are a number of wetlands that are highly sensitive to anthropogenic activity. The wetlands are crucial ecosystem drivers and serve as natural water purification and flood retention roles (Kouga Municipality, 2024). The main river in St Francis Bay is the Kromme River. It is reported by Coastal and Environmental Services (2021) that the Kromme Estuary is a permanently open system. Permanently open systems are "quite large systems with a perennial river and/or strong tidal exchange with the sea" (Water Research Commission, 2006). The estuary runs along the south coast and is located approximately 80km from Gqeberha. The river estuary is approximately 95km with 14km being characteristic of an estuary. The construction of dams in the upper region of the river has led to reduced freshwater inflow into the estuary. Navigation along the river is described as hazardous and at times impossible especially during low tide. Sedimentation in the river estuary is subject to tidal flux and build up is relatively slow. However, due to anthropogenic activity the balance of sediment in the river estuary has

been disrupted. Upstream damming and sediment build up has resulted in the reduced freshwater input (Du Preez et al, 2014). The catchment of the river estuary is approximately 936km² and with the surrounding vegetation consisting of natural forest, fynbos and private farms.

Other features include a sand spit which can be found along the south bank of the estuary mouth and extensive salt marshes that cover the banks of the estuary in the mid to lower areas of the estuary. In terms of the built environment a marina has been established on the south bank near the mouth of the estuary (Coastal and Environmental Services, 2021). The main tributary is the Geelhoutboom River, stemming south of Humansdorp, and joins the Kromme Estuary about 8 km upstream of the mouth. The Estuarine Health Index Score is 49 which indicates that the Present Ecological Status is a D “largely modified.” Even though the river estuary has been largely modified it still considered as having ecological importance and has been deemed a Desired Protected Area. In this case the management protocol is that should be restored and maintained however given the anthropogenic alterations it is argued that a near natural state could not be realistically achieved. Coastal and Environmental Services (2006) recommends that the estuary should be in an Ecological Reserve Category C (a moderately modified system where a loss and change of natural habitat and biota have occurred, but the basic ecosystem functions are still predominantly unchanged). Similarly, the Kouga Integrated Development Plan notes that the Kromme River Valley has been identified as a priority corridor for animal and plant movement between the Kareedouw and Tsitsikamma Mountain ranges and the coast. As a result, development in and around the areas should be managed effectively.

According to spatial data supplied by SANBI (2024), the proposed development site is located within the Kromme River Estuarine Functional Zone (EFZ), there are salt marshes located far to the west and North-west of the site. As illustrated in the Hydrology Map (Figure 5) below, no hydrological features are present within the boundaries of the proposed development site itself.

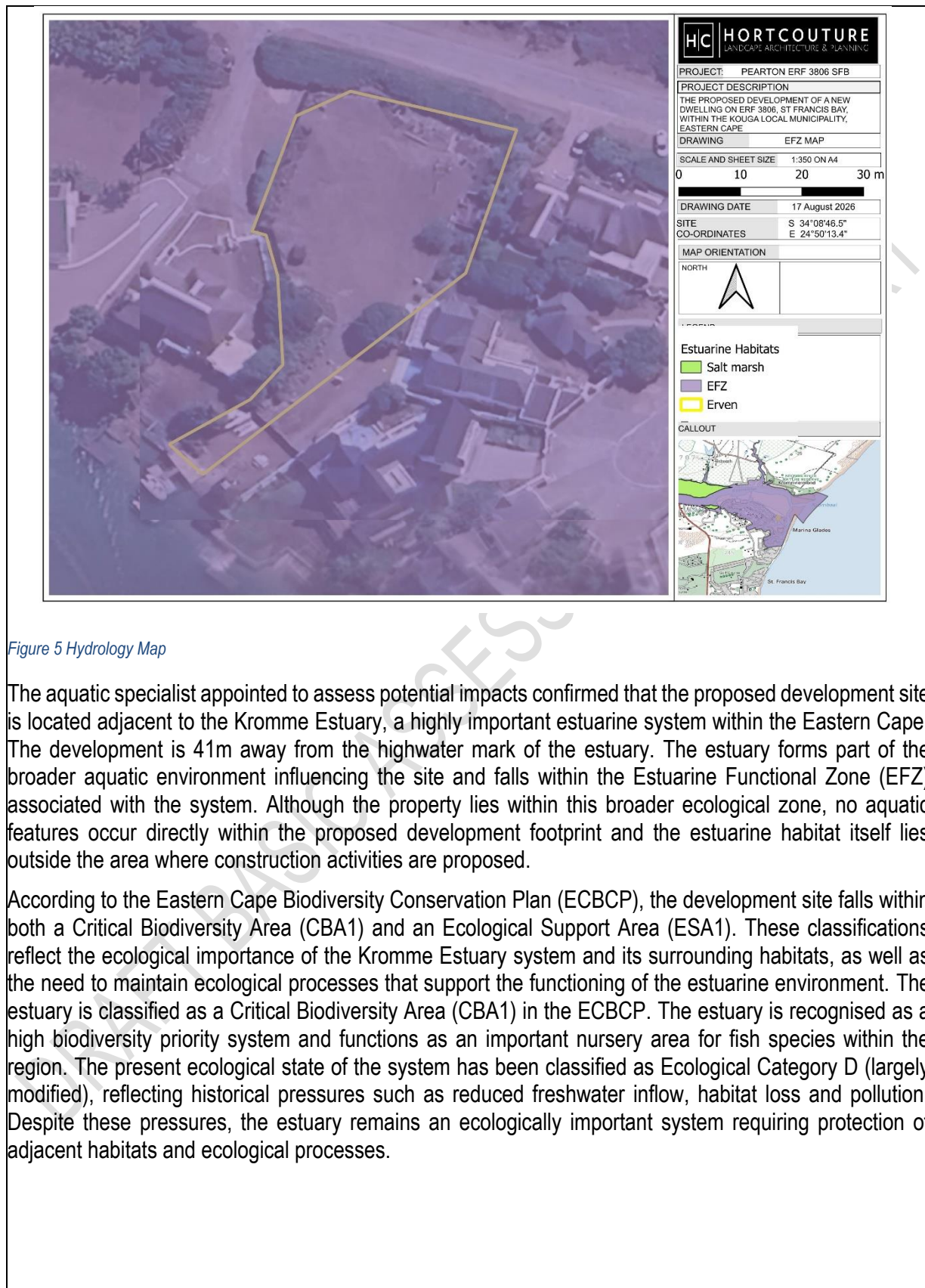


Figure 5 Hydrology Map

The aquatic specialist appointed to assess potential impacts confirmed that the proposed development site is located adjacent to the Kromme Estuary, a highly important estuarine system within the Eastern Cape. The development is 41m away from the highwater mark of the estuary. The estuary forms part of the broader aquatic environment influencing the site and falls within the Estuarine Functional Zone (EFZ) associated with the system. Although the property lies within this broader ecological zone, no aquatic features occur directly within the proposed development footprint and the estuarine habitat itself lies outside the area where construction activities are proposed.

According to the Eastern Cape Biodiversity Conservation Plan (ECBCP), the development site falls within both a Critical Biodiversity Area (CBA1) and an Ecological Support Area (ESA1). These classifications reflect the ecological importance of the Kromme Estuary system and its surrounding habitats, as well as the need to maintain ecological processes that support the functioning of the estuarine environment. The estuary is classified as a Critical Biodiversity Area (CBA1) in the ECBCP. The estuary is recognised as a high biodiversity priority system and functions as an important nursery area for fish species within the region. The present ecological state of the system has been classified as Ecological Category D (largely modified), reflecting historical pressures such as reduced freshwater inflow, habitat loss and pollution. Despite these pressures, the estuary remains an ecologically important system requiring protection of adjacent habitats and ecological processes.

National Environmental Management: Integrated Coastal Management Act 24 of 2008		
Compliance	Section	Objective
The encroachment on the coastal public property	Section 13	(1) Subject to this Act and any other applicable legislation, any natural person in the Republic – (a) has a right of reasonable access to the coastal public property; and (b) is entitled to use and enjoy coastal public property, provided such use – (i) does not adversely affect the rights of members of the public to use and enjoy the coastal public property; (ii) does not hinder the State in the performance of its duty to protect the environment; and (iii) does not cause adverse effect. (1A) Subject to subsections (2) and (3), no person may prevent access to coastal public property.
Coastal public property, coastal processes and estuarine ecosystems	Section 15	No person, owner or occupier of land adjacent to the seashore or other coastal public property capable of erosion or accretion may require any organ of state or any other person to take measures to prevent the erosion or accretion of the seashore or is caused by an intentional act or omission of that organ of state or other people.
Protection of coastal public property	Section 69	No person may discharge effluent originating from a source on land into coastal waters except in accordance with a Coastal Waters Discharge Permit (CWDP) issued by the responsible authority. Furthermore, Section 70 of the ICM Act prohibits the dumping of any waste or other material at sea without a permit issued by the Minister.
Coastal Management Line/Development Setback Line	None	The site falls within the estuarine functional zone (EFZ) of the Kromme Estuary. The development is 41m away from the highwater mark of the Estuary. The road and vegetation between the development site and the estuary act as a buffer to minimise risks to the estuarine environment. According to the specialist on its own the development should not have any impact on the estuary.
National Estuarine Management Protocol (NEMP)	Section 3.2. Objectives	In terms of impact the aquatic specialist concludes that the development alone will not have an impact on the estuary in the construction or operational phase. However, cumulative impacts due to development within the EFZ should be considered as high and a proactive approach should be taken by local authorities to prevent additional development.

2.5. Vegetation

The South African National Biodiversity Institute (SANBI 2018) developed the National Vegetation Map, which provides the foundation for biodiversity monitoring and conservation throughout the country. The map has undergone several revisions, with the most recent update (SANBI 2024) incorporating refined vegetation boundaries and floristic data. The National Vegetation Map forms a key biodiversity layer for planning and environmental assessment, describing each vegetation type and its conservation status.

According to the Eastern Cape Biodiversity Conservation Plan (ECBCP 2019), the province encompasses eight of South Africa's nine biomes, excluding only the Desert Biome. These include the Albany Thicket, Azonal Vegetation, Forest, Fynbos, Grassland, Indian Ocean Coastal Belt, Nama-Karoo, Savanna, and Succulent Karoo Biomes. The Grassland Biome is the most extensive, covering approximately 42% of the province, while the Albany Thicket and Nama-Karoo biomes occupy significant portions of the landscape, accounting for roughly 19% and 17%, respectively. The Fynbos Biome, a continuation of the Cape Floristic Region, occurs mainly in the south-western and coastal mountain ranges, extending eastward towards the Tsitsikamma. The Forest Biome, though covering less than 1% of the province, occurs in fragmented patches along the coastal escarpments and in high-rainfall areas such as the Amathole and Tsitsikamma Mountains. The Indian Ocean Coastal Belt stretches along the humid eastern coastline, while the Savanna and Succulent Karoo biomes occupy the drier inland and western margins of the province.

Table 1 below summarises the area and proportional coverage of each biome in the Eastern Cape, as mapped in the ECBCP (2019) and based on the South African Vegetation Map (SANBI, 2018).

Biome type	Area covered by biome in the Eastern Cape (ha)	% of the Eastern Cape
Albany Thicket	3,177,939	19
Azonal	422,928	3
Forest	131,287	0.8
Fynbos	1,036,242	6
Grassland	7,030,403	42
Indian Ocean Coastal Belt	257,519	2
Nama-Karoo	2,923,182	17
Savanna	1,719,716	10
Succulent Karoo Biome	173,945	1

Table 1 Biome type coverage within the Eastern Cape

According to the South African Vegetation Map (2018), the Eastern Cape supports 107 distinct vegetation types, reflecting exceptional ecological and habitat diversity. Of these, 17 are classified as threatened, including Critically Endangered, Endangered and Vulnerable types and 59 are considered endemic to the province. The Albany Thicket Biome, in particular is a centre of endemism with 37 vegetation types, 35 of which are unique to the region. These vegetation types are critical surrogates for terrestrial biodiversity, as species composition and ecological processes are closely tied to vegetation structure.

This biome and vegetation diversity, combined with complex topography and climatic gradients, from the high Drakensberg mountains to the subtropical Wild Coast, makes the Eastern Cape one of South Africa's

most ecologically diverse provinces, supporting an extensive range of habitats, ecosystems and species assemblages of national and global conservation importance.

The table below (Table 2) indicates the Number of vegetation types, number of threatened vegetation types and endemic vegetation types of the Eastern Cape based on the SA VEGMAP 2018, updated 2024.

Biome	No. of vegetation types	No. of threatened vegetation types	No. of endemic vegetation types
Albany Thicket	37	6	35
Azonal vegetation	6	1	1
Forest	8	0	0
Fynbos	19	3	7
Grassland	24	5	10
Indian Ocean Coastal Belt	2	1	1
Nama-Karoo	5	0	2
Savanna	4	1	3
Succulent Karoo	2	0	1

Table 2 Overview of Vegetation Types and Conservation Significance within the Eastern Cape (ECBCP 2019)

According to the integrated development plan of the Kouga Municipality, there are more than 14 different vegetation types in the municipality which fall under the National Vegetation Map and the Subtropical Thicket Ecosystem Programme (STEP). The majority of the vegetation in the area falls within the Fynbos biome. There are several vegetation types that occur in the Kouga Municipality listed below.

Vegetation	Status	Biomes
Albany Alluvial	Endangered	Albany Thicket
Cape Seashore	Endangered	Azonal
Eastern Coastal Shale Band	Endangered	Fynbos
Elands Forest Thicket	Least Threatened	Albany Thickets and Strandveld
Humansdorp Shale	Endangered	Renosterveld
Kouga Grassy Sandstone	Least Threatened	Fynbos
Kouga Sandstone Fynbos	Least Threatened	Fynbos
Loerie Conglomerate Fynbos	Least Threatened	Fynbos
South Eastern Coastal Thornveld	Poorly Protected	Savanna
Southern Cape Dune Fynbos	Least Threatened	Fynbos
St Francis Dune Thicket	Endangered	Albany Thickets and Strandveld
St Francis Strandveld	Not yet assessed	Fynbos
Sundays Mesic Thicket	Well Protected	Albany Thickets and Strandveld
Sundays Valley Thicket	Least Threatened	Albany Thickets and Strandveld
Tsitsikamma Sandstone Fynbos	Vulnerable	Fynbos

Table 3 Vegetation Types and associated Biomes within the Kouga Municipality (SANBI 2024)

According to the National Vegetation Map (SANBI, 2024), the proposed development site falls within an area mapped as a Non-Terrestrial Estuarine Functional Zone (EFZ). Refer to the vegetation map below (Figure 6).

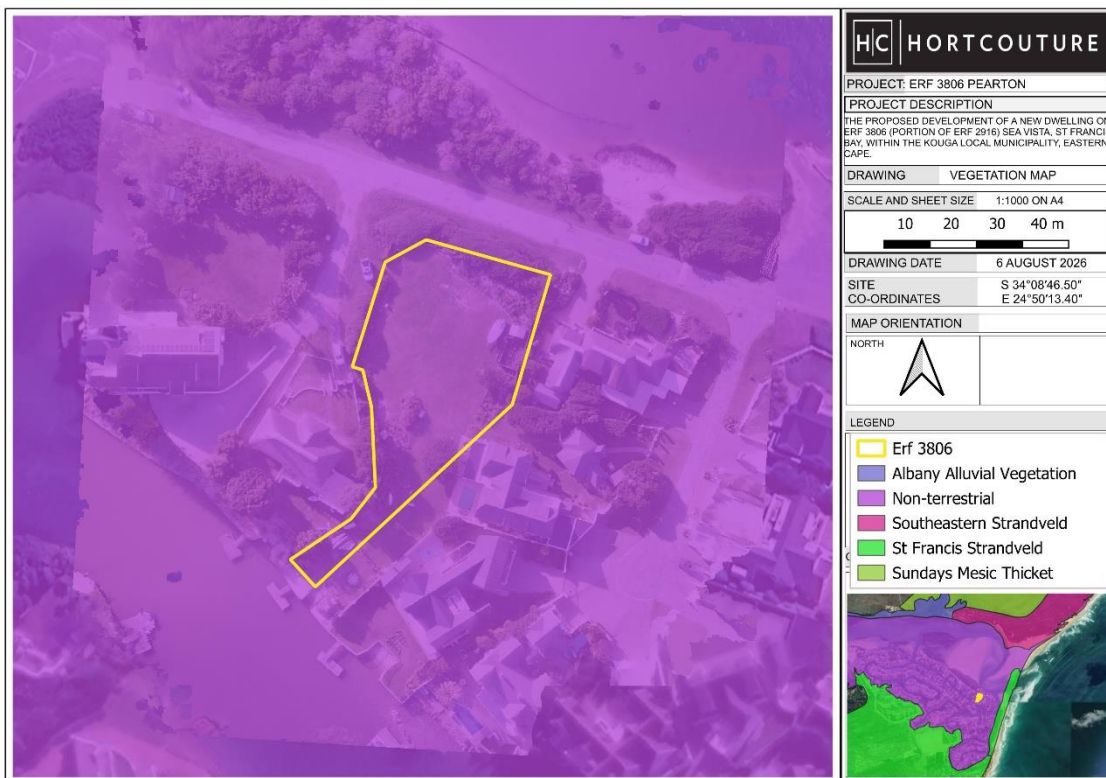


Figure 6 2024 National Vegetation Map

The site is terrestrial in nature, its classification as part of the Estuarine Functional Zone (EFZ) reflects its presence within the functional extent of the estuarine system, rather than a terrestrial vegetation type. Areas within the EFZ may occur on land but are excluded from terrestrial vegetation classification due to their reliance on estuarine and hydrological processes. The closest mapped terrestrial vegetation type adjacent to the EFZ is St Francis Strandveld.

The site and its immediate surroundings have been largely transformed through development, with a large portion of the erf no longer supporting intact natural vegetation. The site is situated within an established and largely transformed residential area and the majority of the site and its immediate surrounds have been extensively modified. The property is situated within an established residential area and is formally zoned for residential use. The site itself is already largely developed and contains existing structures, with much of the erf having been converted into landscaped lawns and garden beds surrounding these structures. These areas no longer support natural vegetation and are therefore considered to be fully modified. Given the predominantly transformed nature of the receiving environment the overall impact on vegetation is anticipated to be low, provided that appropriate mitigation measures are implemented during all phases of the development.

The site is located within an area mapped as a Non-terrestrial: Estuarine Functional Zone (EFZ) in the National Vegetation Map (SANBI, 2024). Although the site is terrestrial in nature, it falls within the functional extent of the adjacent estuarine system and is therefore not classified as a terrestrial vegetation unit. The closest mapped terrestrial vegetation type adjacent to the EFZ is the St Francis Strandveld, a dense coastal thicket–fynbos mosaic typically associated with stabilised Holocene dune systems along the south-eastern

Cape coast, particularly between Humansdorp and Cape St Francis.

The St Francis Strandveld vegetation type occurs in the Eastern Cape Province. According to Grobler et al. (2023) this vegetation type spans from Kromme River in St Francis Bay to Klasies River in the eastern Tsitsikamma, with a smaller section north of the Maitland River stretching towards the Gamtoos River Mouth. It covers an area of 97 km². It is found on vegetated sand dunes that take on a parabolic shape, featuring parallel ridges of dunes that are occasionally broken up by wide or narrow troughs. Within these troughs, some areas host wetlands. The vegetation predominantly consists of a grassy variation of Sand Fynbos, with dense thickets and forest elements. Patches of Mesic Dune Thicket occur within the St Francis Strandveld, where they are associated with moist dune troughs. The altitude ranges between 0 and 182 metres (median 60 m).

The vegetation list below (Table 2) highlights Important Taxa (d=dominant, e=South African endemic, et=possibly endemic to a vegetation type) found within the St. Francis Strandveld.

Growth form	Species
Shrub	<i>Agathosma stenopetala</i> (d) and <i>Phylica litoralis</i> (d), <i>Pterocelastrus tricuspidatus</i> (d), <i>Passerina corymbosa</i> (d) , <i>Restio leptoclados</i> (d), <i>Schoenus australis</i> (d), <i>Olea exasperata</i> (d) and <i>Agathosma stenopetala</i> (d), <i>Phylica litoralis</i> (d). <i>Erica chloroloma</i> (r), <i>Cullumia decurrens</i> and <i>Indigofera sulcata</i> .
Forb	<i>Manulea obovata</i> and <i>Hebenstreitia integrifolia</i> .
Low shrub	<i>Indigofera stricta</i> and <i>Tephrosia capensis</i> , <i>Satyrium princeps</i> and <i>Othonna rufibarbis</i> . – Frequent but not dominant
Tree	<i>Mystroxydon aethiopicum</i> , <i>Sideroxydon inerme</i> (in the mesic thicket).

Table 4 Dominant and Important taxa of the St Francis Strandveld (Grobler et al, 2018)

The table below (Table 5) outlines the conservation status for the St Francis Strandveld Vegetation type.

Conservation Target	No Data
Conserved in	Gamtoos River Mouth Local Nature Reserve; Rebelsrus Private Nature Reserve; Huisklip Nature Reserve; Maitland Mines Nature Reserve; Cape St. Francis Provincial Nature Reserve; Franscois and Annelie Marits Private Nature Reserve; Oyster Bay Private Nature Reserve
Area transformed	2.14 km ² (5.1%)
Threat activities	According to the 2026 NBA the vegetation type is endangered

Table 5 Conservation status of the St. Francis Strandveld (Grobler et al, 2023)

A sample of vegetation was recorded on site (Table 6) and comprised of a mixture of indigenous, exotic and ornamental plant taxa, which is typical of a modified residential garden environment. Several protected plant species were recorded on site, *Aloe arborescens*, *Cotyledon orbiculata*, *Cynanchum obtusifolium* and *Strelitzia nicolai*, which are protected under the Provincial Nature Conservation Ordinance No. 19 of 1974. One species protected under the National Forests Act (Act No. 84 of 1998), *Sideroxydon inerme*, was also recorded on site. These species will require appropriate consideration prior to vegetation clearing and should, where reasonably practicable, be retained or relocated in accordance with the relevant permitting requirements. One species protected under the National Forests Act (Act No. 84 of 1998) was identified on

site, that being *Sideroxylon inerme*.

A number of exotic and ornamental plant species were also recorded on site. These species are consistent with the historical use and maintenance of the property as a landscaped residential garden and further reflect the modified condition of the vegetation present on site.

Given the transformed nature of the site and the absence of natural vegetation the likelihood of impacts on sensitive terrestrial biodiversity is considered low. Nevertheless, as the site falls within the mapped EFZ, development activities should remain cognisant of the broader estuarine context and associated hydrological processes. The proposed development is anticipated to result in a low impact on terrestrial biodiversity, provided that standard environmental management measures are implemented. These should include limiting the construction footprint to the minimum area required, preventing unnecessary disturbance to surrounding areas and controlling invasive alien plant species where present. With appropriate mitigation, the residual ecological impact is expected to be low, and no significant loss of biodiversity value is anticipated.

FAMILY	SPECIES	STATUS
Asphodelaceae	<i>Aloe arborescens</i>	Least Concern (Protect under PNCO)
Lamiaceae	<i>Coleus neochilus</i>	Least Concern
Crassulaceae	<i>Cotyledon orbiculata</i>	Least Concern (Protect under PNCO)
Asteraceae	<i>Crassothonna capensis</i>	Least Concern
Crassulaceae	<i>Crassula capitella</i>	Least Concern
Crassulaceae	<i>Crassula ovata</i>	Least Concern
Asteraceae	<i>Curio crassulifolius</i>	Data Deficient - Taxonomic Problematic
Aizoaceae	<i>Cylindrophyllum tugwelliae</i>	Least Concern
Apocynaceae	<i>Cynanchum obtusifolium</i>	Least Concern (Protect under PNCO)
Asparagaceae	<i>Dracaena hyacinthoides</i> (syn. <i>Sansevieria hyacinthoides</i>)	Least Concern
Asteraceae	<i>Euryops chrysanthemoides</i>	Least Concern
Aizoaceae	<i>Faucaria britteniae</i>	Least Concern
Asteraceae	<i>Gazania rigens</i>	Least Concern
Geraniaceae	<i>Geranium incanum</i>	Least Concern
Acanthaceae	<i>Hypoestes aristata</i>	Least Concern
Crassulaceae	<i>Kalanchoe luciae</i>	Least Concern
Lamiaceae	<i>Leonotis leonurus</i>	Least Concern
Oleaceae	<i>Olea europaea subsp. cuspidata</i>	Least Concern
Asteraceae	<i>Osteospermum moniliferum</i>	Least Concern
Plumbaginaceae	<i>Plumbago auriculata</i>	Least Concern
Polygalaceae	<i>Polygala myrtifolia</i> var. <i>myrtifolia</i>	Least Concern
Didiereaceae (portulacaceae)	<i>Portulacaria afra</i>	Least Concern

Anacardiaceae	<i>Searsia glauca</i>	Least Concern
Sapotaceae	<i>Sideroxylon inerme</i>	Least Concern - Protected under NFA
Strelitziaceae	<i>Strelitzia nicolai</i>	Protected under PNCO
Bignoniaceae	<i>Tecomaria capensis</i>	Least Concern
INVASIVES AND EXOTICS		
FAMILY	SPECIES	STATUS
Crassulaceae	<i>Aeonium arboreum</i>	Exotic/Ornamental
Crassulaceae	<i>Aeonium haworthii</i>	Exotic/Ornamental
Asparagaceae	<i>Agave attenuata</i>	Exotic/Ornamental
Asteraceae	<i>Argyranthemum frutescens</i>	Exotic/Ornamental
Nyctaginaceae	<i>Bougainvillea glabra</i>	Naturalized Exotic
Crassulaceae	<i>Kalanchoe marmorata</i>	Exotic/Ornamental
Plumbaginaceae	<i>Limonium perezii</i>	Exotic/Ornamental
Solanaceae	<i>Physalis peruviana</i>	Least Concern - Naturalized Alien
Solanaceae	<i>Solanum lycopersicum</i>	Cultivated Exotic
Tropaeolaceae	<i>Tropaeolum majus</i>	Naturalized Exotic

Table 6 Sample of vegetation on site

2.6. Eastern Cape Biodiversity Conservation Plan (ECBCP)

As indicated in the ECBCP (2019), there are several Terrestrial and Aquatic CBA layers that are generated in the planning process. These layers include:

- Protected Areas (PA);
- Critical Biodiversity Areas (CBA);
- Ecological Support Areas (ESA);
- Other Natural Areas (ONA); and
- No Natural Habitat remaining (NNR).

The following section provides more detailed descriptions of each layer as set out in the ECBCP (2019):

Protected Areas

According to the ECBCP (2019), Protected Areas are areas that have been formally declared or recognised in terms of NEMPAA. This refers to "State owned" reserves, which includes National PAs managed by SANParks, Provincial PAs managed by Eastern Cape Parks and Tourism Agency, municipal reserves, Private Nature Reserves, and Protected Environments. A number of municipal and provincial reserves have not been formally proclaimed under any legislation, but are zoned accordingly in relevant Spatial Development Frameworks and are recognised as de facto Protected Areas.

Conservation Areas were limited to DAFF forest reserves along the Wild Coast.

Critical Biodiversity Areas (CBAs)

According to the ECBCP (2019), CBAs are selected to meet biodiversity targets for species, ecosystems and ecological processes and include:

- Critically Endangered and Endangered Ecosystems;
- Critical linkage points (bottle-necks or pinch-points) in the corridor network; and
- All areas required to meet biodiversity targets and to ensure future persistence of species, ecosystems and special habitats.

CBAs are areas of high biodiversity value and should therefore be maintained in a natural state, with no further loss of habitat.

Ecological Support Areas (ESAs)

According to the ECBCP (2019), ESAs are areas NOT essential for meeting biodiversity targets, but are essential in terms of:

- Terrestrial landscape: Ensuring connectivity between CBAs, strengthening climate change resilience, and proper function of ecosystem infrastructure for delivery of ecosystem services. From a terrestrial perspective, ESAs may include riparian areas, coastal corridors, ridges, etc.
- Aquatic landscape: ESAs extend into catchments that are essential for the maintenance of CBA rivers and wetlands.

ESAs need to be maintained in a semi-natural, if not natural, state.

Other Natural Areas (ONAs)

ONAs are areas in a natural or near natural state that have not been identified as priority areas in the current plan. ONAs still support biodiversity and deliver ecosystem services.

No Natural habitat Remaining (NNR)

NNR areas that are heavily, permanently, modified and are no longer considered natural. Although some biodiversity and ecological function may be retained, irreversible impacts on biodiversity mean that they cannot contribute towards targets. In addition, the ECBCP (2019) categorises the terrestrial biodiversity using set criteria. The table below highlights the different Map categories based this criterion.

Map Category	Criteria headings	Description of criteria
PROTECTED AREAS	Protected Areas	Biosphere Reserves.
		World Heritage Sites.
		State Owned - SANParks, ECPTA or Municipal.
		Protected Environments.
		Marine Protected Areas.
		Private Nature Reserves.
CONSERVATION AREAS	Conservation Areas	DAFF forest reserves.
Terrestrial CBAs and ESAs		
CBA 1	Critical Patches	1. Critically Endangered ecosystems (SA VEG MAP2012), 2. National Forest Inventory including critically endangered/high priority forest patches and priority forestclusters
	Irreplaceable Sites	Irreplaceable Sites (selection frequency>80%) – planning units were selected to meet targets for: (1) vegetationtypes, (2) species points and (3) expert areas.

	Special habitats	Bat roost sites and 500m radius.
		Cape Vulture breeding colonies and roost sites (500m buffer).
		Bearded Vulture nests (500m buffer).
CBA 2	Forest	All other forests.
	MARXAN analysis	Best Design Sites (selection frequency<80%) - Planning Units selected to meet targets for: (1) vegetation types, (2) species points, (3) expert areas.
	Special habitats	Selected cliffs buffered by 100m.
ESA 1	Forest	CBA1 forest patch 500m buffer.
	Special habitats	Cliff buffers 500m.
	Ecological Corridor	Other sites required to complete the ecological corridor network.
	Eastern Cape corridors	Best Design Corridor Sites - Planning units selected to meet 60% targets for vegetation types.
		Nodes used for corridor network analysis.
	Ecological infrastructure	Climate change refugia.
		Coastal functional zone.
Climate change resilience.		
ESA 2	Where there is no natural habitat remaining in an area that would have been designated as a CBA 1, CBA 2 or ESA1, it is designated as an ESA 2.	
ONA	All remaining natural areas not included in the above CBA or ESA categories	
NNR	These are areas that are considered to have been irreversibly modified or impacted and which do not contribute to maintain biodiversity or ecological processes. These include: settlement areas, croplands, mining areas, forest plantation, derived from the Eastern Cape 2017 Integrated Land Cover Map	
Aquatic CBAs and ESAs		
CBA 1	Critical Rivers (main stem)	Main stem rivers of high irreplaceability plus a 32 metre buffer. This included fish sanctuaries and free flowing / flagship rivers.
	Critical Wetlands	Umzimvubu Wetland Complex, Karst/Limestone wetlands, additional oxbow wetlands, dune and dune bypass wetlands.
	Critical Estuaries	Estuaries with a National Biodiversity Assessment (2011) ranking field "core = 1" plus Regionally important estuaries that are linked to CBA 1 rivers or Protected Areas.
CBA 2	Important Rivers(main stem)	Main stem river lines plus 32 metre buffer that fall within fish corridors and other selected catchments (wetland clusters) to achieve connectivity, best design sites.
	Wetlands	All remaining wetlands.
	Estuaries	CBA 1 estuary buffer 100m. Estuaries that are regionally important or are linked to CBA 1 rivers, or are associated with Protected Areas.
	Rivers and Riverbuffer	CBA1 rivers 1000m buffer.
		All other rivers plus 32m buffer.
	Catchments	All catchments that drain into CBA 1 and CBA 2 rivers.
	Wetland buffers	100m buffer around all wetlands.

ESA 1		Wetland clusters that overlap given 500m buffer.
	Modelled Wetlands	Modelled stream channel and valley bottoms plus a 32m buffer.
	Estuary buffers	CBA 2 estuary buffer 100m.
		All remaining estuaries.
	Strategic Water Source Areas	Strategic surface water source areas based on the CSIR national MAR calculation. Identified at the level of sub- SQ4.
	Ground water source areas	Karst-Limestone landscape.

Table 7 CBA map categories and criteria (ECBCP, 2019)

The ECBCP (2019) refers to the land-use and development guidelines in relation to the spatial planning and decision-making. In this regard, the desired state and management protocol is related to the CBA category categorised in the mapping. It is recommended in the ECBCP (2019) that each category should be described with due regard for its desired state and the management objectives to be followed to achieve the desired state. The following tables indicate the required categories and management objectives:

CBA MAP CATEGORY	DESIRED STATE	LAND MANAGEMENT OBJECTIVE
Protected Areas	Natural	Protected Areas are managed through Protected Area Management Plans and are therefore not managed through the ECBCP2019.
Critical Biodiversity Area 1	Natural	Maintain in a natural state (or near-natural state if this is the current condition of the site) that secures the retention of biodiversity pattern and ecological processes: For areas classified as CBA1, the following objectives must apply: • Ecosystem and species must remain intact and undisturbed; • Since these areas demonstrate high irreplaceability, if disturbed or lost, biodiversity targets will not be met; • Important: these biodiversity features are at, or beyond, their limits of acceptable change. If land use activities are unavoidable in these areas, and depending on expert opinion of the condition of the site, a Biodiversity Offset must be designed and implemented.
Critical Biodiversity Area 2	Natural	Maintain in natural (or near-natural state if this is the current condition of the site) that secures the retention of biodiversity pattern and ecological processes: For areas classified as CBA2, the following objectives must apply: • Ecosystem and species must remain intact and undisturbed; • There is some flexibility in the landscape to achieve biodiversity targets in these areas. It must be noted that the loss of a CBA2 area may elevate other CBA 2 areas to a CBA 1 category. • These biodiversity features are at risk of reaching their limits of acceptable change. If land use activities are unavoidable in these areas, and depending on the condition of the site, set-aside areas must be designed in the layout and implemented. If site specific data confirms that biodiversity is significant, unique and/or highly threatened or that a Critically Endangered or Endangered species is present, Biodiversity Offsets must be implemented.

Ecological Support Area 1	Functional	Maintain ecological function within the localised and broader landscape. A functional state in this context means that the area must be maintained in a semi-natural state such that ecological function and ecosystem services are maintained. For areas classified as ESA1, the following objectives apply: • These areas are not required to meet biodiversity targets, but they still perform essential roles in terms of connectivity, ecosystem service delivery and climate change resilience. • These systems may vary in condition and maintaining function is the main objective, therefore: • Ecosystems still in natural, near natural state should be maintained. • Ecosystems that are moderately disturbed/degraded should be restored.
Ecological Support Area 2	Functional	Maintain current land use with no intensification For areas classified as ESA2, the following objectives apply: • These areas have already been subjected to severe and/or irreversible modification • These areas are not required to meet biodiversity targets, but they may still perform some function with respect to connectivity, ecosystem service delivery and climate change resilience Objective is to maintain remaining function, therefore: • Areas should not undergo any further deterioration in ecological function. • Opportunities to change land use practices to improve ecological function (i.e. cultivation agriculture to livestock grazing agriculture) are desirable in ESA2 areas.
Other Natural Areas and No Natural Habitat Remaining	Production	No desired state or management objective is provided for ONA or NNR.

Table 8 Linking CBA categories to management objectives (ECBCP, 2019)

The following directives for land-use are indicated for rural residential developments in relation to terrestrial and aquatic biodiversity. The sections marked with 'Y' refer to activities that are considered appropriate, 'N' refer to activities that are considered not appropriate and the sections marked with 'R' are considered as activities that are restricted as explained below. Both categories are subject to the incorporation of specialist assessments.

"Yes (Y): This is an appropriate land use activity, it is unlikely to compromise biodiversity, the activity is in line with, and may contribute to, the management objective, the land use activity is permissible. "

"Not appropriate (N): this activity will result in destruction/degradation of important biodiversity and/or ecological support areas, it is not in line with management objectives. Development activities proposed will require detailed specialist assessment in the appropriate field of study in order to establish compelling reasons why this activity should be authorised for development. Stringent restrictive conditions will be applied and, if appropriate, a biodiversity offset plan must be developed and implemented in line with the principals and protocols of the most recent National or Provincial Offset Policy" (ECBCP, 2019).*

“Restricted (R): the activity may compromise the integrity of biodiversity, it may not be in line with management objectives, it will require detailed specialist assessment, it will require restrictive conditions (e.g. reduced footprint, clustering, located only on previously cleared land, etc.), may require the consideration of a biodiversity offset or set-aside” (ECBCP, 2019).

Type of Development	Associated Land-Use activities	SPLUMA Land-Use Purpose	CBA 1	CBA 2	ESA 1	ESA 2
Rural Residential	Traditional/communal areas and Rural Settlement (e.g. golf estates)	Low-medium density residential; Human habitation: housing, hotels, flats, clubs, hostels, rooms to let.	Terrestrial Based Activities			
			N	N	R	R
			Aquatic Based Activities			
			N	N	R	Y

Table 9 Matrix of recommended land use management guidelines for terrestrial based activities in the Eastern Cape (ECBCP, 2019)

Furthermore, the Spatial Development Framework (SDF) is the foundational text for planning procedures in the Kouga Municipality. In regard to biodiversity the main aims of the Spatial Development Framework is to protect the existing biodiversity, preventing further loss and degradation of the natural areas and supporting sustainable development in other natural area. The SDF postdates the Eastern Cape Biodiversity Conservation Plan (ECBCP, 2019) adopted in 2021 and entails the necessary considerations regarding land-use planning.

In the Eastern Cape biodiversity remains intrinsic to the livelihoods of the local people adding to the socio-economic development of the Province. The BSP is premised on the Critical Biodiversity Area's Map which correlates with the ECBCP dividing the landscape into several sections namely Protected Areas, Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA), Other Natural Areas (ONA) and No Natural Areas Remaining (NNR). The management plan is premised on the sustainable development objectives ensuring the protection of the natural (green) environment and the services it provides. The plan is also informed by the NEMA specifically chapter 3 in relation to establishing a bioregional plan (Vroman's et. al., 2012).

Herein, it is argued by Vroman's et al. (2012) that “spatial planning and land-use management decisions must, by law, consider the biodiversity of an area and ensure sustainable development,” as it relates to the biodiversity pattern attributed to a certain area and the ecological processes it provides in terms of maintaining the health and protection thresholds of a specific area. An example of a disturbed ecosystem includes the excessive vegetation clearing close to catchment areas which affects fresh water supplies and ultimately results in the spread of alien and invasive plant species and flood damages due to climatic conditions if not effectively rehabilitated. Therefore, ‘landscape corridors’ like river valleys need to be considered.

The Kouga SDF emphasizes that land-use planning and spatial development decisions must consider these biodiversity areas and adhere to sustainable development principles outlined in the National Environmental Management Act (NEMA). Specifically, protecting CBAs and ESAs is critical for maintaining ecological infrastructure, which includes river floodplains, wetlands, forests, and unique habitats. The SDF stresses the need for ecological corridors, especially along river valleys, to support species movement and ecosystem processes essential for regional biodiversity resilience (Kouga Municipality, 2020).

In this regard, the main aim in terms of developing sustainably is to decrease biodiversity impacts in CBAs and to avoid any further ruin of ESA's and promote sustainable development in areas where there is NNR. In terms of climate change the following decision-making processes are key in spatial planning; maintain intact riparian vegetation, protect wetlands, restrict building to above the 1:100-year flood-line, the 5m contour or higher where necessary, establish coastal setback lines, protect landscape corridors and water resources, remove alien and invasive plants and restore and maintain biodiversity for carbon storage (Vroman's et al., 2012).

Regional Hotspots and Regions of Endemism

The Cape Floristic Region (CFR) extends from the Western Cape into portions of the Eastern Cape. It is recognised as one of the world's primary biodiversity hotspots and forms part of the Cape Floristic Kingdom which is noted as the smallest yet richest of the world's six floral kingdoms. The region is globally renowned for its exceptionally high plant diversity and levels of endemism.

Within the Eastern Cape the CFR encompasses a mosaic of thicket, fynbos, renosterveld and strandveld vegetation types, which occur across a range of landscapes including coastal dunes, plains and low-lying valleys. The regional climate is typically Mediterranean, with cool, wet winters and warm, dry summers (Cowling et al., 1992).

According to the South African National Biodiversity Institute (SANBI, 2010) and Conservation International, the region supports approximately 9,000 plant species, of which nearly 70% are endemic. The dominant fynbos vegetation consists mainly of fine-leaved shrubs such as proteas, ericas and restios, which are uniquely adapted to nutrient-poor soils and periodic fires.

The CFR represents a major centre of endemism and evolutionary diversification and is considered a global conservation priority due to its irreplaceable biodiversity and ecological significance (Rebello et al., 2006; Mucina & Rutherford, 2006).

The Terrestrial CBA Map below (Figure 7) indicates the proposed development site falls within an area classified as a CBA 1 for terrestrial biodiversity.

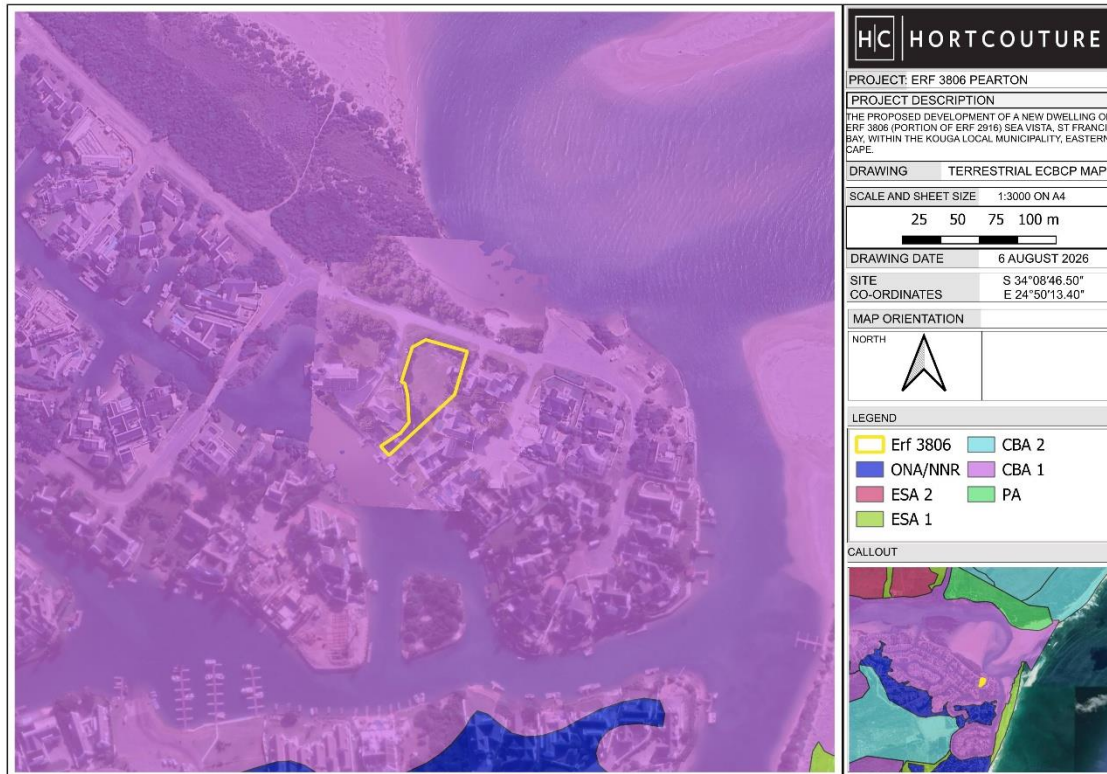


Figure 7 Terrestrial CBA Map

According to the ECBCP (2019), the majority of the proposed development site is classified as a Critical Biodiversity Area 1 (CBA 1) in terms of Terrestrial CBA. The ECBCP (2019) states that Critical Biodiversity Areas (CBAs) are identified to meet biodiversity targets for species, ecosystems and ecological processes. They include Critically Endangered and Endangered ecosystems, critical linkage points within ecological corridors and all areas essential for achieving biodiversity targets and ensuring the long-term persistence of species and habitats. As areas of high biodiversity value, CBAs must be maintained in their natural state, with no further loss of habitat.

Although mapped as CBA1, the majority of the site is already transformed and does not retain the ecological characteristics required to meet biodiversity targets.

The current ecological condition of the transformed areas therefore does not reflect the characteristics typically associated with a CBA in a natural or near-natural state.

While the CBA classification reflects the strategic biodiversity planning importance of the broader estuarine landscape, the current on-site ecological condition is highly modified. Consequently, the site does not presently support the biodiversity features or ecological functionality typically associated with CBA areas, and its conservation value is considered to be low in its current state.

Although the site is mapped as a Critical Biodiversity Area (CBA), the current on-site ecological condition does not reflect the characteristics typically associated with such areas. The CBA designation is therefore

considered to reflect strategic biodiversity planning objectives rather than the present ecological functionality of the site.

Given the transformed nature of the receiving environment and the limited scale of the proposed development, the overall impact on terrestrial biodiversity is expected to be low, provided that standard environmental management measures are implemented during construction. These should focus on minimising unnecessary disturbance, managing erosion and stormwater and preventing the establishment or spread of invasive alien plant species.

For Rural residential land use, the ECBCP also underscores the importance of conducting a specialized assessment to ensure ecological sustainability.

The Aquatic CBA map below (Figure 8) indicates that the proposed development site predominantly falls within an area classified as ESA 1 and partially within an area classified as CBA 1 for aquatic biodiversity.

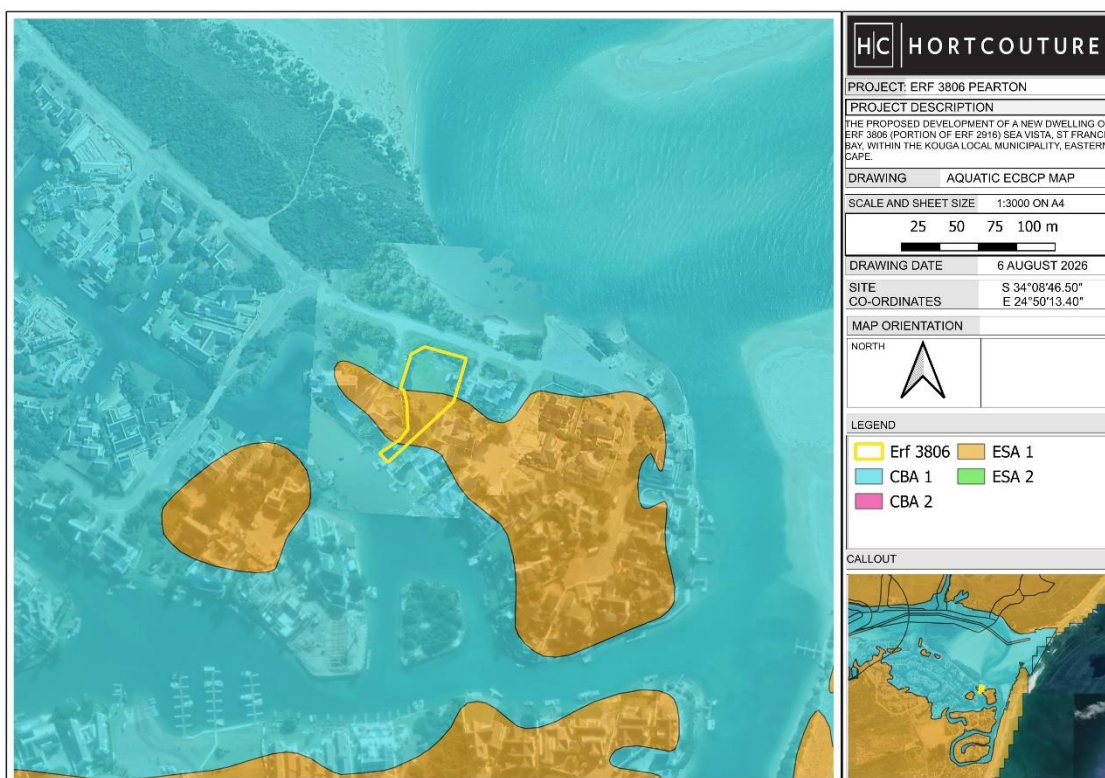


Figure 8 Aquatic CBA Map

The ECBCP outlines the following management objectives for Aquatic ESA 1:

Maintain ecological function within the localised and broader landscape. A functional state in this context means that the area must be maintained in a semi-natural state such that ecological function and ecosystem services are maintained.

For areas classified as ESA1, the following objectives apply:

- These areas are not required to meet biodiversity targets, but they still perform essential roles in terms of connectivity, ecosystem service delivery and climate change resilience.
- These systems may vary in condition and maintaining function is the main objective, therefore:
 - Ecosystems still in natural, near natural state should be maintained.
 - Ecosystems that are moderately disturbed/degraded should be restored.

The property is surrounded by residential developments to the East, West and South. The Kromme Estuary runs adjacent to the Northern boarder of the property.

2.7. Environmental Sensitivity Overview of the site:

A screening of Systematic Planning Framework for the region was undertaken (summarised in Table 4), that included the following features:

- Critically Endangered and Endangered Ecosystems
- Critical Biodiversity Areas
- Ecological Support Areas
- Vulnerable Ecosystems
- River, Estuarine and Wetland Freshwater Ecosystem Priority Areas (FEPAs) and buffers
- Protected Areas (and buffers) and NPAES
- Critical Habitat for listed endemic or protected species.

FEATURE	DESCRIPTION	IMPLICATIONS/COMMENT
National Screening Tool	Agriculture theme - High Animal Species – Very high Aquatic Biodiversity – Very high Archaeological and Cultural Heritage – low Civil Aviation – high Defence – low Paleontological – very high Plant Species - high Terrestrial – very high	In accordance with the directive from the National Screening Tool the following specialists need to be appointed: Aquatic Specialist and a Terrestrial Specialist. The assessment must be prepared by a specialist registered with the South African Council for Natural Scientific Professionals (SACNASP), with expertise in the field of aquatic and terrestrial sciences.
National Vegetation Map (NVM, 2024)	Non- Terrestrial Estuarine Functional Zone (St Francis Strandveld)	Least Concern
National Vegetation Map (NVM, 2018)	Non- Terrestrial Estuarine Functional Zone (St Francis Dune Thicket)	Least Concern
Regional Planning: Sub-Tropical Ecosystem Planning (STEP, 2006)	Estuary	Least Concern
Critically Endangered and Endangered Ecosystems (NBA, 2019)	Least Concern	N/A
Vulnerable Ecosystems (NBA, 2019)	Least Concern	N/A

Eastern Cape Biodiversity Conservation Plan (2019)	Terrestrial – CBA 1 Aquatic – ESA 1 and partially CBA 1	The ECBCP (2019) states that Critical Biodiversity Areas (CBAs) are identified to meet biodiversity targets for species, ecosystems and ecological processes. They include Critically Endangered and Endangered ecosystems, critical linkage points within ecological corridors and all areas essential for achieving biodiversity targets and ensuring the long-term persistence of species and habitats. As areas of high biodiversity value, CBAs must be maintained in their natural state, with no further loss of habitat. Based on a review of recent and historical aerial imagery, supported by on-site verification, the majority of the site and its immediate surrounds have been extensively transformed as a result of historical development and associated land uses. The developed portions of the property no longer support intact natural vegetation or ecological features. For areas classified as ESA1, the following objectives apply: • These areas are not required to meet biodiversity targets, but they still perform essential roles in terms of connectivity, ecosystem service delivery and climate change resilience. • These systems may vary in condition and maintaining function is the main objective, therefore: • Ecosystems still in natural, near natural state should be maintained. • Ecosystems that are moderately disturbed/degraded should be restored. The assessment must be prepared by a specialist registered with the South African Council for Natural Scientific Professionals (SACNASP), with expertise in the field of aquatic and terrestrial sciences.
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South African Protected Areas Database (SAPAD)	Kromme River Mouth Private Nature Reserve Kromensee Nature Reserve Sand River Private Nature Reserve	There are 3 SAPAD areas that fall within proximity of the proposed development site. The site does not fall within any SAPAD and None are directly affected. These protected areas nor any ecological processes associated with them are likely to be affected by the proposed project
National Protected Area Expansion Strategy (NPAES)	Seal Bay Local Authority Nature Reserve Irma Booysen Floral reserve Seal Point Local Authority	There are 3 NPAES areas that fall within proximity of the proposed development site. The site does not fall within any NPAES and None are directly affected. These protected areas nor any ecological processes associated with them are likely to be affected by the proposed project.
Strategic Water Source Areas (SWSA)	Not situated within any designated SWSA	N/A
Freshwater Ecosystem Priority Areas (FEPA's)	The proposed development site does not fall within any Fresh Water Priority areas.	The proposed development is not anticipated to have any impacts on any wetlands, watercourses or associated process areas. Any potential impacts on aquatic systems are addressed in detail in the aquatic compliance Statement attached to BAR.
Important Bird Areas (IBA's)	The site is not within any Important Bird Areas (IBA's).	N/A
Convention on Wetlands RAMSAR sites	None	N/A
Within 32 m of Watercourses	The proposed development site falls within 41m of the Kromrivier highwater mark.	The proposed development if mitigated adequately is not expected to have any impacts on the wetland.
Within 100 m of Rivers	The site falls within 100m of the Kromrivier.	The proposed development if mitigated adequately is not expected to have any impacts on the littoral active Zone.
Within 100 m of Estuaries	The site falls within 100m of an Estuary.	The proposed development is not expected to have any impacts on any Estuary.
Within 500 m of Wetlands	The site does not fall within 500m of any Wetland.	The proposed development is not expected to have any impacts on any Wetland.
Surrounding Land Uses	Urban/Residential	The immediate surroundings include built up residential dwellings, guest houses

Table 10 Systematic planning framework

Although the site is mapped as CBA1 in terms of the Eastern Cape Biodiversity Conservation Plan, site verification and specialist assessment confirm that the development footprint is largely transformed and no longer meets the functional requirements of a CBA1 area. The proposed development therefore does not result in the loss of functional CBA1 habitat and is considered consistent with ECBCP land use guidelines.

2.8. Paleontological and heritage resources

According to the SAHRIS (South African Heritage Resources Information System) Paleontological (fossil) Sensitivity Map (Figure 9), the site falls primarily within an area noted as a Moderately sensitive area and partially within an

area noted as unknown.



Figure 9 Paleontological Sensitivity Map (SAHRIS, 2024)

RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study; a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Table 11 Paleontological Sensitivity Map Key (SAHRIS, 2024)

The majority of the site has been transformed, further limited vegetation clearing will be required. A site visit yielded no immediate evidence of paleontological importance. No paleontologically significant find could be found by means of desktop assessment in the immediate vicinity. With this being said remains may be unearthed during the excavations and construction phase of the proposed development. The Moderate to insignificant sensitivity rating provided by SAHRIS aligns with the National Screening Tool (NST), which indicates a medium sensitivity for the Paleontological Theme. Based on the sensitivity returned by both SAHRIS and the NST the relevant specialists were appointed.

Given the regional archaeological context, the possibility of encountering subsurface cultural material such as stone artefacts, shell middens or even human remains cannot be completely excluded. The site is located within the Algoa Group, which may contain palaeontological material. However, given the disturbed nature of the site and shallow excavation depth, impacts are considered low. Should such material be exposed during excavation, all construction activities must cease immediately, and the Chance Finds Procedure should be implemented. The Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) (043 745 0888) must be notified so that any discoveries may be managed in accordance with the requirements of the National Heritage Resources Act (NHRA).

Socio-economic Profile

The Kouga Local Municipality (KLM) falls within the Sarah Baartman District Municipal area within the Eastern Cape Province. It comprises of nine well-established economic hubs, namely Jeffreys Bay, Humansdorp, St Francis Bay, Cape St Francis, Oyster Bay, Hankey, Patensie, Loerie, and Thornhill, as well as various smaller settlements and agricultural nodes. The Municipality is densely populated due to the tourism and agriculture industries which are dominant in the region. Being a coastal area, many people migrate towards the south in search of economic opportunities.

2.8.1. Kouga Municipality settlement hierarchy

The settlement hierarchy displays that distribution of urban areas and settlements throughout the Kouga Municipality. The hierarchy is made up of the following:

Primary Nodes	Humansdorp
	Jeffreys Bay
Secondary Nodes	Hankey
	Patensie
	St Francis Bay/ Cape St Francis
Rural Nodes	Oyster Bay
	Loerie
	Thornhill
Other Nodes	Maaitsjesfontein
	Melon
	Longmore Forest Village
	Cambria
	Andrieskraal

The Kouga Municipality is a socio-culturally diverse community and has developed rapidly and will continue to do so over the next couple of years. The economic hubs of the region are Jeffreys Bay and Humansdorp. According to the 2011 Census Kouga has a population of 98 558 this increased has in accordance with the Community Survey conducted in 2016 to 112 941 making it the most populated region in the Sarah Baartman District. Out of the statistic from the 2011 Census 4933 people inhabit St. Francis Bay. The coloured population is the largest in the municipality with the second largest being the black African population (Kouga Integrated Development Plan, 2022). The municipality has an annual growth rate of 2,4% with added pressure from the migration to more urbanised areas in the municipality. There is great variation in the population density of each area which has impacted service delivery. An added component of migration is the increase in individuals searching for employment opportunities. Statistics from the Labour Force Survey Data across 1995 to 2010 indicates that “employment in the region declined by 11,7% between 1995 and 2010 while the working age group increased by 25%. This means that 80,3% of the working age group had employment in 1995, compared to 56,8% in 2010” (Kouga Municipality, 2024).

In 2011, the Kouga Municipality had 29 447 households with an average annual household growth rate of the Kouga Municipality at 3.4%. The general age group of the population is between 15-34 based on both the 2011 Census and the 2016 Community Survey. According to the 2011 Census approximately 38% of the population have had access to some secondary schooling with 5% having had no formal schooling. The difference between the labour force participation rate and the unemployment rate decreased in 2016 which indicates a negative outlook for the employment within Kouga Municipality. Moreover, the majority

of the population in the Kouga Municipality depend on child grants. The primary sectors consist of two broad sectors namely the mining and the agricultural sectors. In 2010 the leading industries were finance, insurance and real estate (FIR) at 33,3%, manufacturing (MAN) at 19,1% and general government (GG) at 14,2% (Kouga Municipality, 2024).

3. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Site Location Alternative

No alternative site locations were considered, as the property is privately owned and zoned for residential use within an established residential settlement. The application therefore relates specifically to the redevelopment of an existing residential erf and not to the selection of a new development site.

From a planning and environmental perspective, the site is considered appropriate for the proposed activity, as it falls within an existing urban area with established services and infrastructure. The development represents infill redevelopment within a transformed residential environment and does not result in the expansion of the urban edge or encroachment into previously undisturbed areas beyond the site boundary. In this context, the consideration of alternative sites is not applicable or reasonable.

Layout Alternatives

Alternative layout configurations were considered during the design process to ensure that the development responds appropriately to site constraints, environmental sensitivities and municipal planning requirements. Alternative layout options included variations in building footprint positioning,

orientation and extent. These were assessed against the minimisation of environmental disturbance, avoidance of intact vegetation within the northern portion of the site, compliance with municipal building lines and zoning requirements, visual integration with the surrounding residential context and stormwater management.

No Go Alternative

The no go alternative would entail retaining the existing dwelling in its current form and foregoing redevelopment of the property. While this option would avoid short term construction related impacts, it would not result in any environmental or socio-economic improvement of the site. The no-go option would therefore represent a lost opportunity to optimise land use within an already transformed urban area and would not provide the socio-economic benefits associated with the proposed activity. Given that the site is zoned for residential use and is located within an established urban area, the no go alternative is not considered a preferred or reasonable option.

Material and Equipment Alternatives

Material selection has been guided by considerations of durability, environmental performance and compatibility with the coastal setting. The proposed materials include brick and mortar.

Alternative materials were considered in terms of visual impact, maintenance requirements and resilience to coastal conditions such as wind, salt exposure and corrosion. The selected materials represent a balance between structural integrity, longevity and aesthetic integration with the surrounding environment.

All materials and construction methods will comply with the requirements of SANS 10400, including Part XA relating to energy usage in buildings, and will align with applicable municipal by laws and design guidelines for the Sea Vista area.

Technology Alternatives

Infrastructure and service provision alternatives were considered to ensure efficient and environmentally responsible operation of the dwelling.

Wastewater will be discharged into the existing municipal sewer network, which represents the most appropriate and least impactful option within an urban context. On site treatment alternatives were not considered appropriate given the availability of municipal services and the proximity to sensitive estuarine environments.

Energy supply will be sourced from the municipal grid and supplemented by solar photovoltaic systems and backup capacity, thereby reducing reliance on grid electricity and improving energy efficiency.

Water supply will be provided by municipal services and supplemented through rainwater harvesting for non-potable uses. This reduces demand on municipal water resources and improves resource efficiency.

Stormwater management alternatives were assessed, with the preferred approach incorporating controlled runoff pathways, graded surfaces and energy dissipation measures to prevent erosion,

sediment transport and downstream impacts, particularly in relation to the adjacent estuarine environment.

Motivation and Benefits to the Local Community

The proposed residential development does not conflict with the Kouga Integrated Development Plan or Spatial Development Framework and is consistent with the zoning and established character of the Sea Vista residential area. The activity represents appropriate infill development within a transformed urban footprint and supports principles of spatial efficiency and sustainable coastal planning.

The development will generate short term economic benefits through construction related employment and procurement of locally sourced materials and services. The local building industry will benefit through demand for skilled and unskilled labour, subcontracting opportunities and supply of construction materials.

Although the operational phase will not generate significant long-term employment, the development will contribute to municipal revenue through rates and service payments and will support local service providers involved in maintenance and upkeep.

The redevelopment and associated investment in the property are expected to contribute positively to the value and desirability of the surrounding residential area, reinforcing the long-term stability and sustainability of the Sea Vista community.

Socio Economic Upliftment

The proposed activity will contribute to local socio-economic upliftment in a manner appropriate to its scale, approximately 10 to 15 temporary employment opportunities during construction limited ongoing employment opportunities associated with maintenance and domestic services support to local suppliers and contractors through procurement of materials and services indirect economic benefits to third party service providers and small businesses positive contribution to property values and continued investment in the area

Overall, the preferred alternative represents the most environmentally responsible and planning aligned option, as it utilises an existing disturbed footprint, avoids sensitive areas, and integrates appropriate design and management measures to minimise impacts while delivering localised socio-economic benefits.

Paragraphs 3 – 13 below should be completed for each alternative.

4. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites if applicable. **No alternative sites are available.**

Alternative: Only option

Alternative S1¹ (preferred and only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

Latitude(S):

Longitude(E):

-34	14625	24	83705
0	'	0	'
0	'	0	'

In the case of linear activities:

Alternative:

Latitude(S):

Longitude(E):

Alternative S1 (preferred or only route alternative)

4.1. Starting point of the activity

4.2. Middle point of the activity

4.3. End point of the activity

0	'	0	'
0	'	0	'
0	'	0	'

Alternative S2 (if any)

4.4. Starting point of the activity

4.5. Middle point of the activity

4.6. End point of the activity

4.7.

4.8.

4.9. of the activity

Alternative S3 (if any)

4.10. Starting point of the activity

4.11. Middle point of the activity

4.12. End point of the activity

0	'	0	'
0	'	0	'
0	'	0	'

0	'	0	'
0	'		'
0	'	0	'

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

5. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

600m ²
m
m

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

m
m
m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

m ²
m ²
m ²

6. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES	☐
m	

Describe the type of access road planned:

N/A

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

7. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 7.1. the scale of the plan which must be at least a scale of 1:500;
- 7.2. the property boundaries and numbers of all the properties within 50 metres of the site;
- 7.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 7.4. the exact position of each element of the application as well as any other structures on the site;
- 7.5. the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 7.6. all trees and shrubs taller than 1.8metres;
- 7.7. walls and fencing including details of the height and construction material;
- 7.8. servitudes indicating the purpose of the servitude;
- 7.9. sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100-year flood line (where available or where it is required by DWA);

- ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 7.10. for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 7.11. the positions from where photographs of the site were taken.

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under **Appendix B** to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATIONS

A detailed illustration of the activity must be provided, data scale of 1:200 as **Appendix C** for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

10. ACTIVITY MOTIVATION

10.1. 10 (a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

Approximately
R10 Million

What is the expected yearly income that will be generated by or as a result of the activity?

0

Will the activity contribute to service infrastructure?

No

Is the activity a public amenity?

No

How many new employment opportunities will be created in the development phase of the activity?

15-20

What is the expected value of the employment opportunities during the development phase?

Approximately
R1,2 Million

What percentage of this will accrue to previously disadvantaged individuals?

80%

How many permanent new employment opportunities will be created during the operational phase of the activity?

0

What is the expected current value of the employment opportunities during the first 10 years?

Approximately
R1,2 Million

What percentage of this will accrue to previously disadvantaged individuals?

80%

10.2. 10(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The proposed development is located on Erf 3806, St Francis Bay, an established and formally zoned residential area within the Kouga Local Municipality. The property is privately owned and zoned for residential use. As such, the activity is consistent with the existing land use rights and does not introduce a new or incompatible land use into the receiving environment.

From a planning perspective, the Kouga Spatial Development Framework identifies St Francis Bay as an existing urban node where infill development, consolidation and the efficient use of already transformed land are encouraged. The proposed development aligns directly with these principles, as it occurs within a fully serviced urban area and utilises an existing residential erf. The activity does not contribute to urban sprawl, fragmentation of natural habitat, or the extension of infrastructure into previously undeveloped areas. Instead, it supports compact settlement form and the optimisation of existing municipal services.

In terms of site-specific suitability, the development footprint is largely confined to areas that have already been transformed by previous residential use, including existing structures and landscaped areas. This significantly reduces the potential for impacts on intact natural systems. Although the broader site falls within a mapped Critical Biodiversity Area (CBA1) and Estuarine Functional Zone, the remaining ecologically functional portion of the site is limited to the northern area adjacent to the estuary. As a result, the proposed activity avoids direct impacts on sensitive ecological features and maintains the ecological integrity and functioning of the estuarine interface.

The desirability of the activity must also be considered within the context of the surrounding built environment. The proposed development is consistent in scale, form and function with the surrounding residential properties and will not introduce visual or land use incompatibilities. The redevelopment of the property will contribute positively to the character and aesthetic quality of the area through improved architectural quality and site rehabilitation where required.

From a socio-economic perspective, the proposed development will contribute to the local economy through short-term employment opportunities during the construction phase, including both skilled and unskilled labour, as well as demand for local building materials and services. While the operational phase of a private residence generates limited direct employment, the broader economic contribution of ongoing property investment in the area supports the local property market and associated service industries. Investment in residential properties of this nature contributes to municipal revenue through rates and service charges, thereby supporting long-term municipal sustainability.

Importantly, the proposed activity does not conflict with any applicable municipal or provincial planning instruments, including the Kouga Integrated Development Plan or Spatial Development Framework. No strategic environmental constraints have been identified that would preclude development of the

site for residential purposes, provided that appropriate mitigation and management measures are implemented.

In terms of environmental sustainability, the design and layout of the proposed development have been informed by site sensitivities and specialist input. The limitation of the development footprint to disturbed areas, and incorporation of stormwater management and erosion control measures ensure that the activity can be undertaken without resulting in significant adverse impacts on the receiving environment.

Considering the above, the proposed development is both needed and desirable in that it represents appropriate infill development within an established urban area, aligns with municipal planning objectives, avoids sensitive ecological areas, and contributes to local economic activity without resulting in unacceptable environmental impacts.

Indicate any benefits that the activity will have for society in general:

The proposed development is expected to provide a range of direct and indirect socio-economic benefits at a local scale, primarily associated with construction activity, support to local service industries, and ongoing contribution to the municipal economy.

Employment generation during construction

The construction phase will generate short-term employment opportunities for both skilled and unskilled labour, with an estimated 10 to 15 job opportunities created over the duration of the build. These opportunities are expected to be sourced primarily from the local area where feasible, thereby contributing to income generation and supporting livelihoods within the surrounding community.

Support to local contractors and suppliers

The development will result in direct expenditure within the local economy through the procurement of building materials, plant hire, professional services, and construction-related inputs. Where practicable, materials and services will be sourced locally, thereby supporting small to medium enterprises, local contractors, and the broader building supply chain within the Kouga municipal area.

Indirect economic benefits

Secondary economic benefits are anticipated through increased demand for ancillary services such as transport, equipment hire, security, landscaping, and maintenance. These indirect linkages contribute to the circulation of income within the local economy and support a range of service providers beyond the immediate construction sector.

Contribution to municipal revenue and economic stability

As a formal residential property, the development will contribute to municipal revenue through property rates and service charges. Continued investment in residential properties within established urban areas supports the financial sustainability of the municipality and contributes to the maintenance and upgrading of infrastructure and services over time.

Reinforcement of established urban development patterns

The development represents reinvestment within an existing urban residential area and contributes to the consolidation and upgrading of the built environment. This supports broader planning objectives aimed at maintaining viable, functional, and attractive urban settlements, which in turn sustains property values and encourages responsible long-term investment in the area.

Limited but positive operational phase benefits

While the operational phase of a private residential dwelling typically generates limited direct employment, some ongoing opportunities may arise in relation to property maintenance, cleaning, and garden services. These benefits, although modest, provide continued support to local service providers.

Overall, the proposed activity contributes positively to the local economy in a manner that is appropriate to its scale and nature, without placing additional strain on infrastructure or resulting in significant adverse social or environmental impacts.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The proposed development is expected to generate localised socio-economic benefits, primarily associated with employment opportunities and support to local service providers.

During the construction phase, the development will create short-term employment opportunities, with an estimated 10 to 15 positions available for both skilled and unskilled labour. These opportunities are expected to be sourced locally where feasible, thereby contributing to income generation and supporting households within the surrounding community. In addition to direct employment, local contractors and small businesses are likely to benefit through subcontracting opportunities and the supply of materials and services.

The operational phase of the development, being a private residential dwelling, will generate limited but ongoing economic activity. This may include part-time or periodic employment opportunities related to property maintenance, cleaning, gardening, and security services. While modest in scale, these activities provide continued support to local service providers and contribute to the local informal and small business economy.

Furthermore, the development contributes to the ongoing investment and upkeep of the residential area, supporting the stability and functionality of the local community. By reinforcing established land use and maintaining the quality of the built environment, the development indirectly supports community well-being and the long-term sustainability of the area.

Overall, the benefits to the local community are appropriate to the scale of the development and are considered positive, particularly in terms of short-term employment and support to local enterprises.

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
Constitution Act (No. 108 of 1996)	Constitution Assembly	1996
National Environmental Management Act (NEMA) (No. 107 of 1998)	Department of Environmental Affairs	1998
National Environment Management: Biodiversity Act (NEMBA) (No.10 of 2004)	Department of Environmental Affairs	2004
National Water Act (No. 36 of 1998)	Department of Water and Forestry	1998
National Environmental Management: Integrated Coastal Management Act (No. 24 of 2008)	Department of Environmental Affairs	2008
Eastern Cape Biodiversity Conservation Plan (Berliner and Desmet, 2007)	Department of Economic Development, Environmental Affairs and Tourism	2007
Eastern Cape Environmental Conservation Ordinance	Department of Economic Development, Environmental Affairs and Tourism	1974
Environment Conservation Act (ECA)	Environment Conservation Act (ECA)	1989
Provincial Nature Conservation Bill (Eastern Cape)		2003
National Forest Act	Department of Agriculture, Forestry & Fisheries	1998
National Environmental Management: Integrated Coastal Management Act (ICMA)	Department of Economic Development, Environmental Affairs and Tourism	2004
Kouga Local Municipality Integrated Development plan (Draft IDP 2022/2027) Spatial Development Framework (SDF Second Draft Dec 2012)	Kouga Local municipality	2012-2019
Land use Scheme	Kouga Local municipality	2003
Act No. 16 of 2013: Spatial Planning and Land Use Management Act 2013 (SPLUMA)	Department of Rural Development and Land Reform (DRDLR)	2013
Eastern Cape Biodiversity Conservation Plan (ECBCP) 2019	Department of Economic Development Environmental Affairs and Tourism (DEDEAT)	2019
Civil Aviation Act 13 of 2009	South African Civil Aviation Authority	2009

National Heritage Resources Act, No. 25 of 1999 (NHRA)	The Eastern Cape Provincial Heritage Resources Authority (ECPHRA)	1999
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Table 12 Applicable legislation, Policies and guidelines

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

12.1. 12(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	☒
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If yes, what estimated quantity will be produced per month?

Approx. 15-20m ³

How will the construction solid waste be disposed of (describe)?

All solid waste generated by the activity will be collected on site, and then removed to the licensed local Municipal landfill site in St Francis Bay.

Where will the construction solid waste be disposed of (describe)?

All general building related waste will be disposed of at the local registered Municipal landfill site in St Francis Bay.

Will the activity produce solid waste during its operational phase?

YES	☒
+/-2m ³	

If yes, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

Household waste generated by the activity during the operational phase will be collected on site, and then removed to the licensed local Municipal landfill site in St Francis Bay by means of the Kouga Municipal refuse removal program

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

☒	NO
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If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

☒	NO
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If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

12.2. 12(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

☐	NO
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If yes, what estimated quantity will be produced per month?

m ³	
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Will the activity produce any effluent that will be treated and/or disposed of on site?

☐	NO
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	☐
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If yes, provide the particulars of the facility:

Facility name:	Kouga Municipality – Infrastructure & Engineering		
Contact person:	Leonie Jeggels		
Postal address:	P.O. Box 21 Jeffreys Bay		
Postal code:	6330		
Telephone:	042 200 2200	Cell:	Not Applicable
Email:	pacivil@kouga.gov.za	Fax:	Not Applicable

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Not Applicable

12.3. 12(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

☐	NO
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If yes, is it controlled by any legislation of any sphere of government?

☐	NO
--------------------------	----

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Some dust pollution would also be generated during the demolition and construction phase of the activity. This will however be mitigated and managed accordingly as stated in the EMP. No Additional emissions are expected from the activity during the operational phase of the activity.

12.4. 12(d) Generation of noise

Will the activity generate noise?

☒	NO
☒	NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Low levels of noise will be generated from the activity. This will however be mitigated primarily through the use of handheld equipment in the demolition and construction process where possible. Heavy equipment may be required for demolitions and excavations of foundations but this will be limited to a few days, where possible however, larger equipment should not be used to reduce the amount of potential noise created.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

Municipal	☐ water board	☐ groundwater	☐ river, stream, dam or lake	Other (rainwater)	☐ the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

N/A
☒ NO

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

14. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

SANS 10400XA fenestration and energy efficiency regulations will be applied to the design in order to comply with national and local building regulations.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

Bulk electricity supply will be from existing municipal connection. Alternative energy sources have been incorporated into the design through the integration of a solar photovoltaic (PV) system with associated backup infrastructure to supplement bulk municipal electricity supply, thereby reducing reliance on grid power and improving overall energy efficiency in accordance with SANS 10400 Part XA requirements.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No.
(e.g. A):

1

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

☒	NO
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If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 — 1:20	1:20 — 1:15	1:15 — 1:10	1:10 — 1:7,5	1:7,5 — 1:5	Steeper than 1:5
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Alternative S2: (If any):

Flat	1:50 — 1:20	1:20 — 1:15	1:15 — 1:10	1:10 — 1:7,5	1:7,5 — 1:5	Steeper than 1:5
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Alternative S3: (If any):

Flat	1:50 — 1:20	1:20 — 1:15	1:15 — 1:10	1:10 — 1:7,5	1:7,5 — 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley

2.6 Plain

- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	NO	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUND COVER

Indicate the types of ground cover present on the site:

4.1 Natural veld—good condition^E

4.2 Natural veld—scattered aliens^E

4.3 Natural veld with heavy alien infestation^E

4.4 Veld dominated by alien species^E

4.5 Gardens

4.6 Sport field

4.7 Cultivated land (previously cultivated land, grazing pasture)

4.8 Paved surface

4.9 Building or other structure

4.10 Bare soil

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld—good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land (previously cultivated land, grazing pasture)	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural Area

5.2 Low density residential

5.3 ~~Medium density residential~~

5.4 ~~High density residential~~

5.5 ~~Informal residential~~

5.6 ~~Retail commercial & warehousing~~

5.7 ~~Light industrial~~

5.8 ~~Medium industrial^{AN}~~

5.9 ~~Heavy industrial^{AN}~~

5.10 ~~Power Station~~

5.11 ~~Office/consulting room~~

5.12 ~~Military or police base/station/compound~~

5.13 ~~Spoil heap or slimes dam^A~~

5.14 ~~Quarry, sand or borrow pit~~

5.15 ~~Dam or reservoir~~

5.16 ~~Hospital/medical centre~~

5.17 ~~School~~

5.18 ~~Tertiary education facility~~

5.19 ~~Church~~

5.20 ~~Old age home~~

5.21 ~~Sewage treatment plant^A~~

5.22 ~~Train station or shunting yard^N~~

5.23 ~~Railway line~~

5.24 ~~Major road (4 lanes or more)^N~~

5.25 ~~Airport^N~~

5.26 ~~Harbour~~

5.27 ~~Sport facilities~~

5.28 ~~Golf course~~

5.29 ~~Polo fields~~

5.30 ~~Filling station^H~~

5.31 ~~Landfill or waste treatment site~~

5.32 ~~Plantation~~

5.33 ~~Agriculture~~

5.34 River, stream or wetland (Kromrivier)

5.35 ~~Nature conservation area~~

5.36 ~~Mountain, koppie or ridge~~

5.37 ~~Museum~~

5.38 ~~Historical building~~

5.39 ~~Protected Area~~

5.40 Graveyard

5.41 Archaeological site

5.42 Other land uses (Multiple guest houses)

If any of the boxes marked with an "N" are ticked, how will this impact/be impacted upon by the proposed activity.

N/A

If any of the boxes marked with an "An" are ticked, how will this impact/be impacted upon by the proposed activity.

If YES, specify and explain: N/A

If YES, specify: N/A

If any of the boxes marked with an "H" are ticked, how will this impact/be impacted upon by the proposed activity.

N/A

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site?

☒	NO
☐	No known

If YES, explain:

N/A

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

N/A

Will any building or structure older than 60 years be affected in any way?

☒	NO
☐	NO

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in sub regulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—

- (i) illiteracy;
- (ii) disability; or
- (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case maybe;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (v) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30(thirty) calendar days before the submission of the application.

List of authorities informed:

- Department of Economic Development, Environmental Affairs and Tourism (DEDEAT)-
Cacadu Region
- Kouga Local Municipality
- Department of Forestry, Fisheries and the Environment (DFFE) - Oceans and Coasts.
- Department of Forestry, Fisheries and the Environment (DFFE) – Forestry
- The Eastern Cape Provincial Heritage Resources Authority (ECPHRA)- Heritage
- Department of water and sanitation
- South African Civil Aviation Authority (SACAA)
- Department of agriculture
- Agri EC

List of authorities from whom comments have been received:

- Department of Forestry, Fisheries and the Environment (DFFE) - Oceans and Coasts
- The Eastern Cape Provincial Heritage Resources Authority (ECPHRA)- Heritage
- Agri EC

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub regulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

☐	☐	NO
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If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

The following comments were received by Stakeholders:

None to date

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

The following comments were received by I&APs:

All comments received have been included in Appendix E of this document.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

Response to the comment above:

All responses received have been included in Appendix E of this document.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Alternative (preferred alternative)

The primary direct impact risks relate to construction phase disturbance, including vegetation clearing, soil disturbance, erosion, and associated nuisances such as dust and noise. These impacts are largely site specific, short term in nature, and can be effectively mitigated through the implementation of appropriate environmental management measures.

Indirect impacts are primarily associated with pathways linking the site to the surrounding estuarine environment, including stormwater runoff, sediment transport and potential contamination risks. These

impacts may occur beyond the site boundary and require careful management to prevent downstream effects on the Kromme Estuary.

The key cumulative concern relates to broader development pressure within ecologically sensitive coastal and estuarine systems. While this is a valid consideration at a regional scale, the contribution of the proposed development is limited due to its location within an already transformed urban footprint.

Direct impacts

- Vegetation clearing within the defined development footprint
- Disturbance and loss of topsoil during site preparation and construction
- Potential for erosion due to exposed sandy soils
- Generation of dust during construction activities
- Noise impacts associated with construction equipment and activities
- Visual impacts during construction and from the completed structure
- Generation of construction waste and associated handling requirements
- Risk of introduction and spread of alien and invasive plant species
- Health and safety risks associated with construction activities
- Positive impact in the form of short-term employment opportunities during construction

Indirect impacts

- Alteration of stormwater runoff patterns and associated downstream effects
- Sediment transport and potential siltation of adjacent environments
- Potential contamination of soils through hydrocarbons, cement or waste materials
- Potential contamination of groundwater from construction or operational activities
- Indirect impacts on terrestrial biodiversity adjacent to the development footprint
- Indirect impacts on aquatic biodiversity within the Kromme River Estuary through runoff pathways
- Secondary socio-economic effects, including support to local service providers and contractors

Cumulative impacts

These are associated with increased development along the Kromme Estuary. The aquatic specialist notes that “the risk of estuarine impact due to the cumulative impact of developments within the EFZ in the lower and middle reaches should be regarded as HIGH, and proactive measures by the local authority to prevent additional development within the EFZ would assist in reducing this risk” (Wood, 2026). The impacts of development in this area further relate to:

1. Incremental loss and fragmentation of natural habitat within the broader CBA and estuarine functional zone. This requires that the municipality minimise the development footprint, retain indigenous vegetation where possible establish ecological buffer zones and maintain ecological corridors and connectivity.

2. Increased cumulative stormwater runoff and associated pressure on the estuarine system. This will require an effective stormwater management plan and the improvement, promoting sustainable methods such as rainwater harvesting and improving the quality of water.
3. Progressive degradation risk to estuarine ecological functioning due to multiple developments. This will require the maintenance of an estuarine buffer to prevent encroachment, control pollution and implement environmental monitoring programmes.
4. Incremental change in visual character of the coastal environment over time. Residences should be designed in accordance with the national regulations and local by-laws.
5. Cumulative demand on municipal infrastructure and services. Service capacity should be confirmed prior to development in order to connect to existing infrastructure.
6. Positive cumulative socio-economic effects associated with continued investment in the area. Future development projects should support local economic development initiatives and consider employing and sourcing locally.

7. CLIMATE CHANGE ASSESSMENT

Climate change issues must be considered as part of the EIA process. Please consider the Climate Change guideline. EAP must determine:

- a) The potential impact of climate change on society and the economy, whether the impact is negative or positive, considering that society needs to be at the centre of the proposed development;

Human and ecological system vulnerabilities are interdependent in relation to climate change. In terms of socio-economic development South Africa is heavily reliant on intensive resource extraction and energy demands in sectors such as mining and agriculture. Spatial planning in relation to the development of infrastructure, utilities and services also place a heavy demand on the receiving environment. Given that the development goals of the country and the environment are interconnected planning in these areas are subject to climate change variability. This is specifically pertinent to meeting the objectives of sustainable development, concerns which undeniably will be exacerbated by unpredictable weather patterns such as increased temperatures, variable rainfall patterns and sea-level rise.

Key sectors (but not limited to) have been identified as having high sensitivity and potential risks to the changes in weather patterns these sectors include public infrastructure and utilities, mining, agriculture, forestry and land use change, human settlements (urban, rural and coastal) and waste treatment facilities. Indicators to assess the potential impacts of climate change are both socio-economic and environmental referred to as baseline risks or vulnerabilities. Baseline socio-economic impacts relate to human health through the spread of disease, food and water security, air quality, secure access to services, livelihoods and settlements/displacement. In this case it is necessary to assess the potential impact of a development on the receiving environment both built and natural as it contributes to climate change (NCCAS, 2019).

The aforementioned indicators are used to assess vulnerabilities that are likely to be exacerbated or potentially benefit from the development process. The impact of the development is also measured

against the type of development, development scale/footprint, waste production and the development duration. However, from a project level a socio-ecological life-cycle assessment which integrates climate change mitigation and resilience measures from the on-set of a development project needs to be conducted. This process would involve an accurate reflection of the carbon inventory and atmospheric effects of a proposed development, which falls outside the scope of a basic environmental assessment.

Even though the basic assessment gives recommendations on sustainable mitigation measures and alternative technologies it does not detail the process from the manufacturing and sourcing of materials and architectural considerations in the planning and design phase. Specialist assessment will need to be conducted for a detailed analysis on the overall carbon footprint of a development and the capacity of the development to cope with environmental stresses over time. Factoring in these areas would give due regard to the cumulative impacts a specific development will have in terms of meeting the decarbonisation goals of South Africa while simultaneously meeting the objectives of sustainable development .

Apart from intensive industrial processes such as the transformation of land, agricultural and mining sectors high risk areas include coastal settlements due to the projected sea-level rise, these include settlements in low lying areas, floodplains and estuaries. Flooding and erosion in coastal areas will result in the loss of resources, ecosystems and infrastructure and increase the vulnerability of estuaries. This is pertinent as approximately 40% of South African's live and work in coastal areas. Oceans and coasts are also vital carbon sinks as they absorb carbon dioxide from the atmosphere where a destabilisation could cause changes in the carbon cycle.

Besides our oceans acting as carbon capture systems other terrestrial ecosystems are also significant in carbon sequestration such as soils and vegetation. Disturbance to these natural systems through development initiatives need to be effectively mitigated and managed as highlighted in the basic assessment to promote sustainability and climate resilience. The main vegetation carbon sinks in South Africa include the grassland and savannah biomes. Even though the restoration, rehabilitation and conservation of these biomes are crucial, management systems need to be considered in light of land use and socio-economic pressures.

At the same time the rate at which greenhouse gases are released through development processes needs to be assessed in relation to the carrying capacity and resilience of water and land systems such as coastal and terrestrial ecosystems. This also relates to the effect of a development on the resilience of existing infrastructure and management systems. The following table represents key areas that could be impacted by development processes and contribute to the myriad of climate change factors. Many of the baseline environmental risks have also been considered in the systematic screening section of this report. In general, the construction phase has the most significant socio-economic and environmental impacts therefore focus will be placed on this phase. The key considerations that guided this summary was whether the development would have positive or negative climate change impacts or in turn whether the development would be adversely affected by it, either directly or indirectly (Byer et al., 2012).

Extreme weather events particularly rainfall, storm surges and sea level rise will result in elevated estuarine water levels as well as water levels in the engineered canals. This is a climate related hazard as it will result in the flooding of adjacent properties. The Kouga municipality does have a Flood Pla in place and a Disaster Management Plan.

- b) The potential alternatives of the proposed development, alternatives that will have less impact on climate change (environment and generation of waste included), the society and economy;

Given the relatively small scale of the proposed development, the impacts on climate change and contribution to emissions is considered negligible.

- c) whether, and to what extent, the proposed development will result in the release of greenhouse gas (GHG) emissions;

The proposed activity will not release any GHG emissions into the atmosphere.

- d) whether the proposed development is necessary to achieve long term decarbonisation goals;

Given the relatively small scale of the proposed development, the impacts on climate change and contribution to emissions is considered negligible.

- e) the impact of the development on social, economic, natural and built environment that are crucial for climate change, adaptation and resilience;

Given the relatively small scale of the proposed development, the impacts on climate change and contribution to emissions is considered negligible.

- f) the projected impact of climate change on proposed development; and surrounding environment, and implications for the development.

Given the relatively small scale of the proposed development, the impacts on climate change and contribution to emissions is considered negligible.

- g) Explanation of how the impacts are likely to be exacerbated or minimised as result of climate change and what measures are likely to be implemented to accommodate and manage (adapt to) the anticipated worst scenario where applicable

Given the relatively small scale of the proposed development, the impacts on climate change and contribution to emissions is considered negligible.

Based on the assessment, no fatal flaws were identified. Residual impacts are low and can be effectively managed through implementation of the EMP.

h) whether, and to what extent, the impacts identified in (a) -(g) can be mitigated.

Given the relatively small scale of the proposed development, the impacts on climate change and contribution to emissions is considered negligible.

DRAFT BASIC ASSESSMENT REPORT

8. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been considered with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Direct Impacts:

Vegetation clearing:

The vegetation occurring across Erf 3806 is highly modified and consists predominantly of maintained lawns, planted garden beds, individual trees and a mixture of indigenous, exotic and ornamental plant species. No intact natural terrestrial vegetation remains within the property, and the vegetation present is not considered representative of St Francis Strandveld in a natural or near-natural condition.

In terms of vegetation clearing, the proposed activity will require limited clearing. The estimated footprint of the development is approximately 600 m², which will occur largely within previously disturbed and transformed portions of the site, including landscaped garden areas surrounding the existing dwelling.

Vegetation present within the development footprint consists primarily of a mixture of indigenous, ornamental exotic and invasive plant taxa typical of urban residential gardens. The majority of the indigenous species recorded on site are classified as Least Concern and occur within a context of historical disturbance where the natural vegetation structure has largely been altered.

Following completion of the construction phase, no further vegetation clearing is anticipated during the operational phase, other than that associated with normal residential garden maintenance and horticultural practices. Disturbed areas surrounding the development footprint should be rehabilitated with indigenous and locally occurring plant species characteristic of the surrounding coastal vegetation to enhance ecological integrity and assist with surface stabilisation.

With regard to protected flora, several species were identified indicated in table 6. Any pruning, disturbance, relocation or removal of this species will require the relevant permit from the Department of Forestry, Fisheries and the Environment (DFFE) prior to any such activity taking place.

The site should also be monitored for the establishment of additional invasive alien plant species following construction, as disturbed areas are often susceptible to colonisation. Regular monitoring and control measures will assist in preventing the spread of invasive species within the surrounding environment.

It is recommended that vegetation clearance be minimised to the smallest footprint required for construction, and that plant rescue and relocation of suitable indigenous species be undertaken where feasible prior to site clearing. Rehabilitation of disturbed areas with locally indigenous vegetation typical of the surrounding coastal environment should be implemented following construction to promote ecological recovery and maintain the natural character of the area.

Mitigation measures to reduce impact:

- A plant search and rescue must be undertaken prior to the commencement of activity on site.
- Relevant permits to be obtained from the CA, where required and prior to any disturbance taking

place.

- A solid hoarding or clearly demarcated barrier system should be installed around the proposed construction footprint to ensure that construction activities remain within the designated development area and that surrounding vegetation.
- Identify all alien invasive plant species and eradicate in the appropriate manner.
- Only planting that falls within the building footprint is to be disturbed, unless identified as alien and invasive species.
- Any viable topsoil should also be stockpiled to a secure location on site for re-use in the affected areas after construction.
- All disturbed areas to be re-instated or rehabilitated after the completion of construction.
- Only indigenous plant species should be used to re-establish the disturbed area.
- Due care and consideration must be implemented in the design, construction and operational phase to ensure that biodiversity is not disturbed but rather supported and protected.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Clearing of vegetation to accommodate the proposed demolitions and construction of a new dwelling.					
With mitigation	Short- term	Study Area	Slight	Definite	Low
Without mitigation	Short-term	Study Area	Slight	Definite	Low
Operational None expected/Continued maintenance					
With mitigation	-	-	-	-	-
Without mitigation	-	-	-	-	-

Table 13 Vegetation clearing

Spread of Exotic and Invasive Species:

Alien and invasive species pose a real risk to endemic and indigenous species in the area. These are problematic nuisance species which negatively influence biodiversity and plant-community structure. Eradication of such species is difficult due to their succession rates. These pioneer species easily inhabit disturbed areas as pioneers and easily infest areas.

Cognizance must be kept of this and measures employed to prevent this from occurring and negatively impacting on localized biodiversity. It is suggested that the development of future gardens be planted with indigenous plant material and especially focus on those taxa which occur naturally in the area. Such plant material will further ensure that the area in general and specifically nearby process areas will benefit from the naturally occurring plants.

The presence of Invasive and exotic species was considered Low to Moderate and limited in extent with most of the vegetation being exotic/ornamental and naturalised, it is proposed that such vegetation be removed and disposed of in an adequate manner in order to prevent the further spread thereof. In addition, the removal of plant material and vegetation clearing for the proposed construction phase may result in certain exotic or invasive plant species establishing themselves on the site post completion.

Mitigation measures to reduce impact:

- Limit disturbance strictly to within the approved development footprint to reduce colonisation opportunities.
- The Environmental Control Officer (ECO) must identify and record any invasive species observed on site and report to the relevant authorities where required.
- Eradicate all invasive alien plants within the construction footprint before site clearance in accordance with the National Environmental Management: Biodiversity Act (NEMBA) Alien and Invasive Species Regulations.
- Inspect disturbed areas regularly during construction for germination of invasive plants and remove them before they flower or set seed.
- Dispose of removed invasive plants responsibly, ensuring no re-establishment or seed dispersal.
- Rehabilitate disturbed areas post-construction using indigenous and endemic plant species to maintain the natural balance of local ecosystems.
- Use only indigenous and endemic species in landscaping during the operational phase, including in gardens and planted areas.
- Monitor the site and surrounding areas post-completion for invasive and alien species, removing and eradicating any new threats promptly.
- Remove invasive plants manually or mechanically before flowering or seed set; use herbicides only when mechanical removal is impractical and in accordance with registered product instructions.
- Manage stormwater drains and detention ponds, to prevent establishment of invasive aquatic and riparian plants.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Rehabilitation to make use of indigenous species. Eradicate and monitor alien invasive and exotic species and prevent uncontrolled spread.					
With mitigation	Short-term	Study Area	Slight	Unlikely	Low
Without mitigation	Short-term	Study Area	Moderate	Definite	Low
Operational Monitoring of activity site and surrounding areas for invasive species, and eradicate where necessary or inform relevant authorities. Implement alien invasive eradication management plan.					
With mitigation	Short-term	Study Area	Slight	Unlikely	Low
Without mitigation	Short-term	Study Area	Moderate	Definite	Low

Table 14 Spread of Exotics and Invasive Species

Water Quality and Stormwater impact:

The purpose of stormwater management is to ensure that runoff generated by the proposed development does not negatively impact the surrounding environment, particularly the estuary located along the Northern boundary of the site, which has been identified as a sensitive ecological feature.

The site is relatively flat stormwater is therefore expected to move primarily as sheet flow across the site. Appropriate stormwater management measures must be implemented to prevent erosion, sedimentation and the transport of pollutants toward the estuary.

During the construction phase, temporary erosion and sediment control measures such as silt fences, sediment traps and erosion control blankets should be implemented to minimise sediment movement and prevent contaminated runoff from entering surrounding natural areas including the estuary.

During the operational phase, stormwater management must form part of the engineering design to ensure that post-development runoff does not exceed pre-construction runoff velocity. This can be achieved through the incorporation of vegetated swales, attenuation areas, permeable paving and landscaped infiltration zones designed to slow runoff, promote infiltration and improve water quality.

Sedimentation and erosion risk on estuarine ecological functioning

If mitigation is not adequately implemented during the construction phase vegetation removal, excavation and increased stormwater runoff can have an impact on the loss of soil and sediment transport into the estuary. This could reduce water quality, alter estuarine habitats with erosion leading to the loss of riparian vegetation, bank instability and increased sediment loads which cumulatively will result in the loss of habitats and altered ecosystems. During the operational phase it is imperative for rehabilitated areas to be planted with endemic ground cover plant species to assist with soil stabilization. Retaining walls or slope stabilization structures (where necessary) must be constructed to prevent erosion or subsidence in both landscaped and operational areas

Mitigation measures to reduce impact:

- Endemic and indigenous plant species must be used in post-construction landscaping to stabilize soil, prevent erosion and restore the ecological integrity of the site.
- Erosion and sediment control measures (e.g., silt fencing, sediment traps) must be installed prior to construction and maintained throughout the works
- Rational stormwater design to include Sustainable underground Drainage Systems (SUDS)
- Rainwater harvesting to be implemented into design of project
- Implement permeable surfaces where possible.
- Regular maintenance of all permeable and impermeable surfaces.
- Regular maintenance of all SUDS systems such as attenuation ponds to ensure that adequate water percolation into subsoil occurs
- Creation of low swales to help with stormwater attenuation
- Ongoing monitoring and maintenance of swales
- Post completion discharge into bulk stormwater systems is recommended to be less than or equal to pre-development volumes.
- Reduce hard surfaces where possible to allow for easier penetration into soil and help with recharging ground water.

- Remove only vegetation essential for construction and do not allow any disturbance to the adjoining natural vegetation cover.
- Ensure that measures are in place to control the flow of excess water so that it does not impact on remaining surface vegetation.
- The accumulation of water on the surface must be prevented. The drainage of the surface must be done in such a way that stormwater will be led away quickly and efficiently without any erosion taking place.
- Prevent stormwater or contaminated water directly entering any watercourse.
- Storm water control measures must be implemented with all storm water generated within disturbed earthwork areas channelled to temporary, constructed settling ponds which allow the water to naturally filter back to the watercourse after settling.
- “Trench-breakers”, which are in-trench barriers, should be installed within any trench excavations to minimise the interception and accumulation of surface runoff water from upslope areas.
- Regularly inspect and maintain all stormwater control measures (SUDS, settling ponds, gabions) to ensure they remain effective in preventing sediment or pollutants from entering the wetland.
- Implement emergency spill containment procedures to prevent accidental contamination of runoff.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Potential increase of stormwater discharge through disturbance of vegetation cover and construction activities, with possible impacts on the adjacent estuary due to changes in runoff volume, sedimentation or pollutant inputs.					
With mitigation	Short-term	Study area	Slight	Unlikely	Low
Without mitigation	Short-term	Study area	Moderate	Probable	Moderate
Operational Implement and monitor stormwater management plan.					
With mitigation	Short-term	Study Area	Slight	Unlikely	Low
Without mitigation	Medium-term	Local	Moderate	Probable	Moderate

Table 15 Stormwater Impacts

Visual impact:

The proposed development site currently accommodates an open plot which has been transformed primarily through landscaped and garden areas which denser vegetation on the boundary of the property. Vegetation on the site, surrounding the structures is limited and primarily consists of previously disturbed or modified vegetation. Considering the existing level of transformation, the visual impact associated with the proposed residential development is expected to be limited.

The proposed development has been assessed in the context of the surrounding landscape. The site is located within an established residential area in Sea Vista, St Francis Bay, where the majority of

surrounding erven have already been developed for residential purposes. Due to the existing built environment in the immediate surroundings, the proposed development will not introduce structures that are visually inconsistent with the current character of the area. The surrounding residential developments reduce the visual contrast between the proposed development and the existing landscape, thereby limiting the overall visual impact.

The development will also be designed in accordance with applicable municipal building regulations and height restrictions. As such, the development is not expected to disrupt the general skyline or result in structures that are visually dominant within the surrounding landscape. The scale and form of the proposed dwelling will remain consistent with other residential structures within the neighbourhood.

Overall, considering the existing residential character of the area, the previously transformed nature of the site, the visual impact associated with the proposed development is anticipated to be low.

The following measures are proposed in order to reduce the immediate and long-term visual impact that the proposed activity will have on the surrounding landscape. The development should incorporate neutral, earth-toned finishes for buildings and structures to help them blend with the existing environment. All structures must comply with local municipal height restrictions, as well as relevant town planning schemes, by-laws and National Building Regulations. Existing vegetation on the property should be retained where possible, to maintain natural screening and visual continuity.

Mitigation measures to reduce impact:

- The proposed development must adhere to municipal height restrictions and by-laws.
- The final paint colors are to be neutral natural, earthy tones which will assist in blending the Facility into the existing landscape and also fall within municipal by –laws and regulations.
- All chimneys and structures that protrude beyond the new roof line are to be kept to a minimum height allowable above the roof line and within municipal by –laws and regulations.
- Roof pitches and heights are to be retained at low levels relative to the existing structure and soffits.
- Lighting must be carefully designed to minimize visual intrusion, using downward directed fixtures, shields, or louvers to prevent light spill beyond the site.
- Night lighting must be designed to avoid glare, diffused and directed inward to the property, with no lights directly exposed onto streets, neighboring properties or the estuary.
- Landscaping should prioritize indigenous and endemic species, to screen the development and soften visual impact.
- Temporary visual barriers (such as shade cloth fencing) should be installed where construction is visible from surrounding residential areas.
- Signage, fencing, and other minor infrastructure should be minimal, using natural colors and materials that do not contrast strongly with the surroundings.
- Post-construction, lighting levels should be monitored to ensure they do not negatively affect surrounding residential areas, the estuary or nocturnal wildlife.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Visual impact to be kept to a minimum.					
With mitigation	Short-term	Study area	Slight	May occur	Low

Without mitigation	Short-term	Study area	Moderate	Definite	Low
Operational Visual impact to be kept to a minimum					
With mitigation	Permanent	Study area	Slight	Definite	Moderate
Without mitigation	Permanent	Study area	Slight	Definite	Moderate

Table 16 Visual Impacts

Loss of Topsoil:

The presence of topsoil results from the historic presence of organic material accumulated over millennia from the riverbank vegetation and riparian zone and cleared to make way for anthropogenic development. The protection of topsoil is imperative to the maintaining of a sustainable growing medium for future terrestrial flora. The current depth of topsoil is unknown.

The activity will inevitably result in the disturbance to the topsoil layer on the property. This includes the stripping and stockpiling of all topsoil from the activity area in places where disturbance is to occur. The stockpile must be placed away from the construction activities to ensure no contamination from building materials. All stockpiled topsoil must be reused in the landscape when rehabilitating disturbed areas.

No topsoil must be removed from the site. The removal of topsoil by any means must be mitigated by stockpiling any top layer material on site for use in identified landscape areas of the intended development and treating all disturbed and rehabilitated garden areas on gradients larger than 1:10, with a biodegradable geo-jute, or similar erosion prevention material.

Deep excavations require that top material be set aside and deeper soil profile materials excavated be reused for fill material on site with the aim of negating the need to cart any materials off site. Only excavation necessary to accommodate approved site plans is to be permitted with all stockpiled top material being used in landscape areas.

Post-construction landscape rehabilitation must include soil conditioning using weed-free organic material, mulch and amendments to restore humus-rich topsoil. All disturbed areas should be established using endemic and indigenous plant species to enhance soil stabilization, prevent erosion, and ensure the long-term sustainability of the site's vegetation and landscaped areas.

Mitigation measures to reduce impact:

- Stockpiled top spoil is to be used to rehabilitate disturbed areas.
- The importing of organic materials and topsoil in order to condition and improve soil quality post construction.
- No steep slopes are to be created on site; all gradients greater than 1:10 must be stabilized using biodegradable geo-jute, erosion control mats, or retaining walls where necessary
- All discarded excavated material must be carted off site and disposed of at a registered waste treatment facility.
- Only deep excavations are to be permitted where necessary for approved plans
- Topsoil stockpiles must be located away from construction activities to avoid contamination and erosion. These stockpiles must be kept as far away as possible from the estuary.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Strip and stockpile topsoil for reuse in rehabilitation post construction. Employ erosion control methods and establish new plant growth to retain topsoil.					
With mitigation	Short-term	Study area	Slight	Unlikely	Low
Without mitigation	Short-term	Study area	Moderate-Severe	Definite	Moderate
Operational Continued management and garden maintenance					
With mitigation	Long-term	Study area	Slight	Unlikely	Low
Without mitigation	Long-term	Study area	Slight	May Occur	Low

Table 17 Loss of Topsoil

Noise Pollution:

The activity will inevitably have elevated noise levels during the construction phase. Noise pollution will result from the general construction activities. The activity is not expected to have any noise pollution after the construction phase has been concluded.

Mitigation measures to reduce impact:

- Limit the use of pneumatic or high-noise equipment to essential tasks only.
- Direct trucks and vehicles transporting construction materials along designated access routes to minimise disturbance to surrounding areas.
- Remove rubble and materials manually (e.g. with wheelbarrows) wherever feasible to reduce noise.
- Adhere strictly to local by-laws regulating construction times and working hours.
- Erect temporary noise barriers or screens around high-noise areas, particularly near the estuary and residential properties.
- Consult and notify neighbouring properties—especially those within a 50 m radius—of scheduled work times and adhere to these times.
- Use strategic landscaping and vegetative buffers, especially near the estuary and along property boundaries, to absorb and deflect sound.
- Limit maintenance activities (e.g. mowing, machinery cleaning) to daytime hours.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction: Elevated noise levels during the construction of the new proposed development.					
With mitigation	Short-term	Study area	Slight	Definite	Low
Without mitigation	Short-term	Local	Moderate	Definite	Moderate

Operational					
With mitigation	Long- term	Study area	Slight	Probable	Low
Without mitigation	Long-term	Study area	Slight	Definite	Moderate

Table 18 Noise Pollution

Dust Pollution:

The primary source of potential dust pollution will result from the demolitions, construction phase, carting of building rubble and delivery of materials. The building process makes use of wet materials and thus is not expected to cause excessive dust pollution. There is no dust pollution expected after the construction phase of the activity.

Mitigation measures to reduce impact:

- The sprinkling down with water of exposed areas and stockpiles (including removed vegetation) at least 2–3 times per day during dry conditions to limit dust generation.
- All rubble that is to be removed to the municipal landfill site, is to be sprinkled down with water prior to departure so as to limit the amount of dust blown from the vehicle during transport.
- All removed vegetation and topsoil stockpiles to be dampened prior to any relocation or reuse to prevent wind-blown dust.
- All neighbouring properties within a 100m radius must be consulted and advised of scheduled working and such neighbours to be informed about the potential for elevated dust pollution.
- The prevailing wind directions should be taken into consideration when earthworks are undertaken.
- Limit vehicle movement to identified access routes and ensure that dust suppression is exercised during dry seasons and during maximum vehicle movement work periods
- Dust must be suppressed on access roads and construction sites during dry periods by the regular application of water or a biodegradable soil stabilization agent. Water used for this purpose must be used in quantities that must not result in the generation of run-off.
- Appropriate dust suppression measures or temporary stabilizing mechanisms must be used when dust generation is unavoidable (e.g. dampening with water, chemical soil binders, straw, brush packs, chipping), particularly during prolonged periods of dry weather. Dust suppression to be undertaken for all bare areas, including construction area, access roads, borrow pits, etc.
- The Contractor will take preventative measures to minimize complaints regarding dust nuisances (e.g. screening, dust control, timing, and pre-notification of affected parties).
- Delivery of construction materials to be done within hoarded or enclosed sections on-site to limit dust release.
- Regular monitoring of dust levels during peak use periods, with additional suppression measures applied if necessary.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Potential increase in dust pollution from vegetation clearing, delivery, construction and carting of rubble.					
With mitigation	Short-term	Study area	Slight	May occur	Low

Without mitigation	Short-term	Study area	Moderate	Probable	Low
Operational None expected					
With mitigation	-	-	-	-	-
Without mitigation	-	-	-	-	-

Table 19 Dust Pollution

Health and Safety:

Health and safety form a critical part of the construction process. The Occupational Health and Safety Act, Act 85 of 1993 requires that all construction sites comply with this act and ensure that safety of all workers and the general public is ensured.

The activity is considered to have a low health and safety impact. The primary concern is the control of construction activities on site. Site supervision of all activities is to be overseen by a qualified site supervisor. Safety hoarding and scaffolding must be implemented to create safe areas for passage and access on the site. No unauthorized access to the construction is to be permitted.

Mitigation measures to reduce impact:

- A detailed risk assessment must be conducted before removal begins.
- All flammable substances must be stored in dry area which does not pose an ignition risk to the said substances.
- The contractor must ensure that all workers operating heavy machinery have received the required training and are equipped to operate such machinery. These staff members must also be adequately trained to identify any potential hazards associated with their job.
- Workers must wear appropriate Personal Protective Equipment (PPE), including respirators, disposable coveralls, gloves and safety goggles, hard hats and safety clothing.
- The site must be clearly demarcated with warning signs to prevent unauthorized access
- A qualified safety officer is to be appointed on site to oversee adherence to safety protocols.
- All workers to be inducted and deemed safe prior to starting work on site.
- All mandatory requirements of the Occupational Health and Safety Act, Act 85 of 1993 are to be met.
- Hoarding and scaffolding on the site must be implemented to create safe access on and around the site.
- Access to the site must be strictly controlled, only authorized personnel are allowed entry.
- Emergency procedures, including first aid and fire response, must be established and clearly communicated to all site personnel.
- Machinery and equipment must be regularly inspected and maintained to prevent accidents.
- Safety briefings should be conducted at the start of each workday, with updates as necessary.
- Adequate sanitary and ablutions facilities must be provided for construction workers.

	Effect	Extent	Intensity	Probability of occurrence	Significance
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Construction Safety of construction workers

With mitigation	Short-term	Study area	Slight	May occur	Low
Without mitigation	Short-term	Study area	Very Severe	Probable	Moderate
Operational None expected					
With mitigation	-	-	-	-	-
Without mitigation	-	-	-	-	-

Table 20 Health and Safety

Employment Opportunities:

The proposed development is expected to generate notable employment opportunities during both the construction and operational phases, contributing positively to the local socio-economic conditions of the Kouga Local Municipality.

During the construction phase, jobs will be created for both skilled and unskilled workers. Where possible, local labour from the surrounding community will be prioritised to ensure that the project benefits the immediate area. The sourcing of building materials, equipment hire, and transport services from local suppliers will further stimulate the local economy.

During the operational phase, the facility will provide both full-time and part-time employment opportunities. This may include property/ garden maintenance staff, security personnel and cleaning staff.

Mitigation measures to reduce impact:

- As far as possible, permanently employed skilled construction workers are to be from the local community.
- All unskilled and temporary construction workers are to be from the local community.
- Local building material suppliers are to be used where possible.
- Local service providers (e.g. security, cleaning) are to be prioritised for operational needs.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Employment of permanent and temporary staff from local community					
With mitigation	Short-term	Regional	Moderately beneficial	Definite	Moderately beneficial
Without mitigation	Short-term	Regional	Moderate beneficial	May Occur	Low beneficial
Operational Employment of permanent staff					
With mitigation	Medium-term	Local	Moderately beneficial	Definite	Moderate beneficial

Without mitigation	Medium-term	Local	Moderately beneficial	Probable	Low beneficial
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Table 21 Employment opportunities

Waste Generation:

During the construction phase, the development will generate solid waste primarily in the form of demolition and construction rubble, excess building materials, packaging and wastage from the building process. The minimal removal of vegetation will also generate green waste, which must be managed to avoid dispersal into the estuary. All solid waste in the form of construction material from the activity is to be removed from the site and discarded at the local municipal waste disposal facility.

Liquid waste will be generated from activities such as the mixing of mortar, painting, equipment cleaning and the use of portable toilets by construction personnel. Effluent from portable toilets will be collected by a registered and approved service provider and disposed of correctly, ensuring compliance with municipal infrastructure requirements and avoiding contamination of the surrounding environment. Contaminated soil or material resulting from the spillage of paints, oils or cement will be removed immediately and transported to a licensed disposal facility.

Waste handling on site will follow a structured process. All construction rubble will be stored temporarily in designated waste skips or stockpiles, in a secure and enclosed area to prevent windblown litter. Where possible, rubble will be reused on site for backfilling, erosion protection or gabion construction. Recyclable waste such as paper, cardboard and plastics will be separated at source and taken to an appropriate recycling facility. Surplus and non-recyclable material will be removed by a licensed waste contractor to an approved landfill. A waste management hierarchy will be implemented through the CEMPr to prioritise waste prevention, minimisation, reuse, and recycling, with landfill disposal as the last resort. The import and export of materials will be reduced by balancing cut and fill requirements wherever possible.

During the operational phase, waste generation will be considerably lower and primarily consist of domestic-type refuse. This will include general waste such as paper, plastic, food packaging and organic waste from maintenance activities such as grass cutting and landscaping. The waste will be stored in secure on-site bins and collected as part of the municipal waste removal programme. Recycling will be encouraged by providing clearly marked receptacles for paper, plastic and glass. Green waste generated from maintenance will be composted or taken to an approved green waste facility to prevent unnecessary landfill disposal. Proper waste segregation and regular waste removal during operation will minimise the risk of littering, odour and pest attraction, ensuring no negative impact on the estuary or surrounding environment. Operational liquid waste, such as wastewater from ablution facilities, will be directed into the municipal bulk sewage network for safe treatment and disposal.

Mitigation measures to reduce impact:

- All relevant waste removal, handling, and disposal certificates must be submitted to the Environmental Control Officer (ECO) and included in compliance monitoring reports.
- All reusable material to be repurposed where possible.
- All rubble generated from the activity will be transported and disposed of at a licensed municipal landfill site in compliance with local regulations.
- Green waste from vegetation clearance must be chipped, composted or transported to an approved green waste facility, under no circumstances may it be disposed of in or near the wetland.

- All excavated materials not reused must be carted off site and disposed of at a registered waste treatment facility.
- Waste must be collected daily, placed in secure, windproof containers or skips and stored in a designated enclosed waste storage area with netting or cover to prevent wind dispersal.
- Portable toilets are to be placed on site for construction personnel. These must be placed in accessible locations for use and maintenance as far as possible from the estuary.
- All effluent from portable toilets is to be removed by registered and approved suppliers.
- All potentially contaminated rubble must be immediately reported to the ECO and the relevant authorities.
- All contaminated material is to be discarded by means of licensed and registered operators.
- Spill kits for hydrocarbons, cement and other hazardous substances must be available on site at all times, with staff trained to use them.
- Any accidental spills are to be reported to the ECO and cleaned up immediately using appropriate methods for the type and classification of materials spilled.
- All hazardous material is to be stored in a secure and safe storage facility appropriate for the type and classification of materials spilled.
- All mixing of cement and mortar must be done on a surface such as plywood board or thick micro plastic to prevent leaching of cement residue in the subsoil.
- No waste may be burned on site at any time.
- On-site waste receptacles must be clearly marked for recyclable and non-recyclable waste streams, including paper, plastic, glass, and general refuse.
- All operational waste must be stored in covered bins to prevent wind dispersal, odour, and pest attraction.
- General waste is to be removed from the site as part of the municipal refuse collection programme.
- Effluent from ablution facilities must be directed into the municipal bulk sewage network, ensuring no risk of contamination to the estuary.
- Green waste from ongoing maintenance (e.g., grass cuttings, prunings) should be composted on site where possible or taken to an approved green waste facility.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Demolition, Building rubble and Waste and Sanitation Effluent Management					
With mitigation	Short- term	Study area	Slight	Unlikely	Low
Without mitigation	Short-term	Study area	Moderate	Probable	Low
Operational Only from general domestic use					
With mitigation	Long-term	Study area	Slight	Unlikely	Low
Without mitigation	Long-term	Study area	Slight	Probable	Low

Table 22 Waste generation

Indirect Impacts:**Biodiversity Impacts:**

The proximity of the Kromme Estuary in relation to the proposed activity site is a potential cause of concern. The estuary is recognised as an ecologically important system and is classified as a Critical Biodiversity Area (CBA1), forming part of the Estuarine Functional Zone (EFZ), which indicates a high sensitivity in terms of aquatic biodiversity. Despite the residential development along its banks, the estuarine environment remains an important ecological process area that supports a variety of habitats and species.

Due care and consideration must therefore be implemented in the design, construction, and operational phases of the proposed development to ensure that biodiversity is not disturbed, but rather supported and protected. The long-term sustainability of the surrounding environment and the limitation of potential impacts are dependent on the implementation of best practice environmental management measures that align development activities with both social and biophysical environmental considerations.

The greatest threat to biodiversity in disturbed environments is often the presence and spread of alien and invasive species. These species can affect the natural succession of endemic and indigenous vegetation by outcompeting native species due to their rapid reproduction and aggressive growth rates. As a result, invasive vegetation can prevent the establishment of indigenous plant communities in disturbed areas, leading to a reduction in biodiversity and changes in ecosystem functioning. Alien and invasive vegetation can therefore pose significant threats to biodiversity in a number of ways.

Although the site is mapped as CBA1, the development footprint is largely transformed and the functional ecological component is retained within the 41 m from the highwater mark. As such, no loss of functional CBA1 habitat will occur and impacts are considered low following mitigation.

Mitigation measures to reduce impact:

- Adequate environmental induction prior to the start of the construction process for all staff.
- Due care and consideration must be implemented in the design, demolition, construction and operational phase to ensure that biodiversity is not disturbed but rather supported and protected.
- Construction activities to be limited to the site only with surrounding areas being considered as no-go areas.
- Strict control of the removal of any vegetation is to be limited to only that on the site and which is to be affected by the construction activities.
- All identified listed invasive plant species must be removed and destroyed, and their presence monitored throughout construction and operation
- Reporting of any vertebrate or invertebrate species to the Environmental Control Officer observed on or near the site during the construction phase.
- Reporting of any nests, burrows or animal dwellings observed on or near the activity.
- A solid hoarding must be implemented around the activity area.
- Construction machinery and personnel must avoid sensitive areas and stick to clearly demarcated access routes to minimise habitat disturbance.
- Temporary stockpiles of excavated soil and construction materials must be located away from vegetated areas and the estuary and stabilized to prevent erosion or runoff.
- Lighting should use the lowest intensity necessary for safe play and be warm-colored (≤ 3000 K)

where possible.

- All external lights must be fully shielded (full cut-off) to direct light downward, preventing horizontal or upward spill onto natural areas.
- Motion sensors, timers, or automated dimming can be used to reduce lighting outside active play times.
- Floodlights should be positioned and angled to avoid overspill onto natural habitat patches or adjacent properties.
- All external lighting fixtures should be non-reflective, and clustering lights in essential areas is encouraged to maintain dark zones in non-essential areas.
- Monitoring for invasive species and native biodiversity must continue during the operational phase, with rapid response protocols for any new invasions or disturbances.
- Landscaping during operation should prioritize indigenous species to support local ecological networks and pollinators.

Overall, the presence of alien and invasive vegetation can lead to a loss of biodiversity, which can have negative impacts on ecosystem functioning and the services they provide to both the natural environment and humans alike. The long-term sustainability and limited impact on this environment is dependent on the best practice implementation of the development to be aligned with environmental consideration, both social and biophysical.

Lighting must be carefully managed to avoid disrupting nocturnal fauna, with the use of low-intensity downward-directed, warm-coloured fixtures. Best practice measures must be followed throughout construction and operation to ensure biodiversity is protected and no net ecological loss occurs. Almost half of the property contains natural vegetation, the only disturbance here being a small historical footpath.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Disturbance to sense of place and potential impact on biodiversity					
With mitigation	Short-term	Study area	Slight	Unlikely	Low
Without mitigation	Short-term	Study area	Moderate	Probable	Low
Operational Impacts on biodiversity					
With mitigation	Long-term	Study area	Slight	Unlikely	Low
Without mitigation	Long-term	Study area	Slight	Unlikely	Low

Table 23 Biodiversity Impacts

Aquatic Biodiversity Impacts – Kromme River Estuary

The proposed development is located in close proximity to the Kromme Estuary, with the northern boundary of the site situated approximately 7–9 m from the high-water mark. The property falls entirely within the Estuarine Functional Zone (EFZ) and the estuary is classified as a Critical Biodiversity Area (CBA1), indicating a very high sensitivity for aquatic biodiversity.

The estuary supports sensitive estuarine habitats, including intertidal and supratidal saltmarsh vegetation

and submerged macrophyte beds dominated by *Zostera capensis*, which contribute to the ecological functioning of the system and provide important habitat for estuarine species. Construction and operational activities may pose potential risks to estuarine health, primarily through vegetation disturbance, sediment runoff, cement contamination, hydrocarbon spills from machinery, and wastewater management during the operational phase. If not appropriately managed, these impacts could affect water quality, estuarine vegetation, and habitat integrity.

However, the proposed development will largely occur within an already transformed residential footprint, and most of the area closest to the estuary will remain undeveloped. The aquatic biodiversity compliance statement concluded that, provided recommended mitigation and management measures are implemented, the proposed activities are unlikely to result in impacts on the estuary during either the construction or operational phases.

Based on the above, no significant impacts on aquatic biodiversity are anticipated from the proposed development and any potential risks to the adjacent estuary are expected to be of low significance with the aquatic specialist noting that the implementation of mitigation measures will minimise the risks to the estuary associated with a residential development.

Mitigation Measures to Reduce Impact:

- All cement mixing, refuelling, and hazardous material storage must occur well away from the estuary, with suitable containment measures in place.
- All construction equipment must be cleaned off-site; no washing of machinery is permitted near the estuary.
- Stormwater runoff from the site must be managed to prevent direct inflow into the river. This includes the use of permeable surfaces, swales, attenuation ponds and bio-retention features.
- Portable toilets must be positioned away from the estuary, with effluent removed regularly by certified service providers.
- Any permanent ablution on site must comply with local building regulations, be located outside the estuary and be regularly maintained to prevent leaks.
- A designated Environmental Control Officer (ECO) must monitor compliance during construction, and periodic inspections during operation are recommended
- Lighting must be directed away from the estuary, with low-intensity, warm-coloured, fully shielded LED lights used only where necessary for safety.

- Any accidental spillage of chemicals, cement, or effluent must be immediately contained and cleaned, with the ECO and relevant authorities notified.
- Stockpiled soil and construction materials must be as far as possible from the estuary and protected against erosion and runoff.
- Construction machinery must not be parked close to surface waterbodies overnight. When they are parked, drip trays must be placed under the vehicles and cleaned at regular intervals.
- Hydrocarbons, chemicals and other hazardous substances must be stored off-site where possible, or in bunded areas well away from surface waterbodies.
- Stormwater runoff, particularly from the first seasonal rains, must be treated onsite or diverted to ensure that only water of acceptable quality reaches the wetland.
- All disturbed or cleared areas must be rehabilitated and revegetated with indigenous species as soon as possible after construction to prevent erosion and encourage recovery.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Disturbance to aquatic vegetation and estuarine ecology; risk of contamination from runoff or construction materials.					
With mitigation	Short-term	Study Area	Slight	Unlikely	Low
Without mitigation	Short-term	Study Area	Moderate	Probable	Low
Operational Impacts on aquatic biodiversity					
With mitigation	Long-term	Study Area	Slight	Unlikely	Low
Without mitigation	Long-term	Study Area	Sligh	Unlikely	Low

Table 24 Aquatic Biodiversity Impacts

Contamination of topsoil:

During the construction phase of the facility, there is a high potential for localized topsoil contamination due to accidental spills or improper handling of construction materials such as cement, mortar, paint, solvents, fuels, lubricants and other chemical agents. These substances can alter soil chemistry, making it unsuitable for plant growth and hindering natural rehabilitation. Portable toilets used on-site also pose a risk of leaks, overflows or improper emptying could result in direct contamination of soils with harmful pathogens and nutrients. The risk is particularly significant in areas where soils are exposed or stockpiled, as contaminants can infiltrate more easily and may be carried off-site by wind or stormwater runoff. If contaminated soils are washed into the adjacent estuary, nutrient and chemical loading could occur, leading to changes in water quality, algal blooms, reduced oxygen levels and the decline of sensitive aquatic plant and animal species. Given the estuaries ecological sensitivity, even minor contamination could have disproportionate impacts on biodiversity and estuary functioning. Without appropriate controls, contaminated soils could also negatively affect adjacent landscaped or natural areas, requiring costly remediation.

In the operational phase, the risk of topsoil contamination is reduced but still present. Potential sources include leaks or spills from maintenance activities, and lawn treatments (such as fertilisers, herbicides or pesticides), accidental fuel or oil leaks from maintenance equipment and chemical runoff from cleaning

products used outside on the site. Permanent sanitation infrastructure, including sewer connections could also contribute to contamination if leaks or blockages occur, particularly if effluent escapes before entering the municipal sewage system. Over time, repeated small spills and infrastructure failures could lead to cumulative contamination, degrading soil health, reducing vegetation cover, and increasing erosion risks. If contaminants migrate towards the wetland, they could disrupt nutrient balances, degrade habitat quality, and threaten the integrity of the wetland ecosystem over the long term.

Mitigation measures to reduce impact:

- Stripping and stockpiling of topsoil in areas where construction activities are to take place, with stockpiles clearly demarcated, protected from wind and water erosion and located away from drainage lines and the estuary.
- Stockpiled topsoil is to be used to rehabilitate disturbed areas post construction activities
- Stockpiled topsoil must be covered with geotextile sheeting or organic mulch to prevent erosion and contamination.
- Soil protection techniques (e.g., heavy-duty groundsheets, drip trays, or timber boarding) must be implemented under all mixing and decanting areas for cement, mortar, paint, fuels and chemicals to prevent accidental seepage into the soil.
- All handling, mixing and decanting of materials must be carried out under controlled supervision in designated, bunded areas within the hoarding zone, with spill kits readily available.
- Portable toilets must be placed on impermeable surfaces, away from stormwater drains, drainage lines or the estuary and must be regularly serviced by a licensed waste management company to prevent leakage.
- Any contaminated soil must be immediately excavated, stored in sealed containers or lined skips and removed to a licensed landfill site for disposal.
- All hazardous materials must be stored in secure, bunded areas with 110% containment capacity and covered to prevent rainwater ingress.
- Emergency spill response procedures must be in place, with trained personnel and spill kits on-site at all times.
- No vehicle refuelling or servicing is to occur outside designated bunded areas with impermeable surfaces.
- Adequate health, safety and environmental induction must be provided to all construction personnel, with refresher training on spill prevention and response.
- Limiting of construction activities and staff to the site only.
- Permanent sanitation infrastructure must be regularly inspected and maintained to prevent leaks or blockages, any leaks must be repaired immediately.
- All grounds maintenance equipment must be checked for oil or fuel leaks before use and refuelling must occur in designated, bunded areas.
- Fertiliser, pesticide and herbicide application must be carefully managed, follow an Integrated Pest Management (IPM) approach and avoid application prior to heavy rain to prevent runoff into the estuary.
- Maintain an operational spill response plan, including the immediate containment and safe removal of contaminated soil, with disposal at a licensed facility.
- Ensure no contaminated runoff from operational areas can enter stormwater drains or flow towards the estuary, stormwater channels must be inspected and maintained to prevent pollutant build-up.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Localised contamination of topsoil					
With mitigation	Short- term	Study area	Slight	Unlikely	Low
Without mitigation	Short-term	Study area	Moderate	Probable	Low
Operational None expected					
With mitigation	Short-term	Study area	Slight	Unlikely	Low
Without mitigation	Medium-term	Study area	Slight	May occur	Low

Table 25 Contamination of Topsoil

Contamination of Groundwater:

With the Kromme Estuary located in close proximity to the proposed development site, the surrounding environment is sensitive to potential contamination pathways. During the construction phase, potential contamination risks may arise from activities such as the handling of construction materials, cement mixing, hydrocarbon leaks from machinery and the use of portable sanitation facilities on site. If pollutants infiltrate the soil during construction, there is a possibility that they may migrate through shallow subsurface pathways or via surface runoff toward surrounding environments

Portable toilet facilities used during construction may also pose a contamination risk if they are not properly maintained or if leakages occur. Nutrient or pathogen loading associated with poorly managed sanitation infrastructure could potentially enter surrounding soils and, during rainfall events, be transported through surface runoff. Appropriate management and regular servicing of these facilities will therefore be essential.

During the operational phase, the risk of groundwater contamination is expected to be limited, as the development will be connected to the municipal sewage system, thereby reducing the likelihood of wastewater infiltration into surrounding soils. Minor risks may still arise from the use of household cleaning chemicals or accidental spills; however, these risks are considered minimal within a residential context.

Overall, the retention of natural vegetation together with appropriate environmental management during both the construction and operational phases, will assist in reducing the potential for groundwater contamination and protecting the ecological integrity of the adjacent estuarine environment.

Mitigation measures to reduce impact:

- Adequate health, safety, and environmental induction for all construction personnel prior to commencing work.
- All hazardous materials (e.g., fuel, lubricants, cement slurry, paints, chemicals) must be stored in designated, bunded, and impermeable areas within the hoarding zone, as far from the estuary as possible
- Handling and mixing hazardous materials must occur under controlled supervision, using drip trays or containment measures to prevent soil infiltration.
- Portable toilets must be provided on-site, positioned on impermeable surfaces away from the

estuary and any drainage lines.

- Portable toilet facilities must be regularly emptied and serviced to prevent leakage or overflow.
- Fueling and maintenance of machinery must occur in a designated area with spill containment (e.g., bunded pads) and spill kits readily available.
- Accidental spillages must be cleaned immediately, with contaminated soil removed and disposed of at a licensed facility.
- Stormwater and runoff from construction areas should be diverted away from the estuary to prevent potential contamination.
- All construction activities must be restricted to the site; no-go zones must be enforced around the estuary area.
- Permanent ablution facilities must comply with SANBS and all local building regulations and bylaws.
- Storage and use of chemicals (fertilisers, herbicides, pesticides, cleaning agents) must be in designated bunded areas away from the estuary.
- Any irrigation or water application near landscaped areas must avoid overwatering that could mobilise contaminants into the wetland.
- Spill response procedures and kits must be maintained on-site for rapid containment and cleanup.
- Staff should be trained in the correct handling and disposal of hazardous materials to reduce the risk of accidental infiltration into the soil.
- Surface runoff should be directed away from sensitive areas, with drainage infrastructure designed to prevent contaminated water from reaching the estuary.
- If a conservancy tank is utilized it must be placed on the southern portion of the erf, as far from the estuary as possible.

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Contamination of groundwater					
With mitigation	Short-term	Study area	Slight	Unlikely	Low
Without mitigation	Short-term	Study area	Severe	Probable	Low
Operational Potential leaks could result in groundwater contamination					
With mitigation	Long-term	Study area	Slight	Unlikely	Low
Without mitigation	Long-term	Study area	Moderate	Probable	Moderate

Table 26 Contamination of groundwater

Socio-Economic:

Apart from job creation, this activity can have a beneficial impact on the broader socio-economic context. Due to the construction sector being one of the largest employment sectors within the Kouga municipality, job creation directly affects the livelihood of permanent and temporary staff. This is through the availability of disposable income and ability of family support and sustainability. This is further seen in that materials are supplied by local businesses which also provide employment and again feed disposable income into

the local economy. Construction is considered as one of the best and quickest ways to inject disposable income into the lower LSM levels:

Mitigation measures to reduce impact:

- As far as possible, permanently employed skilled construction workers are to be from the local community.
- All unskilled and temporary construction workers are to be recruited from the local area to maximize local employment benefits.
- Encourage the support of local business and suppliers where possible.
- Encourage the use of local sub-contractors where possible.
- During operation, prioritize hiring local for, maintenance, security and cleaning services

	Effect	Extent	Intensity	Probability of occurrence	Significance
Construction Local Socio-economic upliftment and job creation					
With mitigation	Short-term	Regional	Moderately beneficial	Definite	Moderately Beneficial
Without mitigation	Short-term	Regional	Moderately beneficial	Probable	Moderately Beneficial
Operational Socio-economic upliftment					
With mitigation	Long-term	Regional	Moderately beneficial	Definite	Moderate Beneficial
Without mitigation	Long-term	Regional	Moderately beneficial	Probable	Moderately Beneficial

Table 27 Socio-economic

Impact summary:

Impact Significance								
Mitigation	With mitigation				Without mitigation			
Impact Level	Low	Moderate	High	Very High	Low	Moderate	High	Very High
Planning and Design Phase	-	-	-	-	-	-	-	-
Construction Phase (CP)	13	-	-	-	9	4	-	-
Beneficial (CP)	-	2	-	-	1	1	-	-
Operation Phase (OP)	9	1	-	-	6	4	-	-
Beneficial (OP)	-	2	-	-	1	1	-	-
Decommissioning phase	-	-	-	-	-	-	-	-
Totals	22	5	-	-	17	10	-	-

Table 28 Impact Summary Scoring

Ranking of evaluation criteria

Effect/Time Scale			Score
Short term	Less than 5 years		1
Medium term	Between 5-20 years		2
Long term	Between 20 and 40 years and almost permanent		3
Permanent	Over 40 years and thus permanent		4
Extent/Spatial Scale			
Study Area	The proposed site and its immediate environs		1
Local	At localised scale and a few hectares in extent		2
Regional	District and Provincial level		3
National	Country		4
International	Internationally		5
Intensity Scale	Severity	Benefit	
Slight	Slight impacts on the affected system	Slightly beneficial to the affected system	1
Moderate	Moderate impacts on the affected system	Moderately beneficial to the affected system	2
Severe/ Beneficial	Severe impacts on the affected system	A substantial benefit to the affected system	3
Very Severe/ Beneficial	Very severe change to the affected system	A very substantial benefit to the affected system	4
Probability Scale			
Unlikely	The likelihood of these impacts occurring is slight		1
May Occur	The likelihood of these impacts occurring is possible		2
Probable	The likelihood of these impacts occurring is probable		3
Definite	The likelihood is that this impact will definitely occur		4

Table 29 Impact Scoring Criteria

Environmental Significance ratings, descriptions and scores:

Significance Rate	Description	Score
Low	Low impact magnitude with a site-specific extent and short-term duration, or a very low magnitude with any combination of extent and duration except regional and long term. Therefore, this can be considered as an acceptable impact but may require management plans for implementation. No additional investigation should be required.	4-8
Moderate	High magnitude with a site-specific extent and short-term duration. Medium magnitude with a site-specific extent and short-term duration. Low magnitude with any combination of extent and duration except site specific and short term. Very low magnitude with a regional extent and long-term duration. Such impacts most probably require mitigation and possible alternative investigations.	9-12
High	High magnitude with a local extent and medium-term duration. High magnitude with a regional extent and short-term duration or a site-specific extent and long-term duration. High magnitude with either a local extent and short-term duration or a site-specific extent and medium-term duration. Medium magnitude with any combination of extent and duration except site specific and short term or regional and long term. Low magnitude with a	13-16

	regional extent and long-term duration. High impacts require definite mitigation measures and or alternative investigations.	
Very High	High magnitude with a regional extent and long-term duration. High magnitude with either a regional extent and medium-term duration or a local extent and long-term duration. Medium magnitude with a regional extent and long-term duration. Very high impacts require alternative investigations with mitigation measures not adequate enough to affect significance scales.	17-20

Table 30 Environmental significance rating, descriptions and scoring

Impact Assessment Statement:

The proposed activity entails the development of a new dwelling and associated infrastructure on Erf 3806, Sea Vista, St Francis Bay, within the Kouga Local Municipality. The property is located adjacent to the Kromme Estuary, a highly significant estuarine system forming part of a mapped Critical Biodiversity Area and Estuarine Functional Zone. While the broader area is ecologically sensitive, the development site itself is situated within an established and largely transformed residential environment. The proposed activity therefore constitutes development within an existing urban footprint rather than expansion into previously undisturbed natural areas. A comprehensive assessment of the receiving environment has been undertaken, supported by site verification and specialist input, including aquatic and terrestrial biodiversity assessments. These assessments confirm that the development footprint is largely transformed.

Key Findings

Vegetation and terrestrial biodiversity

Vegetation disturbance will be limited primarily to previously transformed and landscaped areas within an open plotted area.

Aquatic environment and estuarine sensitivity

The site falls within the Estuarine Functional Zone of the Kromme Estuary, which is recognised as an ecologically important system. No direct works are proposed within the estuary or its active interface. Potential indirect risks during construction include erosion, sediment runoff and contamination from construction activities. These risks are considered manageable and of low significance following the implementation of appropriate mitigation measures.

Stormwater and erosion

Construction activities may temporarily increase the risk of erosion and sediment transport due to disturbance of sandy soils. With the implementation of engineered stormwater management measures, including controlled runoff pathways and energy dissipation, impacts are expected to be localised, short term and reduced to low significance.

Air quality and dust

Dust generation during demolition and construction will be temporary and localised. Standard dust suppression measures will be implemented to ensure that impacts remain low and do not affect surrounding receptors. Operational phase emissions are negligible.

Noise

Construction related noise will be temporary, localised and limited to standard working hours. No significant operational noise impacts are anticipated, as the development is consistent with surrounding residential land use.

Alien and invasive species

Disturbance of soil surfaces may create conditions conducive to the establishment of invasive species. This risk will be managed through active monitoring, removal of invasive plants and rehabilitation using indigenous species appropriate to the local coastal environment.

Socio economic considerations

The proposed development represents appropriate infill within an established residential area and aligns with existing zoning and planning frameworks. The activity will generate short term employment during construction, support local suppliers and contractors, and contribute to municipal revenue through rates and services.

Impact Significance

Potential impacts, including vegetation disturbance, erosion, stormwater runoff, dust, noise and risks associated with proximity to the estuary, have been assessed in terms of extent, duration, intensity, probability and overall significance.

Although the site falls within a mapped CBA1 and Estuarine Functional Zone, the development is confined to a previously transformed footprint and avoids the ecologically functional area of the estuary.

With the implementation of mitigation measures, effective stormwater management and erosion control appropriate handling of construction materials and waste control of invasive species all identified impacts are expected to be reduced to low significance in the post mitigation scenario.

Conclusion

Taking into account

- the location of the activity within an established and already developed residential area
- the confinement of development to an existing transformed footprint
- the implementation of appropriate stormwater, erosion and environmental management measures the findings of specialist inputs, which indicate that impacts can be effectively mitigated

it is concluded that the proposed development does not represent a fatal environmental flaw and is environmentally acceptable.

Residual impacts are expected to be low and manageable, provided that mitigation measures and the Environmental Management Programme are fully implemented and monitored throughout all phases of the development.

The proposed activity is therefore considered acceptable from an environmental perspective and is recommended for authorisation subject to standard and site-specific conditions.

The following key environmental risks have been identified for the proposed residential development.

These risks have been assessed in terms of their likelihood, consequence and potential significance, and are considered manageable through the implementation of appropriate mitigation measures and environmental management controls.

Socio-economic risk if not implemented

If the proposed development is not implemented, the site will remain underutilised within an established urban residential area. The opportunity to realise short term employment benefits associated with construction, as well as local economic activity through procurement of goods and services, will be forgone. In addition, the redevelopment represents appropriate infill within an existing urban footprint, and failure to proceed would result in a missed opportunity to optimise land use within the current municipal and spatial planning framework.

While this is not an environmental risk in itself, it represents a relevant socio-economic consideration in the overall assessment of need and desirability.

Spread of alien and invasive species

Disturbance of soil during demolition, earthworks and landscaping may create favourable conditions for the establishment and spread of alien and invasive plant species. If not actively managed, these species may colonise disturbed areas and potentially spread into adjacent natural vegetation, including areas associated with the estuarine interface.

This risk is particularly relevant in disturbed coastal environments where invasive species can rapidly establish. Without appropriate control measures, this may result in localised degradation of indigenous vegetation and ecological functioning.

Disturbance to biodiversity and estuarine habitats

The site is located within the Estuarine Functional Zone of the Kromme Estuary, which is recognised as an ecologically important system. Although no direct works are proposed within the estuary or its active interface, construction activities may result in indirect impacts through sediment runoff, accidental pollution, or disturbance beyond defined work areas. The primary risk pathway is through uncontrolled surface runoff or inappropriate site management practices.

Soil and groundwater contamination

Improper storage, handling or disposal of construction materials, fuels, cement or sanitation facilities may result in localised soil contamination. There is a secondary risk that contaminants could infiltrate into subsurface pathways or be mobilised through surface runoff, potentially affecting groundwater or adjacent ecological systems.

This risk is typically associated with poor site management and can be effectively mitigated through standard pollution prevention measures, including designated storage areas, spill response procedures and appropriate waste handling practices.

Stormwater runoff and erosion

Construction activities will result in temporary exposure of soils, particularly sandy and erosion prone substrates, increasing the risk of surface runoff, erosion and sediment transport during rainfall events. If not properly controlled, sediment laden runoff may migrate beyond the site and affect surrounding environments.

Given the proximity of the estuarine system, this represents a key risk pathway. The implementation of engineered stormwater management measures, including controlled runoff pathways, attenuation where required, and energy dissipation, will be essential to prevent off site impacts.

Light pollution

Exterior lighting associated with the residential dwelling may result in light spill into the surrounding natural environment, particularly toward the estuarine interface, if not appropriately designed. Artificial lighting has the potential to affect nocturnal fauna by altering natural behavioural patterns, including feeding, breeding and movement, and may also reduce the natural dark sky character of the area.

This risk is generally low in scale for a single residential dwelling but is relevant within sensitive coastal environments. It can be effectively mitigated through appropriate lighting design, including the use of downward directed, shielded fixtures and minimising unnecessary illumination.

Noise and construction disturbance

Noise generated during demolition and construction activities may temporarily affect nearby residents and surrounding receptors. These impacts are short term and limited to the construction phase but may result in temporary disturbance if not appropriately managed.

Compliance with standard working hours, maintenance of equipment, and implementation of basic noise control measures will ensure that impacts remain low and acceptable within the context of the surrounding residential environment.

Overall risk conclusion

The identified risks are typical of small-scale residential redevelopment within a coastal urban environment and are primarily associated with the construction phase and indirect pathways to the adjacent estuarine system.

With the implementation of appropriate mitigation measures, stormwater and erosion control, pollution prevention and invasive species management, all identified risks are considered to be low and manageable.

Alternative A (preferred alternative)

Alternative A

Alternative A represents the preferred option for the proposed redevelopment of Erf 3806, St Francis Bay, within the Kouga Local Municipality. The property is privately owned, zoned for residential use, and situated within an established urban residential area.

The proposed activity entails the development of a new private residential dwelling and associated infrastructure on Erf 3806, St Francis Bay.

The development components are anticipated to include the following:

- A multi storey brick and mortar residential dwelling with a total floor area of approximately 500 square metres.
- Associated decks, patios and external entertainment areas linked to the dwelling and canal frontage.
- A swimming pool and associated hard landscaped areas.
- An enclosed pergola or similar covered structure along the canal frontage.
- Solar power generation and backup infrastructure.
- Rainwater harvesting tanks and associated water storage infrastructure.
- Connection to existing Kouga Local Municipality bulk services, including water, electricity, sewerage or approved sanitation infrastructure and municipal solid waste services, where applicable.
- Landscaping, garden rehabilitation, access, parking and service areas associated with the residential use of the property.
- The total development footprint, inclusive of the dwelling footprint, decks, patios, pool, pergola, access, services, hard landscaping and associated external areas, is anticipated to be approximately 600 square metres.

Vegetation clearing is expected to be limited, as the site consists predominantly of maintained landscaped garden areas rather than intact natural coastal vegetation. No unnecessary removal of indigenous vegetation will be undertaken. Any disturbed areas will be stabilised and rehabilitated through appropriate landscaping, erosion control and environmental management measures.

The proposed development will be assessed through a Basic Assessment process, during which potential impacts on the estuarine environment, canal frontage, stormwater management, biodiversity, visual character and broader receiving environment will be identified and addressed through appropriate avoidance, mitigation and management measures.

Materials and construction methodology

The proposed dwelling will be constructed using conventional residential building materials including brick and plastered masonry, reinforced concrete elements where structurally required, glazing systems, timber architectural features and shingle roofing. Materials and finishes have been selected to complement the established residential character of St. Francis Bay and to reduce visual contrast within the surrounding coastal environment. All building materials and construction methods will comply with applicable National Building Regulations and relevant municipal requirements.

Servicing and access

Access to the site will be obtained via the existing road network servicing the property, with no requirement for new offsite access roads. Municipal water and electricity services will supply the dwelling, supplemented by rainwater harvesting for non-potable uses and solar photovoltaic generation to improve resource efficiency. Wastewater generated by the development will be discharged to the municipal sewer network in accordance with municipal requirements. Stormwater will be managed through engineered measures including graded surfaces, controlled runoff pathways and erosion protection to prevent sediment transport and off-site impacts.

Environmental response and site sensitivity

The site is located 41m from the highwater mark of the Kromme Estuary and falls within the broader Estuarine Functional Zone. There is a road and vegetation buffer along development area that separates the development from the estuary. Although the wider area is environmentally sensitive, the proposed development is largely confined to an already transformed urban residential footprint and open plot.

Compliance and sustainability

The preferred alternative is consistent with the residential zoning of the property and the established character of the surrounding settlement. The development constitutes infill redevelopment within an existing urban node and does not contribute to urban sprawl or the expansion of infrastructure into previously undeveloped land. Sustainable design measures incorporated into the proposal include rainwater harvesting, solar energy supplementation, and stormwater controls aimed at reducing erosion and protecting the adjacent receiving environment.

Rationale for the preferred alternative

Alternative A is preferred because it utilises an already developed and zoned residential property within an established urban area aligns the proposed footprint within previously disturbed parts of the site, thereby minimising new environmental disturbance avoids encroachment and efficient use of existing municipal infrastructure is consistent with the Kouga planning framework and surrounding residential land use character incorporates appropriate environmental design and mitigation measures to reduce potential impacts

Overall, Alternative A represents the most appropriate and environmentally acceptable development option for the site, as it achieves the intended residential use while limiting impacts on the surrounding coastal and estuarine environment.

No-go alternative (compulsory)

The No Go Alternative entails maintaining the current status quo. Under this scenario, no additional disturbance to the site would occur as a result of redevelopment activities, and all potential construction related impacts would be avoided.

From an environmental perspective, the No Go Alternative would avoid short term impacts associated with demolition, earthworks, vegetation disturbance, noise, dust generation and potential pollution risks. The existing condition of the site, including the already transformed residential footprint would remain unchanged.

However, the No Go Alternative would also result in the continued underutilisation of a property that is zoned for residential use within an established urban area. The site currently contains an existing structure and associated disturbed areas, and the opportunity to optimise the use of this already transformed footprint would not be realised.

In the absence of development, the following considerations apply:

The site would not benefit from improved design and environmental management interventions, including enhanced stormwater control, erosion management and invasive species management that would be implemented as part of the proposed development

Existing disturbed areas may remain unmanaged, which could allow localised issues such as the persistence or gradual spread of alien and invasive vegetation to continue if not actively maintained

The opportunity for short term local economic activity associated with construction, including employment and procurement of goods and services, would not be realised

The property would continue to contribute to the urban fabric in its current form without the potential improvements associated with reinvestment and development

It is important to note that, given the scale and nature of the proposed activity as a single residential dwelling, the socio-economic implications of the No Go Alternative are limited and localised. Similarly, the environmental benefits of avoiding development are largely confined to the avoidance of short-term construction phase impacts, as the site is already transformed and located within an established residential area.

Overall, while the No Go Alternative would avoid development related impacts, it would also forgo the opportunity to improve and manage the site within a structured environmental framework. Given that the proposed development represents infill redevelopment within an existing urban footprint, and that impacts can be effectively mitigated, the No Go Alternative is not considered the preferred option.

9. ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

The assessment of the proposed development has been undertaken based on available information, site inspections and specialist input. While the findings of the Basic Assessment are considered robust and sufficient to inform decision making, a number of assumptions, uncertainties and limitations inherent to the assessment process are acknowledged below.

Assumptions

The assessment assumes that the proposed development will be implemented in accordance with the layout, footprint and design parameters described in the DBAR and associated plans with adherence to the recommendations of the EAP and Specialists and that all mitigation measures and management actions outlined in the Environmental Management Programme will be fully implemented and enforced throughout the construction and operational phases municipal services, including water supply, electricity and sewerage infrastructure, have sufficient capacity to accommodate the proposed development.

Uncertainties

The following uncertainties are recognised

Seasonal variability

Site assessments and specialist inputs represent conditions observed at the time of survey. Ecological processes, vegetation condition and hydrological responses may vary seasonally, particularly in relation to rainfall patterns, soil moisture and estuarine dynamics. While this may influence the expression of certain environmental characteristics, it is not expected to materially alter the findings of the assessment, given the transformed nature of the development footprint.

Climate variability

Future climatic conditions, including changes in rainfall intensity and frequency, may influence stormwater behaviour and erosion risk over time. The incorporation of conservative stormwater management and erosion control measures is intended to address this uncertainty

Gaps in knowledge and limitations

The following limitations are noted

Reliance on screening tools and secondary data

The assessment has made use of national and provincial spatial datasets, including environmental screening tools and biodiversity mapping. While these tools provide an important planning level indication of environmental sensitivity, they may not fully reflect fine scale, site specific conditions. This has been addressed through site verification and specialist input

Site survey limitations

Field observations are based on a limited number of site visits and are therefore representative of conditions at the time of inspection. The assessment does not constitute a long-term monitoring dataset. However, given the largely transformed nature of the site and the clear delineation of sensitive areas, this limitation is not considered to materially affect the conclusions of the assessment

Subsurface conditions

Detailed geotechnical and subsurface investigations fall outside the scope of the environmental assessment. Potential variability in subsurface conditions, including soil stability and groundwater pathways, will be addressed through engineering design and construction phase controls

Overall statement

Notwithstanding the above assumptions, uncertainties and limitations, sufficient information is available to assess the potential environmental impacts of the proposed development with an acceptable level of confidence. The assessment concludes that no fatal flaws have been identified and that impacts can be effectively mitigated to acceptable levels through the implementation of the recommended management measures.

The precautionary principle has been applied throughout the assessment, and conservative mitigation measures have been incorporated to address identified uncertainties and ensure the protection of the adjacent estuarine environment.

SECTION E. RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	☒
YES	☒

Is an EMPr attached?

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

NA

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

Based on the information contained in this Basic Assessment Report, specialist inputs, site verification and the assessment of potential environmental impacts, it is the reasoned opinion of

the Environmental Assessment Practitioner that the new residential dwelling on Erf 3806, Sea Vista, St Francis Bay, should be authorised.

The assessment has not identified any fatal flaws that would preclude the development from proceeding. The proposed activity represents redevelopment within an existing and largely transformed residential footprint and is consistent with the zoning and established land use of the area. Although the site falls within the Estuarine Functional Zone and a mapped Critical Biodiversity Area associated with the Kromme Estuary, the development footprint is largely restricted to previously disturbed areas and does not result in the loss of intact habitat required to meet biodiversity targets.

All potential impacts, including those related to vegetation disturbance, erosion, stormwater runoff, construction related pollution, noise, dust and proximity to the estuarine environment, have been assessed and are considered to be of low significance following the implementation of mitigation measures.

Compliance with NEMA Principles

The proposed development is considered to be consistent with the principles of the National Environmental Management Act, including

- avoiding, minimising and remedying disturbance of ecosystems and loss of biodiversity
- promoting sustainable use of natural resources
- ensuring that development is socially, environmentally and economically sustainable
- applying a risk averse and cautious approach, taking into account the limits of current knowledge

The activity constitutes appropriate infill development within an existing urban area and does not result in unacceptable environmental degradation or ecological fragmentation.

Conditions of Authorisation

Authorisation of the proposed activity is recommended subject to the following key conditions

- strict implementation of the approved Environmental Management Programme throughout all phases of the development
- appointment of a suitably qualified Environmental Control Officer to monitor compliance
- implementation of appropriate stormwater management and erosion control measures to prevent sediment transport and uncontrolled runoff toward the estuarine environment
- implementation of pollution prevention measures, including appropriate handling and storage of fuels, cement and hazardous materials
- control and ongoing management of alien and invasive plant species
- rehabilitation of all disturbed areas using indigenous species appropriate to the local coastal environment
- compliance with all relevant municipal requirements, permits and applicable legislation

In addition to the condition of the Authorisation above, the following impact specific considerations

and mitigation are highlighted including EAP and Specialist recommendations

Vegetation Clearing

- Conduct a plant search-and-rescue operation prior to site clearance.
- Obtain all required permits from the competent authority (e.g., for *Sideroxylon inerme* under the National Forests Act).
- A solid hoarding system should be installed around the proposed structure.
- Limit vegetation clearance strictly to what is necessary within the approved building footprint.
- Clearly demarcate no-go areas to prevent accidental disturbance.
- Stockpile viable topsoil in a secure area for post-construction rehabilitation.
- Rehabilitate all disturbed areas using endemic and indigenous species only.
- Ensure biodiversity protection is incorporated into construction design and implementation.
- Prevent clearing along the estuary adjacent to the development site.

Invasive Alien Species Management

- Avoid unnecessary disturbance to areas outside of the approved development footprint
- Remove and eradicate all identified invasive species (e.g., *Nerium oleander*, *Schinus terebinthifolia*) before construction begins.
- Dispose of all removed invasive plants in a manner that prevents re-establishment
- Implement a weed management strategy for construction and post-construction phases.
- Rehabilitated areas must be landscaped only with indigenous and endemic plant species.
- ECO to approve the final planting list and layout plan for reinstatement.
- Monitor for re-establishment of alien species post-construction and remove accordingly.
- Dispose of all removed invasive species correctly and off-site.

Stormwater management

- Incorporate a rational stormwater design using Sustainable Urban Drainage Systems (SUDS), including swales, attenuation ponds, permeable paving, and rainwater harvesting.
- Ensure post-development stormwater discharge does not exceed pre-development volumes.
- Implement erosion control measures such as gabion mattresses and vegetated swales in sensitive areas.
- Keep the stormwater network separate from the wastewater system at all times.
- Avoid accumulation of standing water; design drainage to remove runoff quickly without causing erosion.
- Install waste traps and sediment control measures to prevent litter, sediment, and pollutants from entering watercourses.
- Prevent concentrated flows towards the estuary by using diversion berms or infiltration areas.
- Regularly inspect and maintain all SUDS and erosion control measures to ensure

ongoing effectiveness.

- Implement emergency spill containment procedures

Visual Impact Mitigation

- Adhere to municipal height restrictions and local planning bylaws.
- Use neutral, earthy tones for all external finishes and roof structures.
- Minimise architectural features and structures that protrude above the main roofline; keep them to the minimum allowable height.
- Incorporate indigenous screen planting along exposed edges.
- Use downward-directed, warm-colour lighting with full cut-off shielding, shields or louvers to prevent light spill beyond property and along the estuary.
- Avoid upward-facing, flood, or high-lumen exterior lighting near the estuary.
- Use low-mounted or bollard lighting along walkways only where necessary.
- Implement motion-sensor lighting and avoid lighting near vegetated or the estuary area.
- Monitor post-construction lighting levels to ensure no negative effects on surrounding residential areas, the estuary, or nocturnal wildlife.
- Use minimal, unobtrusive signage, fencing, and minor infrastructure, with natural colours and materials that blend into surroundings.
- During construction, avoid unnecessary clearing and install temporary visual barriers (e.g., shade cloth fencing) where works are visible from surrounding residential areas.

Topsoil Management

- Strip and store topsoil in a secure, designated location.
- Topsoil stockpiles must be located away from construction activities to avoid contamination and erosion. These stockpiles must be kept as far away from the estuary as possible
- Reuse topsoil during rehabilitation of landscaped and disturbed areas.
- Avoid creating steep slopes; use retaining walls or planters as needed.
- Use biodegradable soil saver fabrics (e.g., jute) on slopes >1:10.
- Excavate only to required depths for approved plans and reuse deeper fill onsite where possible.
- Post-completion rehabilitation must include composted mulch and organic soil enhancers.

Noise Control

- Restrict noisy operations to municipal construction hours.
- Avoid use of pneumatic tools unless essential.
- Use wheelbarrows for rubble removal to reduce noise.
- Erect temporary noise barriers or screens around high-noise areas where needed.
- Notify adjacent property owners (within 50m) of construction times in advance.
- Use trucks and vehicles only on designated access routes to minimise noise.
- Limit maintenance activities (e.g., lawn mowing, machinery cleaning) to daytime hours.

Dust Control

- Water dust-generating surfaces at least three times daily during dry periods.
- Wet down all material and rubble before transport.
- Deliver materials into hoarded sections of the site to prevent spread.
- Implement a speed restriction of 30–40 km/h for construction vehicles within the site.

Health and Safety

- Appoint a dedicated safety officer on site.
- Induct all workers and require appropriate PPE at all times.
- Erect hoarding and scaffolding to separate workers from public access.
- Control all access to the site.
- Adhere strictly to the Occupational Health and Safety Act, Act 85 of 1993.
- Ensure workers operating heavy machinery are properly trained to operate the equipment safely and identify potential hazards.
- Establish and communicate emergency procedures
- Regularly inspect and maintain machinery and equipment to prevent accidents.
- Clearly demarcate the site with warning signs to prevent unauthorized access.

Waste and Effluent Management

- Remove all rubble and refuse daily and store in a wind-secure enclosure.
- Cart all non-reusable waste to a licensed municipal landfill.
- Store hazardous materials in designated containment areas.
- Cement and mortar mixing to occur on impermeable surfaces (e.g., plastic sheeting).
- Provide portable toilets for workers and have waste removed by licensed service providers.
- Maintain the tank regularly and check for leaks.
- Report any spills or contaminated material to the ECO and dispose of via registered operators.
- Repurpose or reuse materials where possible to minimize waste generation.
- On-site waste receptacles must be clearly marked for recyclable and non-recyclable streams (paper, plastic, glass, general refuse).
- Operational waste must be stored in covered bins to prevent wind dispersal

Aquatic Biodiversity Protection

- Cement mixing, refuelling, and machinery cleaning must occur away from the estuary.
- Install sediment barriers and erosion controls before construction.
- Construction equipment must be cleaned offsite, no washing of machinery near the estuary.
- Direct all stormwater away from the estuary using swales, infiltration trenches, or permeable paving.
- Portable toilets must be positioned away from the estuary.
- Educate site workers and residents about estuary sensitivity.

- External lighting must not face or reflect toward the estuary.
- Stockpiled soil and construction materials must be kept outside the estuary.
- Hydrocarbons, chemicals and hazardous materials must be stored offsite or in bunded areas away from surface waterbodies.

Contamination Prevention (Topsoil and Groundwater)

- Supervise all handling of wet or hazardous construction materials.
- Mix and store materials in hoarded areas only.
- Remove any contaminated soil for disposal at a licensed facility.
- Provide permanent or portable sanitation facilities on impermeable surfaces, serviced by approved providers.
- Ensure fuelling, maintenance and cleaning of equipment occur in designated bunded areas.
- Ensure that spill kits are readily available on-site and that personnel are properly trained in their correct use
- Avoid any washing of implements or hosing on natural ground surfaces.
- Connect to the bulk municipal sewage network in accordance with SANBS standards, ensuring all connections are approved and serviced by authorized providers.

Biodiversity Protection (General and Indirect)

- Conduct environmental induction training for all staff.
- Limit activity to within approved site boundaries, enforce no-go zones.
- Implement and maintain solid hoarding to restrict site access.
- Monitor and report any wildlife sightings, nests, or habitat disturbances.
- Avoid use of reflective or metallic lighting finishes and fixtures.
- Avoid lighting within 32 m of the estuary or near dense vegetation.
- Maintain dark zones outside essential areas to preserve nocturnal species behaviour.
- Remove all alien and invasive vegetation and limit impact to surrounding open space.
- Ensure rehabilitated areas are stabilised with endemic cover and erosion control measures.
- Locate temporary stockpiles away from vegetated areas and stabilize to prevent erosion or runoff.

Employment and Socio-Economic Benefit

- Maximise use of local labour (skilled and unskilled) where feasible.
- Procure from local building material suppliers and subcontractors.
- Promote fair working conditions and transparency in hiring.
- Encourage the inclusion of youth and women in short-term job opportunities.
- Provide on-site training and skills transfer to enhance long-term employability.
- Prioritise locals for operational roles, including maintenance, security, and landscaping.

Specialist recommendations

Terrestrial Specialist recommendations

- An Environmental Control Officer (ECO) must be appointed to oversee construction activities, ensuring compliance with the Environmental Authorisation, Environmental Management Programme (EMPr) and the mitigation measures contained within this report.
- A plant Search and Rescue must be undertaken by a suitably qualified individual prior to the commencement of vegetation clearing or other activities which may affect vegetation on site.
- Protected plant species, including *Sideroxylon inerme*, *Aloe arborescens*, *Cotyledon orbiculata*, *Cynanchum obtusifolium* and *Strelitzia nicolai*, must be identified and appropriately managed prior to construction. Where feasible, these species should be retained in situ and incorporated into the final landscaping design.
- Where the removal, disturbance or relocation of protected plants or trees cannot be avoided, the necessary permits or licences must be obtained from the relevant competent authorities prior to vegetation clearing.
- The approved development footprint, site camp, access routes, material storage areas and designated delivery areas must be clearly demarcated prior to the commencement of construction.
- Construction activities must be strictly confined to the approved development footprint. Areas outside Erf 3806, neighbouring properties and the adjoining canal environment must be regarded as no-go areas unless specifically authorised for project-related activities.
- No construction equipment, building materials, rubble, spoil, fuels or hazardous substances may be stored outside the approved construction area or where they may enter the adjoining canal system.
- No dumping of garden refuse, construction waste, rubble or any other material may occur beyond the property boundary or into the adjoining canal.
- Vegetation clearing must be limited to the minimum area required for construction and should be undertaken progressively where possible to reduce the extent of exposed soil at any one time.
- Where viable topsoil is present, it should be carefully stripped and stockpiled in a secure designated area for reuse during rehabilitation and landscaping.
- All disturbed areas not required for permanent infrastructure must be stabilised and rehabilitated as soon as reasonably possible following completion of construction.
- Indigenous plant species suitable for the local coastal environment should be favoured for rehabilitation and landscaping. The introduction of listed invasive alien plant species must be avoided.
- Any alien invasive plant species that establish on the property during or following construction must be appropriately controlled and removed in accordance with the applicable legislative requirements.
- Stormwater management must be implemented in accordance with best practice to prevent erosion, sedimentation and the uncontrolled discharge of stormwater from the construction area into the adjoining Marina Glades canal system.

- Sediment, soil, cement, concrete wash water, paint, fuels, oils and other pollutants must not be permitted to enter the canal or wider estuarine environment.
- Refuelling, vehicle servicing, cement mixing and the storage of fuels or hazardous substances must take place within appropriately designated and controlled areas away from the canal frontage.
- Spill kits must be available on-site during construction and any accidental spillages must be contained and appropriately managed.
- Natural drainage patterns must not be unnecessarily altered and stormwater generated from the developed property must be appropriately managed to prevent erosion and pollution of the adjoining canal system.
- All excavated areas associated with services or other temporary works must be stabilised and rehabilitated once works have been completed.
- All external lighting should be downward-directed and appropriately shielded to minimise unnecessary light spill towards the adjoining canal and wider estuarine environment. Excessive floodlighting of the canal frontage should be avoided.
- A comprehensive environmental induction must be provided to all construction staff prior to commencement of works, with particular emphasis on footprint control, protected flora, fauna, waste management, spill response and the protection of the adjoining canal and estuarine environment.
- Should fauna be encountered during vegetation clearing or construction, the animal must be allowed to move away from the construction area unharmed. No fauna may be intentionally captured, harmed or killed.
- Construction activities must be limited to standard daytime working hours to reduce unnecessary disturbance to surrounding residents and fauna that may utilise the canal and surrounding environment.
- All construction waste must be appropriately stored and removed to a suitably authorised waste disposal facility.
- All waste bins on site must have closeable lids to prevent wind-blown waste and avoid attracting local wildlife.
- No activities may extend into the adjoining canal or beyond the approved development footprint unless separately authorised in terms of the relevant environmental and other legislative requirements.
- Due care and consideration must be exercised during the design, construction and operational phases to ensure that terrestrial biodiversity is not unnecessarily disturbed and that the adjoining estuarine environment is appropriately protected.
- Post-construction monitoring should be undertaken by the appointed ECO to confirm that disturbed areas have been stabilised and rehabilitated and that the environmental management measures have been appropriately implemented.

Aquatic Specialist recommendations

Construction Phase

- It is recommended that a sediment barrier be placed along the southern edge bordering the canals during construction until the area is stabilised (paved or landscaped), and there will be NO IMPACT.
- Any cement mixed on site must be done in a demarcated area towards the northern end of the property on a non-permeable surface that can contain the mixture.
- There must be no mixing on the bare ground to prevent leaching;
- All spills onto the ground must be cleaned up by hand and removed from site; and
- All machinery or tools must be washed off at an off-site location or in containers that can be emptied off-site.
- Any machinery (e.g., cement mixers, generators) must be located on drip trays containing a layer of fine sand (small particle size) that can trap hydrocarbons through adsorption, and which should be cleaned out regularly for disposal at a suitable waste treatment site.
- Any accidental spills on site must be cleaned up manually and disposed of off-site.

Operational Phase

- Any foul odours and leaks (dampness) around the conservancy tank site must be investigated, and repairs must be conducted immediately if required.
- On its own, wastewater from Erf 3806 is unlikely to have any negative effects, and there will be NO IMPACT if these guidelines are adhered to.

Cumulative Impacts

- All footpaths traversing saltmarshes should be “closed”, and the areas rehabilitated as detailed in Van Niekerk et al. (2019);
- sewerage infrastructure must be regularly maintained; and the capacity to service (empty) conservancy tanks must be ensured.
- The future development of vacant, untransformed plots, or the rezoning of areas for development within the EFZ, needs to be discouraged.

Heritage Specialist recommendations

Based on the available information, the development does not trigger any of the S38(1) criteria in terms of the NHRA. No further heritage studies are recommended - the application should proceed in terms of NEMA as it is highly unlikely that significant heritage resources will be affected.

ECPHRA Recommendations

- The project proponent/representative must notify ECPHRA of the date of commencement of the project or share the project schedule and the Environmental Authorisation (EA), if applicable.
- Heritage induction and training for all ground crew, must include identification of archaeological, palaeontological, historical, and burial-related material. This ensures lawful heritage compliance during all phases of the project.
- A Heritage and Fossil Chance Finds Protocol must be adhered to.
- There must be monitoring during vegetation clearing and excavations.

Final Statement

It is therefore concluded that the proposed development is environmentally acceptable and can be undertaken without resulting in significant adverse impacts, provided that all recommended mitigation measures and management actions are fully implemented and enforced.

Residual impacts are expected to be low and manageable, and the development does not represent a risk to the ecological functioning of the adjacent estuarine environment.

Accordingly, it is recommended that Environmental Authorisation be granted for the proposed activity, subject to the above conditions.

Based on the information provided, it is in the opinion of Hort-Couture that no fatal flaws have been identified for the proposed residential development on Erf 3806, St Francis Bay within the Kouga Local Municipality, Sarah Baartman District in the Eastern Cape. The information contained within this report is thus sufficient to permit DEDEAT to make an informed decision in order to grant environmental authorisation. The Environmental Authorisation is to be based on the following recommendations from the EAP and relevant specialists.

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SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan

- Site Plan

Appendix B: Site Photographs

Appendix C: Preliminary Plan

- Preliminary Plan

Appendix D: Specialist reports

- Site Sensitivity Verification Report
- Environmental Screening Report
- Aquatic Biodiversity Compliance Statement Report
- High-Level Desktop Heritage Report
- Response to NID (Notification of Intent to Develop)
- Terrestrial Biodiversity Sensitivity Verification and Compliance Statement

Appendix E: Public participation process (PPP) & Comments and responses report

Appendix F: Construction Environmental Management Programme (EMPr)

Appendix G: Other information

- Site Sensitivity Verification Report
- Environmental Screening Report