

In terms of the **National Environmental Management Act** and 2014 Environmental Impact Regulations as amended, 2017, for:

**PROPOSED DEVELOPMENT OF A RESIDENTIAL DWELLING ON  
ERF 1363, PARADYS STRAND, KOUGA LOCAL MUNICIPALITY,  
EASTERN CAPE**

**DRAFT BASIC ASSESSMENT REPORT**

**DEDEAT REFERENCE NUMBER: EC08/C/LN1&3/M/18-2026**

**REVIEW AND COMMENT PERIOD: 1 June – 1 July 2026**



**PREPARED FOR THE APPLICANT:**

**Mr Krzysztof Kryszczuk**

**PREPARED BY:**

**Claire De Jongh (EAPASA REG: 2021/3519)**

**DATE:**

**1 June 2026**

TABLE OF DEFINITIONS
<p>Basic Assessment Report – A tool used by the EAP to submit to the competent authority if listed activities is triggered in Regulations GNR 327 and GNR 324 as per NEMA to make a decision regarding a proposed development.</p>
<p>“development footprint” means any evidence of physical alteration as a result of the undertaking of any activity;</p>
<p>“coastal waters” means -</p> <ul style="list-style-type: none"> <li>(a) marine waters that form part of the internal waters or territorial waters of the Republic referred to in sections 3 and 4 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), respectively; and</li> <li>(b) subject to section 26, any estuary.</li> </ul>
<p>Composition of coastal protection zone</p> <p>(1) Subject to subsection (2), the coastal protection zone consists of -</p> <ul style="list-style-type: none"> <li>(a) land falling within an area declared in terms of the Environment Conservation Act, 1999 (Act No. 73 of 1989), as a sensitive coastal area within which activities identified in terms of section 21(1) of that Act may not be undertaken without an authorisation;</li> <li>(b) any part of the littoral active zone that is not coastal public property;</li> <li>(c) any coastal protection area, or part of such area, which is not coastal public property;</li> <li>(d) any land unit situated wholly or partially within one kilometre of the high-water mark which, when this Act came into force- <ul style="list-style-type: none"> <li>(i) was zoned for agricultural or undetermined use; or</li> <li>(ii) was not zoned and was not part of a lawfully established township, urban area or other human settlement;</li> </ul> </li> <li>(e) any land unit not referred to in paragraph (d) that is situated wholly or partially within 100 metres of the high-water mark;</li> <li>(f) any coastal wetland, lake, lagoon or dam which is situated wholly or partially within a land unit referred to in paragraph (d)(i) or (e);</li> <li>(g) any part of the seashore which is not coastal public property, including all privately owned land below the high-water mark;</li> <li>(h) any admiralty reserve which is not coastal public property; or</li> <li>(i) any land that would be inundated by a 1:50 year flood or storm event.</li> </ul> <p>(2) An area forming part of the coastal protection zone, except an area referred to in subsection (1)(g) or (h), may be excised from the coastal protection zone in terms of section 26.</p>
<p>“coastal wetland” means -</p> <ul style="list-style-type: none"> <li>(a) any wetland in the coastal zone; and</li> <li>(b) includes - <ul style="list-style-type: none"> <li>(i) land adjacent to coastal waters that is regularly or periodically inundated by water, salt marshes, mangrove areas, inter-tidal sand and mud flats, marshes, and minor coastal streams regardless of whether they are of a saline, freshwater or brackish nature; and</li> <li>(ii) the water, the subsoil and substrata beneath, and bed and banks of, any such wetland;</li> </ul> </li> </ul>
<p>Critical Biodiversity Area – Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.</p>
<p>“development” means the building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity,</p>

[including any associated post development monitoring] but excludes any modification, alteration or expansion of such a facility, structure or infrastructure, including associated earthworks or borrow pits, and excluding the redevelopment of the same facility in the same location, with the same capacity and footprint;
“development setback” means a setback line defined or adopted by the competent authority;
Environmental Assessment Practitioner – an individual responsible for the planning, management, coordination or review of environmental impact assessments, strategic environmental assessments and environmental management programmes.
Environmental Control Officer – A site agent who needs to ensure that all environmental authorisation and conditions are adhered to during the construction phase of the project
Ecological Support Area – Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services.
Environmental Management Programme – an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced
“estuary” means a body of surface water - (a) that is part of a water course that is permanently or periodically open to the sea; (b) in which a rise and fall of the water level as a result of the tides is measurable at spring tides when the water course is open to the sea; or (c) in respect of which the salinity is measurably higher as a result of the influence of the sea.
“estuarine functional zone” means the area in and around an estuary which includes the open water area, estuarine habitat (such as sand and mudflats, rock and plant communities) and the surrounding floodplain area, as defined by the area below the 5 m topographical contour (referenced from the indicative mean sea level);
“indigenous vegetation” refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years;
interested and affected party - an whose name is recorded in the register opened for that application in terms of regulation 42 of NEMA regulations.
“interests of the whole community” means the collective interests of the community determined by- (a) prioritising the collective interests in coastal public property of all persons living in the Republic over the interests of a particular group or sector of society; (b) adopting a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable; and (c) taking into account the interests of other living organisms that are dependent on the coastal environment.
“local community” means any community of people living, or having rights or interests, in a distinct geographical area within the coastal zone;
“maintenance” means actions performed to keep a structure or system functioning or in service on the same location, capacity and footprint;
Maintenance Management Plan – means a maintenance management plan for maintenance purposes defined and adopted by the competent authority

National Environmental Management Act (Act 107 of 1998) as amended 2017 – national environmental legislation that provides principles for decision-making on matters that affect the environment.
Protected area - an area of land or sea that is formally protected by law and managed mainly for biodiversity conservation. Protected areas recognised in the National Environmental Management: Protected Areas Act (Act 57 of 2003) (hereafter referred to as the Protected Areas Act) are considered formal protected areas in the NPAES. The NPAES distinguishes between land-based protected areas, which may protect both terrestrial and freshwater biodiversity features, and marine protected areas.

TABLE OF ABBREVIATIONS	
<b>BAR</b>	Basic Assessment Report
<b>CBA</b>	CBA Critical Biodiversity Area
<b>CMP</b>	Coastal Management Plan
<b>DEDEAT</b>	Eastern cape Department of Economic Development, Environmental Affairs and Tourism
<b>DFFE</b>	Department of Forestry, Fisheries and the Environmental
<b>DWS</b>	Department of Water and Sanitation
<b>EAP</b>	Environmental Assessment Practitioner
<b>ECO</b>	Environmental Control Officer
<b>EFZ</b>	Estuarine Functional Zone
<b>EIA</b>	Environmental Impact Assessment
<b>EMP</b>	Estuary Management Plan
<b>EMPr</b>	Environmental Management Programme report
<b>ESA</b>	Ecological Support Area
<b>GA</b>	General Authorisations
<b>IAP</b>	Interested and Affected Party/ies
<b>KLM</b>	Kouga Local Municipality
<b>MMP</b>	Maintenance Management Plan
<b>NEMA</b>	National Environmental Management Act (Act 107 of 1998)
<b>NEMPAA</b>	National Environmental Management: Protected Areas Act (Act 57 of 2003)
<b>NEMWA</b>	National Environmental Management Waste Act (Act
<b>PA</b>	Protected Area
<b>SAHRA</b>	South African Heritage Resources Agency
<b>SANBI</b>	South African National Biodiversity Institute
<b>SBDM</b>	Sarah Baartman District Municipality
<b>STR</b>	Screening Tool Report

APPENDIX 1 OF REGULATIONS	DESCRIPTION	CROSS REFERENCE IN BAR
3a	Details of the EAP and CV	Appendix G2
3b	Location of Activities	Section A1
3c	Layout Plan	Section A1; Appendices A - C

3d	Description of the scope of the proposed activity including the triggered and specified activities, associated structures and infrastructure and the way the proposed development relates to the triggered activities	Section A1 - 8
3e	Description of the policy and legislative context within which the development is proposed and how is each one applicable to the proposed activity	Section A10
3f	The motivation for the need and desirability (including the development at that specific location)	Section A9
3g	The motivation for the preferred site, activity, and technology alternative	Section A1 - 8
3h (i)	Details of all the alternatives considered	Section A1 - 8
3h (ii)	Details of the Public Participation Process (PPP) undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs Section 5	Section C
3h (iii)	A summary of the issues raised by interested and affected parties, and an indication of the way the issues were incorporated, or the reasons for not including them Section 5	Section C, Appendix E
3h (iv)	The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	Section B and Section D2
3h (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;	Section D
3h (vi)	The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives	Appendix G1
3h (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	Section D2
3h (viii)	Possible mitigation measures that could be applied and the level of residual risk	Section D2; Appendix F

3h (ix)	Outcome of the site selection matrix	Section D2; Appendix F
3h (x)	If no alternatives, including alternative locations for the activity, were investigated, the motivation for not considering such	Section A1 - 8
3h (xi)	Concluding statement indicating the preferred alternatives, including the preferred location of the activity	Sections D4
3i	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, risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures	Sections D
3k	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	Sections D4
3l	Environmental impact statement containing a map and a summary of the positive and negative impacts of the proposed development and alternatives	Sections D4
3m	Based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr	Section D
3n	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 the authorisation	Section D
3o	Description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed	Section A and Section D
3p	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	Section D
3q	Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on	Section A

## EAP Services

	which the activity will be concluded, and the post-construction monitoring requirements finalised	
3r	Undertaking under oath or affirmation by the EAP	Appendix G2
3s	Details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of adverse environmental impacts	Not applicable

## EXECUTIVE SUMMARY

**Introduction**

Erf 1363 is situated on de Jager street in Paradys Strand (SG Code: C03400110000136300000) and falls within 100 meters of the high-water mark of the sea.

The owner of the property is proposing to develop a dwelling with an estimated development footprint of 298.9m<sup>2</sup> which will include an estimated 43.8m<sup>2</sup> decking area. A lookout point is also proposed which will be equipped with a walkway leading from the house to the lookout point and it will be set above the vegetation (similar to a rope bridge). The lookout area will be an estimated 20m<sup>2</sup>. Approximate central coordinates: 34° 6'21.00"S; 24°53'16.07"E

Due to the dynamic nature of the site within a coastal environment, the dwelling is recommended to be designed in such a way to prevent instability of the dunes and to prevent erosion. Maintaining a dense vegetation cover will trap and stabilise the sand to some extent and avoid the nuisance of sand encroachment. The house design should keep this in mind in terms of doorways and outside spaces. A raised structure would allow sand transport under the structure with less nuisance inside the buildings. The eastward part of the property could be raised (inundated by sand) in future years as the frontal dune migrates onto the property. The rate of movement is not known at this stage. To avoid possible shifts, it is advised that the foundations/pylons of the building on Erf 1363 extend down as far as possible along the southwestern side of the building (engineering advise recommended on depths). This will allow movements of the upper part of the dune without impacting the foundations of the building on Erf 1363. The risk of these shifts is less towards the north of Erf 1363.

The proposed development triggers activities in Listing Notice 1 and Listing Notice 3 of the Environmental Impact Assessment Regulations, 2014 (as amended, 2017) published in terms of the national Environmental Management Act (Act 107 of 1998) (NEMA) and therefore requires an environmental authorisation to be issued by the competent authority before development can commence. The competent authority for the application is the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism.

**Environmental Sensitivities**

A screening tool has been developed by the Department of Forestry, Fisheries and Environmental Affairs (DFFE). The Screening Tool identifies related exclusions and/ or specific requirements including specialist studies applicable to the proposed site and/or development, based on the national sector classification and the environmental sensitivity of the site. A screening report was generated for the proposed project; the site verification report is provided as Appendix D1. The sensitivities identified and verified are provided below.

*Table 1: Verification of environmental sensitivity identified in DFFE screening tool report*

Specialist Study as per Screening Tool Report	Environmental sensitivity as per screening tool report	Verification of environmental sensitivity	
Agriculture Assessment	High	Low	The sensitivity rating provided by the Screening Tool Report is disputed. The rating is based on the land capability rating and cropland use. There is no agriculture practiced within the highly

Specialist Study as per Screening Tool Report	Environmental sensitivity as per screening tool report	Verification of environmental sensitivity	
			developed areas. The 740m2 site is underlain by windblown sand and is designated as residential 1 and not suited to agriculture. .
Landscape/Visual Impact Assessment	NA	Low	The visual character of the study area consists of visually appealing natural coastal landscapes and modified landscapes including residential, tourism, roads and footpaths. The proposed activity will be developed to blend in with the natural environment and wont deteriorate visual quality of the area. No further assessment is deemed necessary; the concept design and proposed SDP is considered to fit in with the site and surrounding land uses. Mitigation measures to are included in the EMPr submitted with the BAR
Agricultural	High	Low	The sensitivity rating provided by the Screening Tool Report is disputed. The rating is based on the land capability rating and cropland use. There is no agriculture practiced within the highly developed areas. The site is not suited to high intensity agricultural development.
Socio-Economic Assessment	NA	Low	No further assessment is deemed necessary; the proposed development will have a low positive impact on social and economic conditions and contribute towards rates and taxes in the area and employment of contractors and service providers and purchase of local goods. Mitigation measures to are included in the EMPr submitted with the BAR
Animal Species assessment including avian	Medium	Low	The 740m2 site is underlain by windblown sand and is designated as residential 1 with the surrounding area being the seafront and other houses. No specific populations of threatened species were identified within the footprint; the entire footprint is situated within transformed and degraded habitat. The SCC included in the STR are not expected to be affected by the proposed development due to the limited footprint and extensive more suitable habitat being present in the surrounding area.
Aquatic Biodiversity Impact Assessment	Low	Low	No aquatic features were identified within close proximity (100 meters) to the site. Stormwater management and sewage management mitigation measures are included in the EMPr to prevent polluted and / or excessive runoff from the site.
Archaeological and Cultural Heritage Impact Assessment	Low	Low	No further assessment is deemed necessary, however mitigation measures to prevent unnecessary impact on heritage resources are recommended and will be included in the EMPr submitted with the BAR.
Paleontological Impact Assessment	Very High	Medium	No paleontology assessment is deemed to be necessary for the proposed development on the residential erf; however, mitigation measures to prevent unnecessary impact on paleontological resources are recommended and will be

Specialist Study as per Screening Tool Report	Environmental sensitivity as per screening tool report	Verification of environmental sensitivity	
			included in the EMPr submitted with the BAR .It is recommended that a specialist search dune sand moved to facilitate the development once construction commences as the current intact and dense ground cover would prevent a valuable assessment at pre-construction stage.
Plant Species Assessment	Medium sensitivity	Low Sensitivity	<p>The historical vegetation mapped on site is St Francis Dune Thicket (least concern) (NatVEG map, 2019)</p> <p>Vegetation mapped as southeastern Strandveld of fynbos biome (NATVEG, 2024); however, the site is confirmed by the EAP to be representative of St Franci Dune thicket.</p> <p>The majority of vegetation on site will remain intact. The dwelling will be 300m2 (maximum including look out point) however the excavated area will be less due to proposed design of dwelling and method of construction (i.e. to assemble foundations off site and transport to site) this approach will minimise disturbance on the site</p> <p>No endemic and range restricted species were recorded as being present. Several species are known from the surrounding area, but unlikely to be affected by the proposed activity. No Endangered or Critically Endangered flora species were confirmed to be present nor known to be present in the affected area. PNCO (Provincial Nature Conservation Ordinance) permits are unlikely to be required as no species protected in terms of the provincial PNCO were recorded within the actual proposed footprints. Milkwood trees are present (one large individual and several seedlings associated with the remnant thicket clumps, but these will not be affected and will be retained. Respective permits will be required for removal during site clearing.</p>
Terrestrial Biodiversity Impact Assessment	Low	Low	<p>The historical vegetation mapped on site is St Francis Dune Thicket (least concern) (NatVEG map, 2019)</p> <p>Vegetation mapped as southeastern Strandveld of fynbos biome (NATVEG, 2024); however, the site is confirmed by the EAP to be representative of St Franci Dune thicket.</p> <p>The majority of vegetation on site will remain intact. The dwelling will be 300m2 (maximum including look out point) however the excavated area will be less due to proposed design of dwelling and method of construction (i.e. to assemble foundations off site and transport to site) this approach will minimise disturbance on the site.</p>
Geotechnical Assessment	NA	medium	A geomorphological assessment was requested to be conducted to address the impact of development in a dynamic coastal area.
Marine Impact Assessment	NA	medium	

Specialist Study as per Screening Tool Report	Environmental sensitivity as per screening tool report	Verification of environmental sensitivity	
Visual Assessment	NA	NA	Aspects related to visual impacts are addressed in the basic assessment; however no specific specialist study is deemed to be required.
Civil Aviation Assessment	High sensitivity	Low sensitivity	A civil aviation assessment / compliance statement is excluded as the proposed development will not have an impact on civil aviation aerodrome.
Defence theme	Low sensitivity	Low sensitivity	A defence them compliance statement is excluded as the proposed development will not have an impact on the defense theme.

## Impact Assessment summary

Several impacts were identified for construction phase, and a few identified in the planning and operational phase. Measures are recommended to mitigate anticipated impacts. The potential impacts associated with the proposed development are considered to be negative of low to medium significance without any mitigation. However, all potential impacts should readily be reduced to low significance provided the construction work and ongoing operation of the development are carried out with due diligence and the appropriate mitigation measures, as recommended in this report, are adhered to. No negative impacts of high or very high significance were identified. The development is expected to have a positive impact on local employment and property value.

## Public participation

The draft basic assessment report will be provided to registered interested and affected parties for a 30-day comment and review period.

**Registration date for interested and affected parties: 12 January – 16 February 2026**

The application for EA has been submitted to the DEDEAT and accepted on 22 April 2026 (DEDEAT Reference number: EC08/C/LN1&3/M/18-2026).

The draft BAR is hereby provided to interested and affected parties for a 30-day comment and review period. The BAR will then be updated with all comments received and responses, as required. The Final BAR will then be submitted to the DEDEAT for a 107-day decision making by the competent authority.

**Comment and review on draft BAR: 1 June – 1 July 2026**

## Conclusion

The draft basic assessment has assessed the no go option, alternative 1 (initial SDP), the concept design and proposed service options. Measure are recommended to mitigate identified potential impacts, including input into the final SDP and designs. With mitigation measures in place the majority of identified direct impacts are expected to be negative of negligible / low significance.

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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 **1 OCTOBER 2022**. 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.

# EAP Services

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



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS & TOURISM

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

YES

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

### Introduction

Erf 1363 is situated on de Jager street in Parady's Strand (SG Code: C0340011000013630000) and falls within 100 meters of the high-water mark of the sea. The erf is an estimated 741.6 m<sup>2</sup> in extent. Approximate central coordinates: 34° 6'21.00"S; 24°53'16.07"E (Error! Reference source not found.).

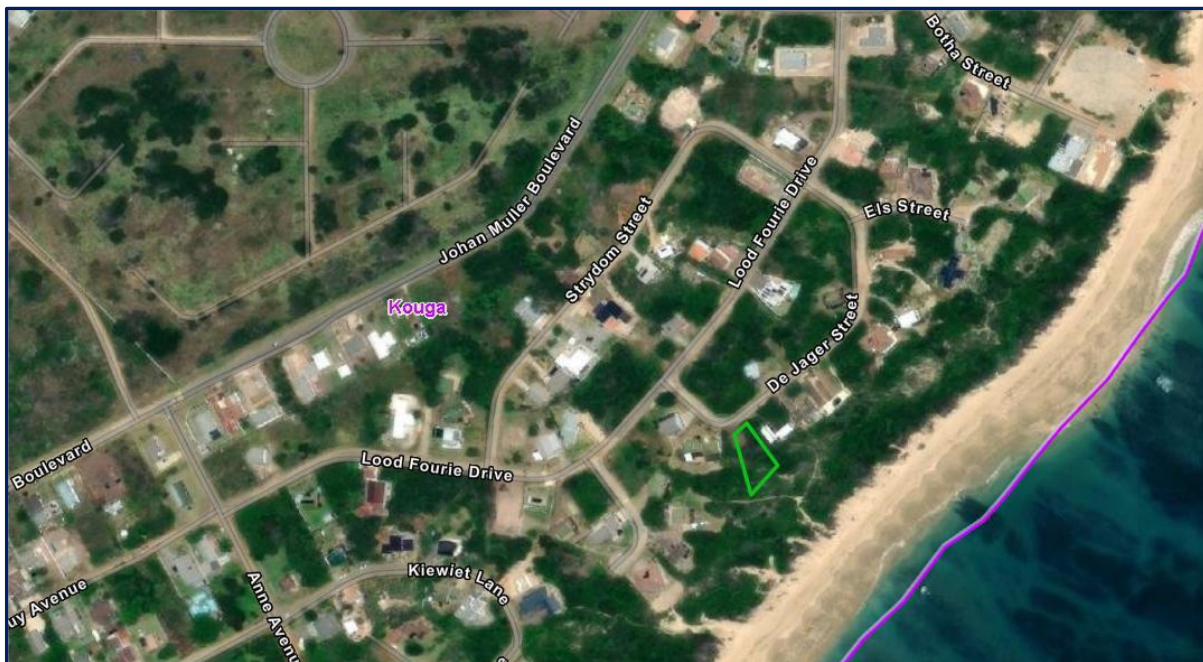


Figure 1: Location of erf 1363, Parady's beach

The owner of the property is proposing to develop a dwelling with an estimated development footprint of 298.9m<sup>2</sup> which will include an estimated 43.8m<sup>2</sup> decking area. A lookout point is also proposed which will be equipped with a walkway leading from the house to the lookout point and it will be set above the vegetation (similar to a rope bridge / raised decking walkway). The lookout area will be an estimated 20m<sup>2</sup>.

Due to the dynamic nature of the site within a coastal environment, the dwelling is recommended to be designed in such a way to prevent instability of the dunes and to prevent erosion. Maintaining a dense vegetation cover will trap and stabilise the sand to some extent and avoid the nuisance of sand encroachment. The house design should take this into account in mind in terms of doorways and outside spaces. A raised structure would allow sand transport under the structure with less nuisance inside the buildings. The eastward part of the property could be

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raised (inundated by sand) in future years as the frontal dune migrates onto the property. The rate of movement is not known at this stage. To avoid possible shifts, it is advised that the foundations/pylons of the building on Erf 1363 extend down as far as possible along the southwestern side of the building (engineering advise recommended on depths). This will allow movements of the upper part of the dune without impacting the foundations of the building on Erf 1363. The risk of these shifts is less towards the north of Erf 1363.

Access to the proposed development area will be a driveway developed off de Jager Street.

The development will be managed using self-generated electricity via a combination of solar power and gas. Stormwater management will be via correct placement of drainage pipes, stormwater catchment tanks, gradient and permeable paving and anti-erosion features where required. All stormwater will drain into the natural environment and be released so it doesn't result in erosion (I, e, back of the dwelling and / or equipped to drain to the Kouga municipal stormwater system in the road servitude. Water and waste management services are provided by the Kouga municipality as it is zoned as residential 1 and relevant service fees will be included in the rates. Sewage will be treated by means of a conservancy tank which will be suitable sized and sealed and regularly serviced. The tank will be positioned to allow for easy access of the honey sucker service.

The dwelling is recommended to be raised, allowing parking and storage to be placed underneath the dwelling and raise the living area off ground level. The foundations of the structures will require adequate reinforcement as required for the site.

## Environmental Sensitivities

A screening tool has been developed by the Department of Forestry, Fisheries and Environmental Affairs (DFFE). The Screening Tool identifies related exclusions and/or specific requirements including specialist studies applicable to the proposed site and/or development, based on the national sector classification and the environmental sensitivity of the site. A screening report was generated for the proposed project (Appendix D); the site verification report is provided as Appendix D1. A geomorphological assessment is provided in Appendix D2. The sensitivities identified and verified are provided below.

*Table 2: Verification of environmental sensitivity identified in DFFE screening tool report*

Specialist Study as per Screening Tool Report	Environmental sensitivity as per screening tool report	Verification of environmental sensitivity	
Agriculture Assessment	High	Low	The sensitivity rating provided by the Screening Tool Report is disputed. The rating is based on the land capability rating and cropland use. There is no agriculture practiced within the highly developed areas. The 740m2 site is underlain by windblown sand and is designated as residential 1 and not suited to agriculture.
Landscape/Visual Impact Assessment	NA	Low	The visual character of the study area consists of visually appealing natural coastal landscapes and modified landscapes including residential, tourism, roads and footpaths.  The proposed activity will be developed to blend in with the natural environment and wont deteriorate visual quality of the area. No further assessment is deemed necessary; the concept design and proposed SDP is considered to fit in with

			<p>the site and surrounding land uses. Mitigation measures to are included in the EMPr submitted with the BAR</p> <p>No further assessment is deemed necessary; the concept design and proposed SDP is considered to fit in with the site and surrounding land uses. Mitigation measures to are included in the EMPr submitted with the BAR</p>
Socio-Economic Assessment	NA	Low	<p>No further assessment is deemed necessary; the proposed development will have a low positive impact on social and economic conditions and contribute towards rates and taxes in the area and employment of contractors and service providers and purchase of local goods. Mitigation measures to are included in the EMPr submitted with the BAR</p>
Animal Species assessment including avian	Medium	Low	<p>The 740m2 site is underlain by windblown sand and is designated as residential 1 with the surrounding area being the seafront and other houses. No specific populations of threatened species were identified within the footprint; the entire footprint is situated within transformed and degraded habitat. The SCC included in the STR are not expected to be affected by the proposed development due to the limited footprint and extensive more suitable habitat being present in the surrounding area.</p>
Aquatic Biodiversity Impact Assessment	Low	Low	<p>No aquatic features were identified within close proximity (100 meters) to the site. Stormwater management and sewage management mitigation measures are included in the EMPr to prevent polluted and / or excessive runoff from the site.</p>
Archaeological and Cultural Heritage Impact Assessment	Low	Low	<p>No further assessment is deemed necessary, however mitigation measures to prevent unnecessary impact on heritage resources are recommended and will be included in the EMPr submitted with the BAR.</p>
Paleontological Impact Assessment	Very High	Medium	<p>No paleontology assessment is deemed to be necessary for the proposed development on the residential erf; however, mitigation measures to prevent unnecessary impact on paleontological resources are recommended and will be included in the EMPr submitted with the BAR .It is recommended that a specialist search dune sand moved to facilitate the development once construction commences as the current intact and dense ground cover would prevent a valuable assessment at pre-construction stage.</p>
Plant Species Assessment	Medium sensitivity	Low Sensitivity	<p>The historical vegetation mapped on site is St Francis Dune Thicket (least concern) (NatVEG map, 2019)</p> <p>Vegetation mapped as southeastern Strandveld of fynbos biome (NATVEG, 2024); however, the site is confirmed by the EAP to be representative of St Franci Dune thicket.</p> <p>The majority of vegetation on site will remain intact. The dwelling will be 300m2 (maximum including look out point)</p>

			<p>however the excavated area will be less due to proposed design of dwelling and method of construction (i.e. to assemble foundations off site and transport to site) this approach will minimise disturbance on the site</p> <p>No endemic and range restricted species were recorded as being present. Several species are known from the surrounding area, but unlikely to be affected by the proposed activity. No Endangered or Critically Endangered flora species were confirmed to be present nor known to be present in the affected area. PNCO (Provincial Nature Conservation Ordinance) permits are unlikely to be required as no species protected in terms of the provincial PNCO were recorded within the actual proposed footprints. Milkwood trees are present (one large individual and several seedlings associated with the remnant thicket clumps, but these will not be affected and will be retained. Respective permits will be required for removal during site clearing. A 5-meter corridor will also be retained on the northern perimeter between the proposed and existing northern property.</p>
Terrestrial Biodiversity Impact Assessment	Low	Low	<p>The historical vegetation mapped on site is St Francis Dune Thicket (least concern) (NatVEG map, 2019) Vegetation mapped as southeastern Strandveld of fynbos biome (NATVEG, 2024); however, the site is confirmed by the EAP to be representative of St Francis Dune thicket.</p> <p>The majority of vegetation on site will remain intact. The dwelling will be 300m<sup>2</sup> (maximum including look out point) however the excavated area will be less due to proposed design of dwelling and method of construction (i.e. to assemble foundations off site and transport to site) this approach will minimise disturbance on the site.</p>
Geotechnical Assessment	NA	medium	A geomorphological assessment was requested to be conducted to address the impact of development in a dynamic coastal area.
Marine Impact Assessment	NA	medium	
Visual Assessment	NA	NA	Aspects related to visual impacts are addressed in the basic assessment; however no specific specialist study is deemed to be required.
Civil Aviation Assessment	High sensitivity	Low sensitivity	A civil aviation assessment / compliance statement is excluded as the proposed development will not have an impact on civil aviation aerodrome.

Defence theme	Low sensitivity	Low sensitivity	A defence them compliance statement is excluded as the proposed development will not have an impact on the defense theme.
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## Impact Assessment summary

Several impacts were identified for construction phase, and a few were identified in operational phase. Measures are recommended to mitigate anticipated impacts. The potential impacts associated with the proposed development are considered to be negative of low to medium significance without any mitigation; climate risk is considered to be negative medium impact for the site. The majority of potential impacts should be reduced to low significance provided the construction work and ongoing operation of the development are carried out with due diligence and the appropriate mitigation measures, as recommended in this report, are adhered to. No negative impacts of high or very high significance were identified. The development is expected to have a positive impact on local employment and property value.

Detailed site layout plans and designs will be provided once an environmental authorisation is in place; the site layout and designs will align to the relevant conditions of the EA (if attained) and accompanying mitigation measures contained within an approved Environmental Management Plan Report (EMPr).

Based on the scope of work, the preconstruction and planning phase is estimated to take 24 months to complete; the construction of the dwelling is expected to take between 6 – 24 months to complete.

The proposed development triggers activities in Listing Notice 1 and Listing Notice 3 of the Environmental Impact Assessment Regulations, 2014 (as amended, 2017) published in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA) and therefore requires an environmental authorisation to be issued by the competent authority before development can commence. The competent authority for the application is the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT).

The final designs and conditions of the EA must be incorporated into the final SDP; the SDP approved by KLM must first be approved by the DEDEAT. The KLM, *inter alia*, will be sent the draft BAR for a 30-day comment and review period. Refer to Appendix A1 for the proposed site development plan; Refer to Appendix C for the concept designs.

The draft basic assessment report will be distributed for a 30-day review and comment period (1 June – 1 July 2026). The report will then be updated to address all comments received and the final report will be submitted to the DEDEAT for a 107-day decision making phase. The report aims to provide all relevant information required for the competent authority to make an informed decision on the proposed NEMA EA application.

## 2. 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.

### A.2.1 Site selection (alternatives and preferred)

The only suitably feasible site for the proposed development is Erf 1363 situated on de Jager street in Parady’s Strand (SG Code: C03400110000136300000). Approximate central coordinates: 34° 6'21.00"S; 24°53'16.07"E.

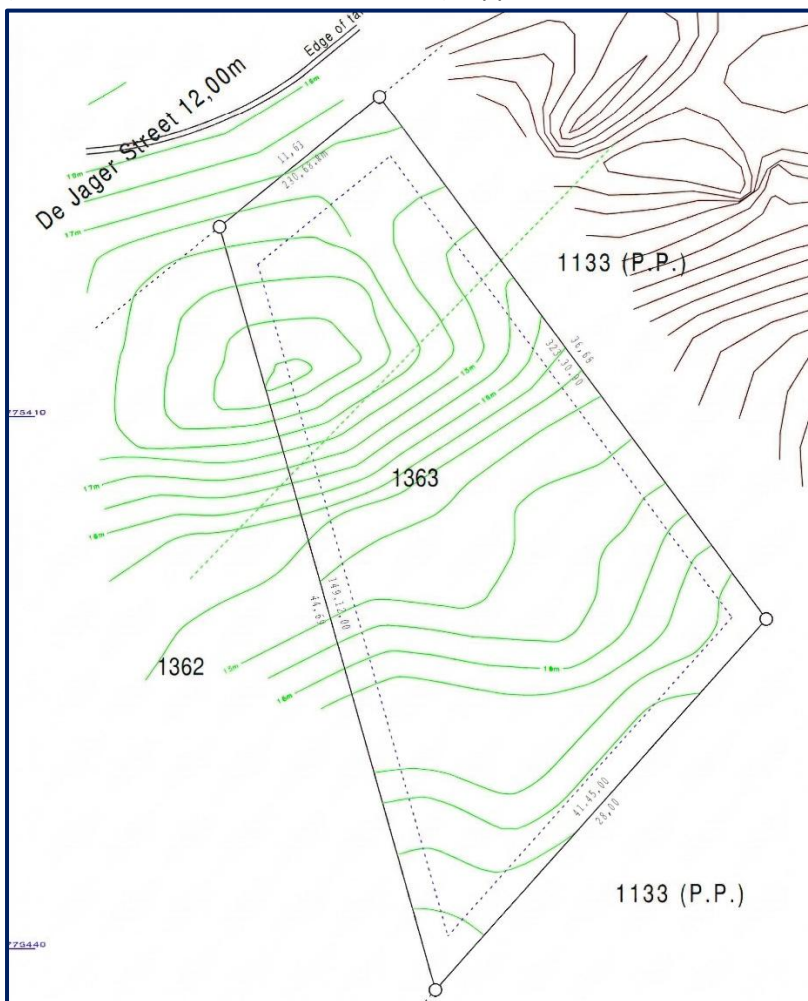


Figure 2: Erf 1363 showing approximate contour lines of the property

## A.2.2 Activity

The activity refers to the development of a residential dwelling, decking area and a lookout point. The habitable area will be raised and have an estimated footprint of 148m<sup>2</sup>, with parking and storage areas provided below the dwelling on the ground level. The dwelling will have an estimated development footprint of 298.9m<sup>2</sup> which will include an estimated 43.8m<sup>2</sup> decking area. The walkway between the house and look out point will be a raised rope bridge across the top of the vegetation with a maximum distance of 25 meters. The lookout point will be approximately 20m<sup>2</sup>.

## A.2.3 The design and layout of the activity

Specialist studies have been carried out to determine the sensitivities on the site. The conceptual site layout plan AND concept design of dwelling has been assessed. Recommendations are provided.



Figure 3: Concept design and layout of the proposed dwelling on erf 1363 (Refer to Appendix C)

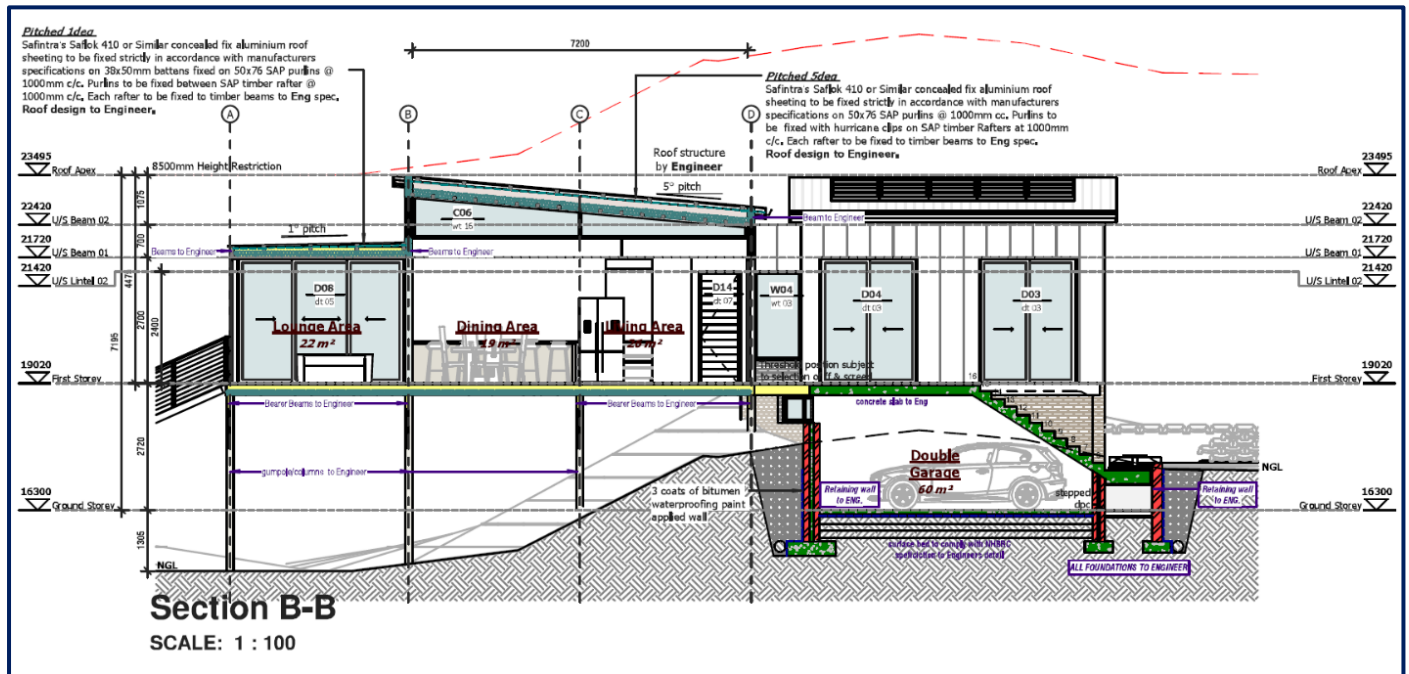


Figure 4: Concept Design and layout of the proposed dwelling on erf 1363 (Pure Design ;January 2023) (Refer to Appendix A)

## A.2.4 - Technologies

Electricity, water, sewage options are assessed and recommendations provided.

# EAP Services

## **A.2.5 - Operational aspects**

Operational aspects are assessed and recommendations provided.

## **A.2.6 The option of not implementing the activity.**

The option of not implementing the proposed development is assessed.

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

## 3. 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.

**Alternative:**

Alternative S1<sup>1</sup>

Alternative S1<sup>2</sup>

Alternative S2 (if any)

Alternative S3 (if any)

In the case of linear activities:

**Alternative:**

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Alternative S2 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

**Latitude (S):**

**Longitude (E):**

34° 6'21.00"S;		24°53'16.07"E	
0	'	0	'
0	'	0	'

**Latitude (S):**

**Longitude (E):**

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

0	'	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.

## 4. PHYSICAL SIZE OF THE ACTIVITY

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

**Alternative:**

Alternative A1<sup>3</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3

**Size of the activity:**

300 m2 (maximum) (40% of erf est.)

<sup>1</sup> "Alternative S.." refer to site alternatives.

<sup>2</sup> "Alternative S.." refer to site alternatives.

<sup>3</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

# EAP Services

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:**

741.6 m <sup>2</sup>
m <sup>2</sup>
m <sup>2</sup>

## 5. SITE ACCESS

Does ready access to the site exist?

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

<b>YES</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Estimated		5	
meters			

Describe the type of access road planned:

Short access / driveway to the dwelling from the de Jager Street will be provided.

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.

## 6. 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:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 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;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 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 infested with alien species);
- 6.9 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
- 6.10 the positions from where photographs of the site were taken.

**Refer to Appendix A**

## 7. 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.

**Refer to Appendix B**

## 8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a 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.

Refer to Appendix C.

## 9. ACTIVITY MOTIVATION

### 9(a) Socio-economic value of the activity

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

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

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

Unknown	
NA	
YES	NO
YES	NO
Estimated 10	
Unknown  (will be awarded based on proposals received)	
80%	
-	
NA	
NA	

### 9(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 an investment for the applicant. Jeffreys is a popular destination, and the location of the land portion located close to the beach and ocean making it a good investment opportunity. The landowner and applicant would like to develop a coastal home to enjoy coastal activities (surfing, kite boarding). The lookout point / decking area will provide an area to wash surf equipment instead of using the dune area on the erf.

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

The proposed development will have a low positive impact on local businesses; construction is an economic activity that crosses over the primary, secondary and tertiary economic sectors. A few operational income opportunities will

be created by the development, including, *inter alia*, sewage removal service of conservancy tank/s, house moving companies, landscaper etc. once construction is completed.

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

Construction work will be created; income will be generated for the suppliers of materials and services required during planning, construction and operational phases of the activity. Work opportunities (i.e., electricians, plumbers, gas specialists, service providers) will be created. Local contractors, service providers and suppliers will be sourced from the local area (i.e., St Francis, Humansdorp, Jeffreys bay) where possible. Once operational there will an increase in local rates and taxes, which will offer additional funds for upgrading/maintenance works on services and infrastructure within the local area that will benefit the local community.

## 10. 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:
National Environmental Management Act and Environmental Impact Assessment Regulations	DEDEAT / DFFE	1998 / 2017
<p><b>GN R. 327 (Listing Notice 1) Activity 17.</b></p> <p>Development—</p> <ul style="list-style-type: none"> <li>I. in the sea;</li> <li>II. in an estuary;</li> <li>III. within the littoral active zone;</li> <li>IV. in front of a development setback; or</li> <li>V. if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater;</li> </ul> <p>in respect of—</p> <ul style="list-style-type: none"> <li>(a) fixed or floating jetties and slipways;</li> <li>(b) tidal pools;</li> <li>(c) embankments;</li> <li>(d) rock revetments or stabilising structures including stabilising walls; or</li> <li>(e) [buildings of 50 square metres or more; or</li> <li>(f)] infrastructure or structures with a development footprint of 50 square metres or more —</li> </ul> <p>but excluding—</p> <ul style="list-style-type: none"> <li>(aa) the development of infrastructure and structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</li> <li>(bb) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</li> <li>(cc) the development of temporary infrastructure or structures where such structures will be removed within 6 weeks of the commencement of development and where coral or indigenous vegetation will not be cleared; or</li> <li><b>(dd) where such development occurs within an urban area.</b></li> </ul> <p><b>GN R.327- Activity 18</b></p>		

The Planting of vegetation or placing of any material on dunes or exposed sand surfaces of more than 10 square meters, within the littoral active zone, for the purpose of preventing the free movement of sand, erosion or accretion, excluding where —

- (i) the planting of vegetation or placement of material relates to restoration and maintenance of indigenous coastal vegetation undertaken in accordance with a maintenance management plan; or
- (ii) such planting of vegetation or placing of material will occur behind a development setback.

**GN R.327- Activity 19A**

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from—

- (i) the seashore;
- (ii) the littoral active zone, an estuary or a distance of 100 metres inland of the highwater mark of the sea or an estuary, whichever distance is the greater; or
- (iii) the sea; —

*but excluding where such infilling, depositing , dredging, excavation, removal or moving—*

- (f) will occur behind a development setback;*
- (g) is for maintenance purposes undertaken in accordance with a maintenance management plan;*
- (h) falls within the ambit of activity 21 in this Notice, in which case that activity applies;*
- (i) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies*

**GNR 324 (Listing Notice 3) Activity 12.**

The clearance of an area of 300 square metres or more of indigenous vegetation...

- a. Eastern Cape
  - i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;
  - ii. Within critical biodiversity areas identified in bioregional plans;
  - iii. Within the littoral active zone or 100 metres inland from the high water mark of the sea, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;
  - iv. Outside urban areas, within 100 metres inland from an estuarine functional zone; or
  - v. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.

Environmental Conservation Act (Act 73 of 1989)	DFFE	1989
Provincial Nature and Environmental Conservation Ordinance No 19 of 1974	DEDEAT	1974
National Heritage Resources Act 25 of 1999	SAHRA / ECHPA	2008

## EAP Services

National Environmental Management: Integrated Coastal Management Act, 2008	DFFE	2019
Coastal Management Programme SBDM	SBDM	2020
Kouga Spatial Development Framework	KLM	2020
National Environmental Management: Waste Act 2008	DFFE	2019
National Water Act (Act 36 of 1998)	DWS	1998
Conservation of Agricultural resources Act	DALRD	

## 11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

### 11(a) Solid waste management

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

YES	NO
-----	----

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

10m <sup>3</sup>
------------------

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

Construction waste will be removed from the site by the appointed contractor to a registered waste disposal site. Where possible, excavated construction “waste” material (i.e. subsoils) must be used as fill material.

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

Closest registered transfer site

Will the activity produce solid waste during its operational phase?

YES	NO
-----	----

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

1 dwelling x 2m <sup>3</sup>
2m <sup>3</sup>

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

Closest registered transfer site

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

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?

YES	NO
-----	----

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?

YES	NO
-----	----

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.

### 11(b) Liquid effluent

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

YES	NO
-----	----

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

m <sup>3</sup>
----------------

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

Yes	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.

# EAP Services

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

YES	NO
-----	----

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

The dwelling will have a conservancy tank installed and sized accordingly. Relevant piping will need to be installed. The conservancy tank will need to be sealed at all times to prevent water pollution and serviced on a regular basis.

## 11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

<b>YES</b>	<b>NO</b>
YES	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 emissions in terms of type and concentration:

Development of dwelling and associate access / driveway areas and pipelines will be installed. The development area is estimated to be a maximum of 300m<sup>2</sup>. Some dust can be expected to be generated during construction activities, particularly during high wind conditions, until rehabilitation is effective. Mitigation measures to control dust generation are included in the EMP<sub>r</sub> (Appendix F) to ensure that dust generation is minimised.

## 11(d) Generation of noise

Will the activity generate noise?

<b>YES</b>	<b>NO</b>
YES	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:

Noise generated will mostly be from construction activities. All machinery will be within sound working order and will meet the necessary noise level requirements. Construction activities will be limited to daylight hours.

## 12. WATER USE

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

<b>municipal</b>	water board	groundwater	river, stream, dam or lake	<b>other</b>	the activity will not use water
------------------	-------------	-------------	----------------------------	--------------	---------------------------------

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:

litres	
YES	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.

## 13. ENERGY EFFICIENCY

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

- Construction is to be carried out during regular working hours to reduce the use of artificial lighting.
- Contractor will be advised to transport all construction materials on-site at the same time wherever possible

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

A combination of gas and solar electricity will be used. Designs will incorporate orientation and insulation. Glazing and aluminium are proposed for the windows and door to assist with energy efficiency and withstanding coastal elements. Low energy light fittings are recommended. Night lighting should be minimal and orientated to prevent visual impacts at night and on nocturnal fauna.

# 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 create 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):

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

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

<b>YES</b>	
------------	--

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	<b>1:20 – 1:15</b>	<b>1:15 – 1:10</b>	<b>1:10 – 1:7,5</b>	<b>1:7,5 – 1:5</b>	Steeper than 1:5
		<b>Eastern edge</b>			<b>Western edge</b>	
		<b>Estimated 7%</b>			<b>Estimated: 11%</b>	

**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
------	-------------	-------------	-------------	--------------	-------------	------------------

**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
------	-------------	-------------	-------------	--------------	-------------	------------------

### B.1 Gradient

Erf 1363 is partly located on a dune crest; a large part of the property that will be developed slopes towards the south-east. Smaller undulations on Erf 1363 and a frontal dune area situated approximately 50 m in the easterly direction. Dune instabilities are possible along the face of the dune as a result of increased loadings (buildings, wet periods with saturated sands) and cause movement in a south easterly direction.

The depth of instability is likely to be shallow (sub-meter to several meters) and the design of the foundations of the building should take this into account.

The beach and primary dunes migrate westwards as the sea level rises and a westward extension of the frontal dune is likely. The eastward part of the property could be raised (inundated by sand) in future years as the frontal dune migrates onto the property. The rate of movement is not known at this stage.

South of erf 1363 is a pan-handle erf that will access the property from De Jager Street. This development can lead to excavations to grade the driveway exposing several meters of dune sand adjacent to Erf 1363. Retaining features will likely be put in place along the driveway, but shifts of the dune layers are possible over time, especially under wet saturated conditions. These shifts can affect the stability of the dune on Erf 1363.

To avoid these possible shifts, it is advised that the foundations/pylons of the building on Erf 1363 extend down as far as possible along the southwestern side of the building (engineering advise recommended on depths). This will allow movements of the upper part of the dune without impacting the foundations of the building on Erf 1363. The risk of these shifts is less towards the north of Erf 1363.

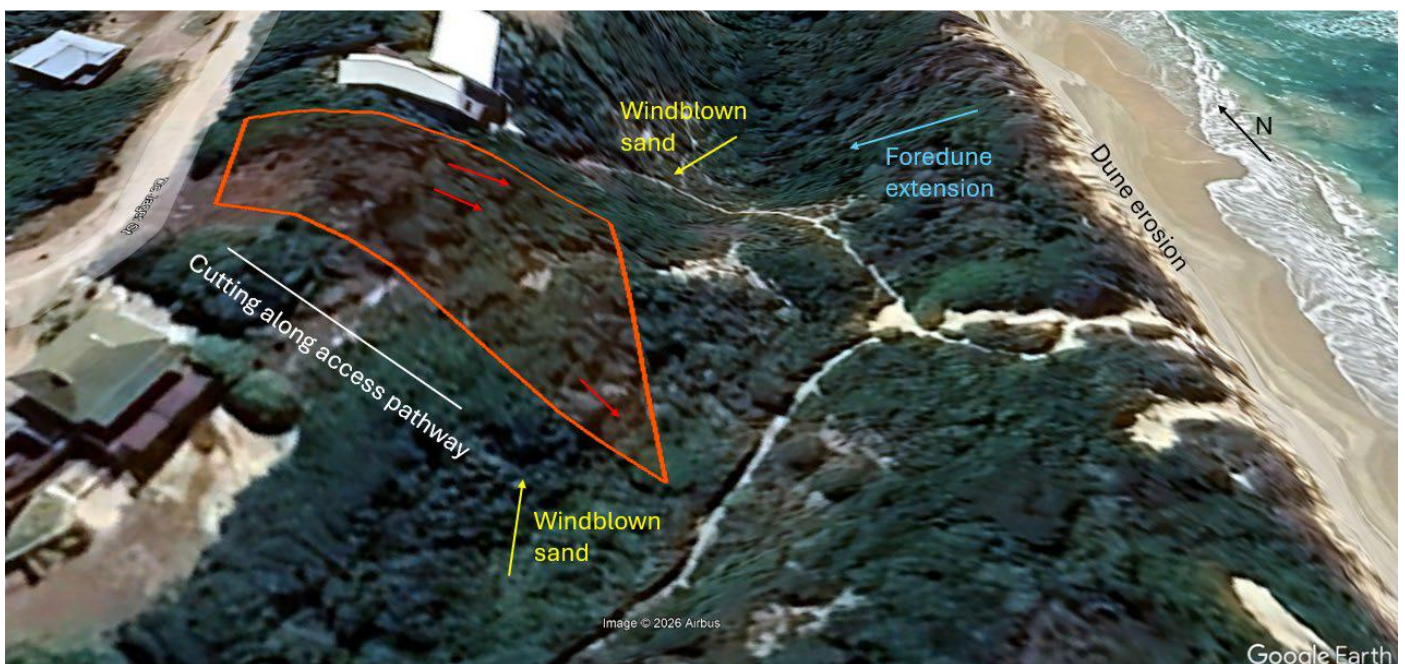


Figure 5: Oblique image indicating the likely processes in the future. The small red arrows indicate possible dune instabilities.

## 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	<b>YES</b>	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).

### B.2 – Aquatic features

The study area is not part of a Strategic Water Source Area (surface or groundwater); no aquatic features were identified within close proximity (100 meters) to the site. The screening tool report generated for the site indicates a low sensitivity for the site. Verification is low sensitivity for the site.



Figure 6: Low aquatic sensitivity (DFFE STR)

### B.3 - Geology

The site is underlain by the Nanaga Formation. The Nanaga Formation is underlain by a wave-planed Ceres subgroup made up of resistant shale and fine-grained sandstone layers that form a shallow seaward-sloping rock platform (Toerien and Hill, 1989). The dunes and beaches are composed of shell fragments and quartzitic sands originating from the Cape Supergroup rocks. Most of the coastal zone around the site consists of erodible aeolian sediment of fine to medium sand size, making the coastline vulnerable to degradation and slumping. (De Waal, 2026)

### B.4 Aeolian (wind-blown) sand

Dominant and strong wind directions drive aeolian transport across the shore in a north-easterly direction (south-westerly wind) and in a westerly direction (easterly wind). Theron and Rossouw, 2008). Theron and Rossouw calculated that an increase of wind speed by 10 % can result in a wave height increase of ~ 26 % and a sediment transport rate increase of ~49 to 100%. Historical measurements and future predictions indicates an increased intensity and frequency of storm events (Guastella and Rossouw, 2009).

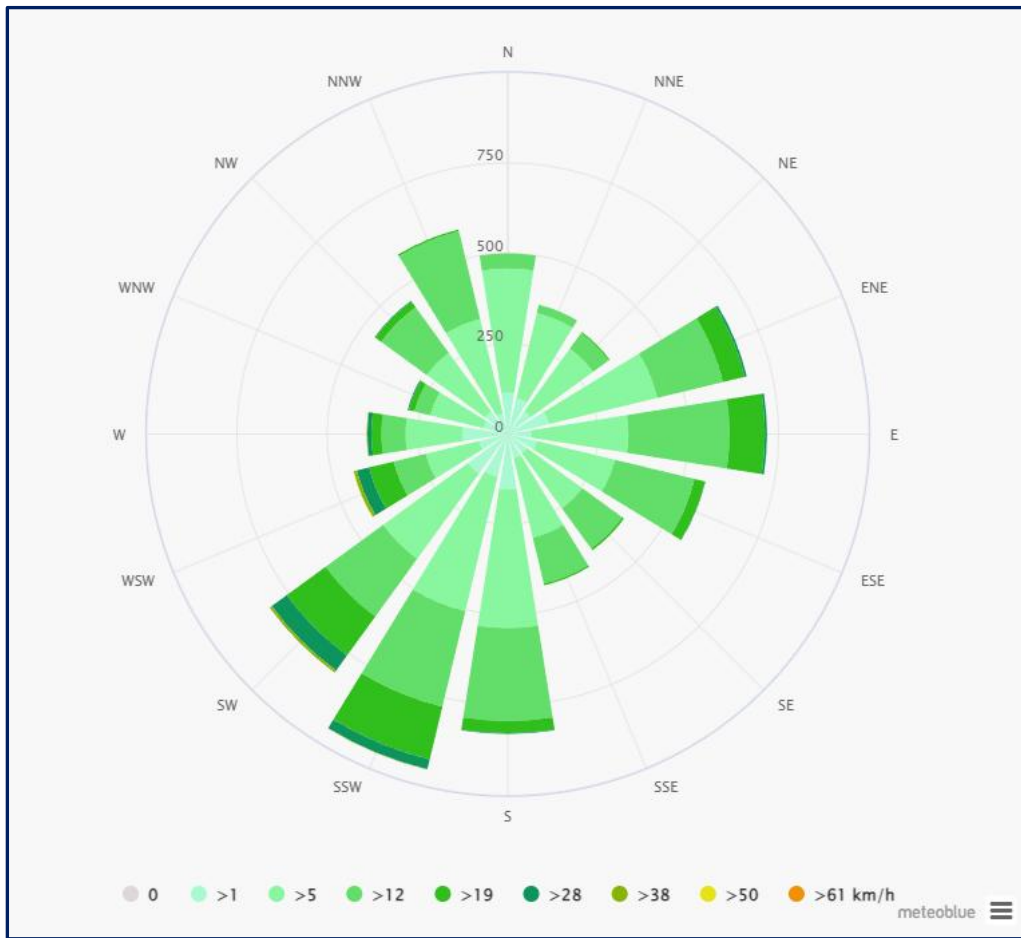


Figure 7: Wind rose for Jeffreys Bay based on 30 years of hourly simulations (Source: MeteoBlue)

## B.5 Wave direction and sediment transport

The majority of the waves experienced along the Paradise Beach coastline generate in the Southern Ocean due to the predominant westerly winds occurring further south in the gale belt of the ‘Roaring Forties’. These approach the coast from a south-westerly direction and have a long wave period. As a result of refraction effects around the Cape St Francis point, the waves approach the coast at an oblique angle which drives longshore currents and associated sediment transport. The longer-period waves often move sand from the offshore sandbank to the beach (Illenberger and Schumann, 2022).

Erosional events occur in summer during cutoff lows when locally produced large waves associated with strong easterly winds drive high energy waves from an easterly direction into these east-facing bays (Illenberger and Schumann, 2022). These high-energy waves drive beach erosion, moving beach sand towards the offshore sand bars during high-wave events (Illenberger and Schumann, 2022).

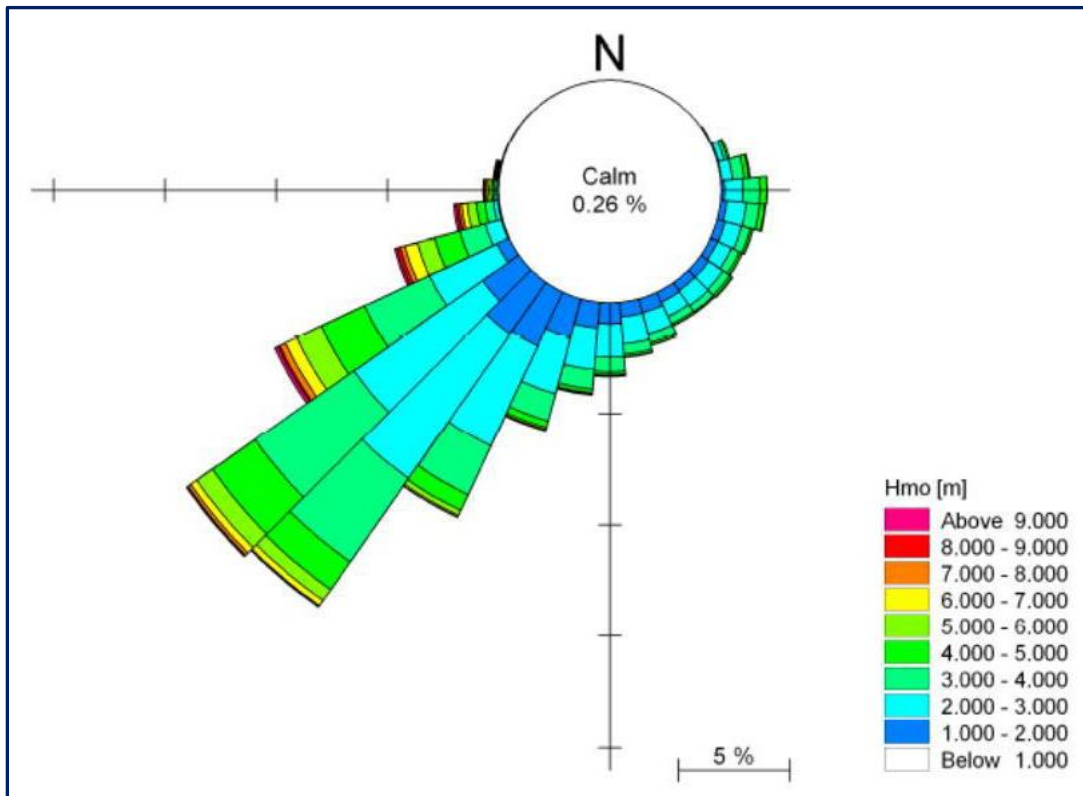


Figure 8: Wave Rose for Cape St Francis for 15 years of data (PRDW 2009 presented in Illenberger and Schumann, 2022)

## B.6 Dune dynamics

Most of the South African coastline consists of sandy beaches backed by dunes which are generally a mixture of modern and ancient lithified dune systems. The dunes act as a sediment store for these dynamic landscapes.

The dynamic zone should ideally not be stabilised so that coastal processes such as sand migration, storage and erosion continues without impacting infrastructure. Indigenous coastal vegetation is adapted to these dynamic landscapes; pioneer to climax vegetation structures develop around the coastal morphodynamics and resultant habitat dynamics. Invasive plants are known to outcompete native species and form dense vegetation which stops sediment transport. Soft sandy coastlines, as seen at the site, are constantly changing due to wave and wind action, the changing sand input from the rivers, near-shore environment as well as sea level rise. Reductions in sand availability in the littoral zone, due to dune bypass stabilisation and dams trapping terrigenous sediment, drive foredune erosion to supplement the sand budget. (Tinley, 1985 as cited by van de Waal, 2026)

Coastal beach-dune systems are unstable dynamic zones due to interactions of wave and aeolian sediment erosion and transport (Knight and Burningham, 2021). The level of dune stability increases landward and the foreshore and backshore experiencing frequent changes (hours to weeks); the fixed dunes experience change on a monthly to decadal+ timescale (Tinley, 1985) (van de Waal, 2026)

The typical progression of vegetation cover, stability and sediment transport activity for a beach and dune is shown below in Figure 9 . Beach-dune systems show a gradient in dune and vegetation stability due to how often each area is affected: foreshore and backshore are frequently reworked, foredunes only during larger, less common events, and central/back dunes during rare major occurrences like sea level changes. This progression should be reinstated where possible to reduce damage to infrastructure within the dune zone.

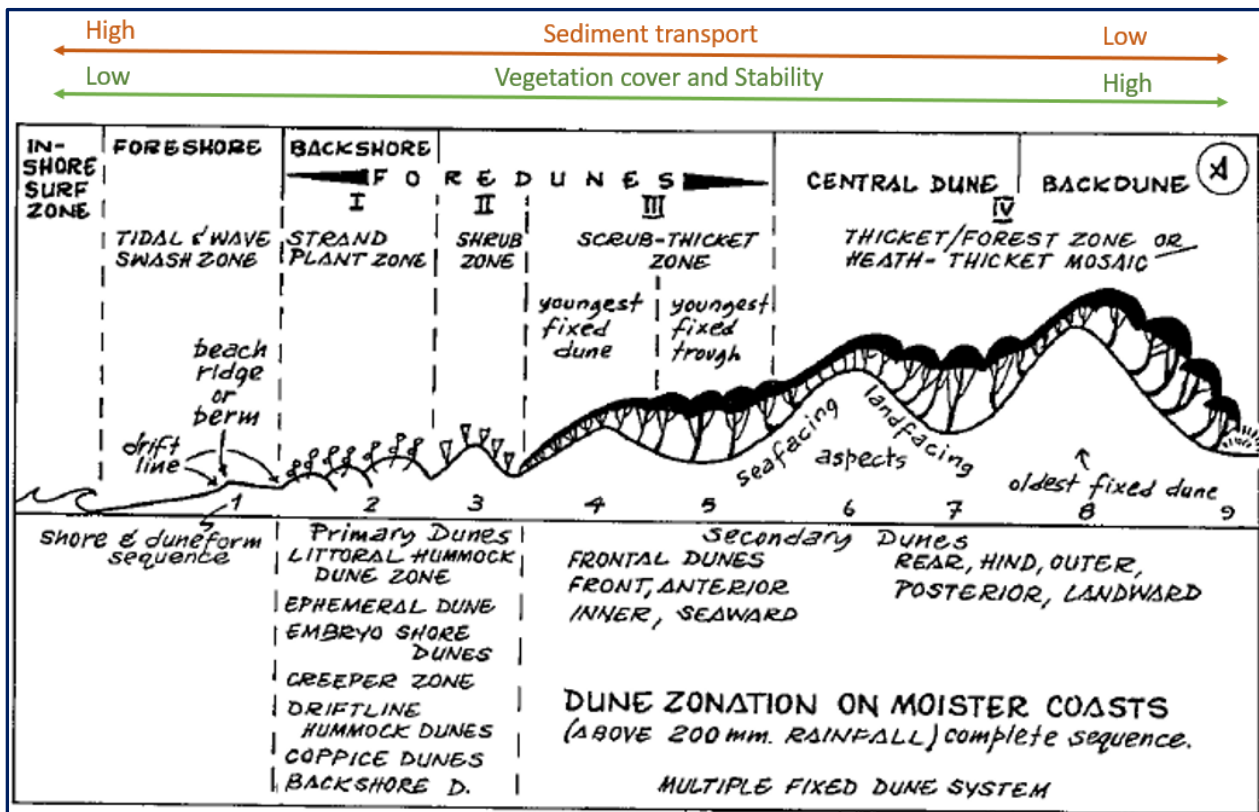


Figure 9: Dune zonation, vegetation cover, stability and sediment transport for a beach to back dune transect (Tinley, 1985)

Blowouts can develop as a result of:

- destruction of protective vegetation on a foredune or dune ridge when winds are very strong or
- the ridge becomes excessively steep
- fires destroying dune vegetation
- footpaths and vehicle access paths on retention ridges (Illenberger and Schumann, 2022).

These poorly vegetated patches act as a source of sand for parabolic dune formation (Illenberger and Schumann, 2022). The parabolic dunes often migrate inland, posing threats of sand inundation to infrastructure. Several blowouts are visible on the steep eroding foredune in the area of Erf 1363 (Figure 10).

The Kouga LM has commissioned a Basic Assessment (BA) and Environmental Maintenance Management Plan (EMMP) to respond to problems and enable management in their area of jurisdiction. A basic assessment process has been followed to implement a maintenance management plan for the coastal and estuary environment falling in the coastal area between the Kromme and Kabeljous beaches, including the Seekoei Estuarine Functional Zone (EFZ). This study area includes the dune and coastal area immediately east of the erf 1363. A number of footpaths are in place; beach access pathways can alter the vegetation cover, structural roughness and wind pattern. Beach access areas should be of such character that it does not funnel the dominant winds (south-westerly and easterly winds) towards infrastructure; the KLM propose to make use of interventions (i.e., sand traps) in this area (FBAR, CEN IEM Unit, 2024). The Kouga Maintenance Management Plan for the Coastal Area between the Kromme and Kabeljous beaches, and the Seekoei Estuarine Functional Zone, indicates that dune restoration - sand traps, brush packing and sand barriers is a high priority and should start within 1 – 2 years of the approval of the environmental authorisation and the maintenance management plan. Refer to Figure 11.



Figure 10: Satellite image showing Erf 1363 (orange outline) in relation to the steep eroding foredunes (yellow dashed line) and blowouts (van der Waal, 2026).

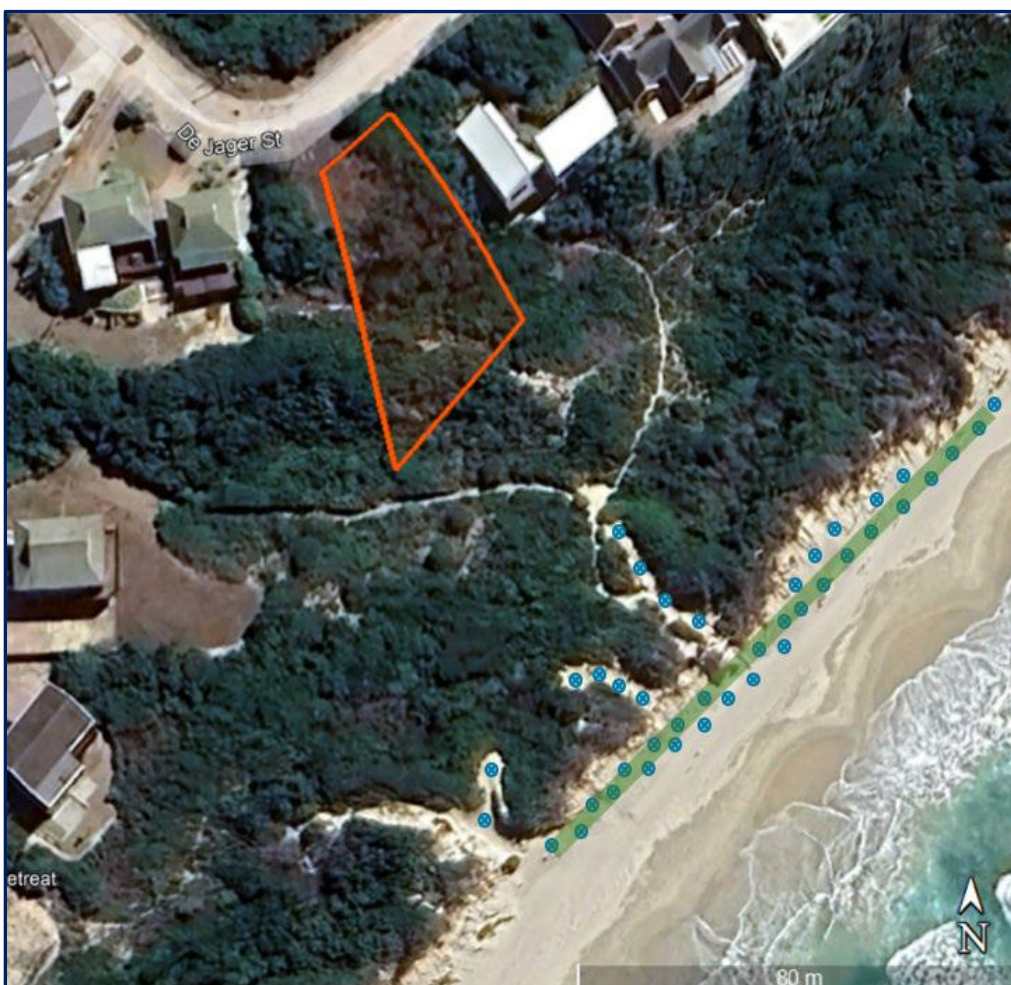


Figure 11: Planned interventions in the adjacent coastal area which are included in EMPr and maintenance management plan prepared for KLM to trap sand with brushwood piles (blue circles) and establish pioneer dune vegetation (green highlight); no footpaths should be created in this area.

## B.7 Dune and beach dynamics

Historical images from 1942 onwards shows that the dunes were less vegetated and more mobile in the past and the beach seems to be wider, possibly supporting a larger foredune sequence as a result of unconstrained sediment supply. It is estimated that the current sediment supply is  $\sim 1/3$  of the historic volumes resulting in beach narrowing and dune erosion (Illenberger and Schumann, 2022; Schroeder, 2015).

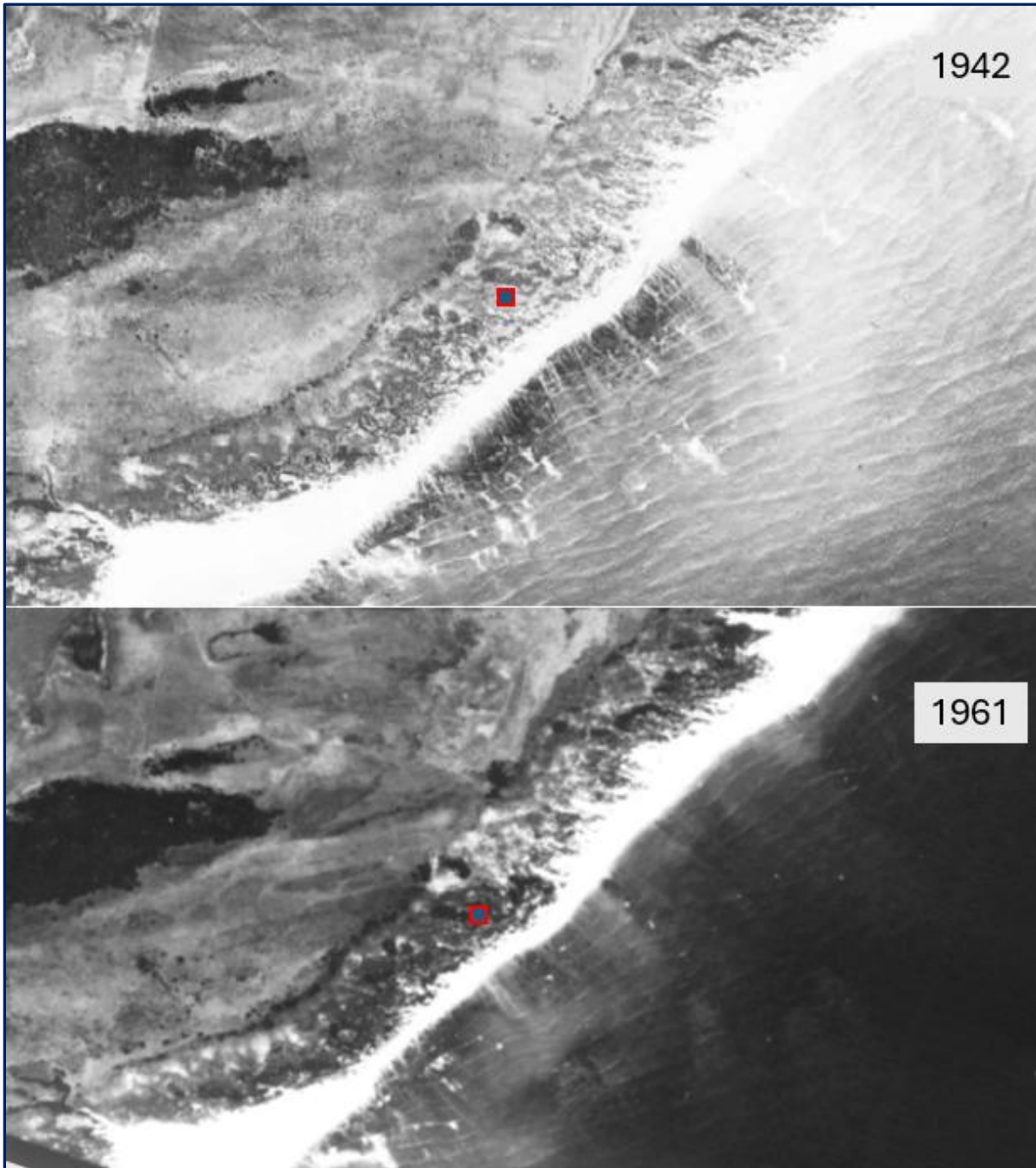


Figure 12: Historical aerial images for 1942 and 1961 of the coastline in the area of Erf 1363 (estimate as red square)

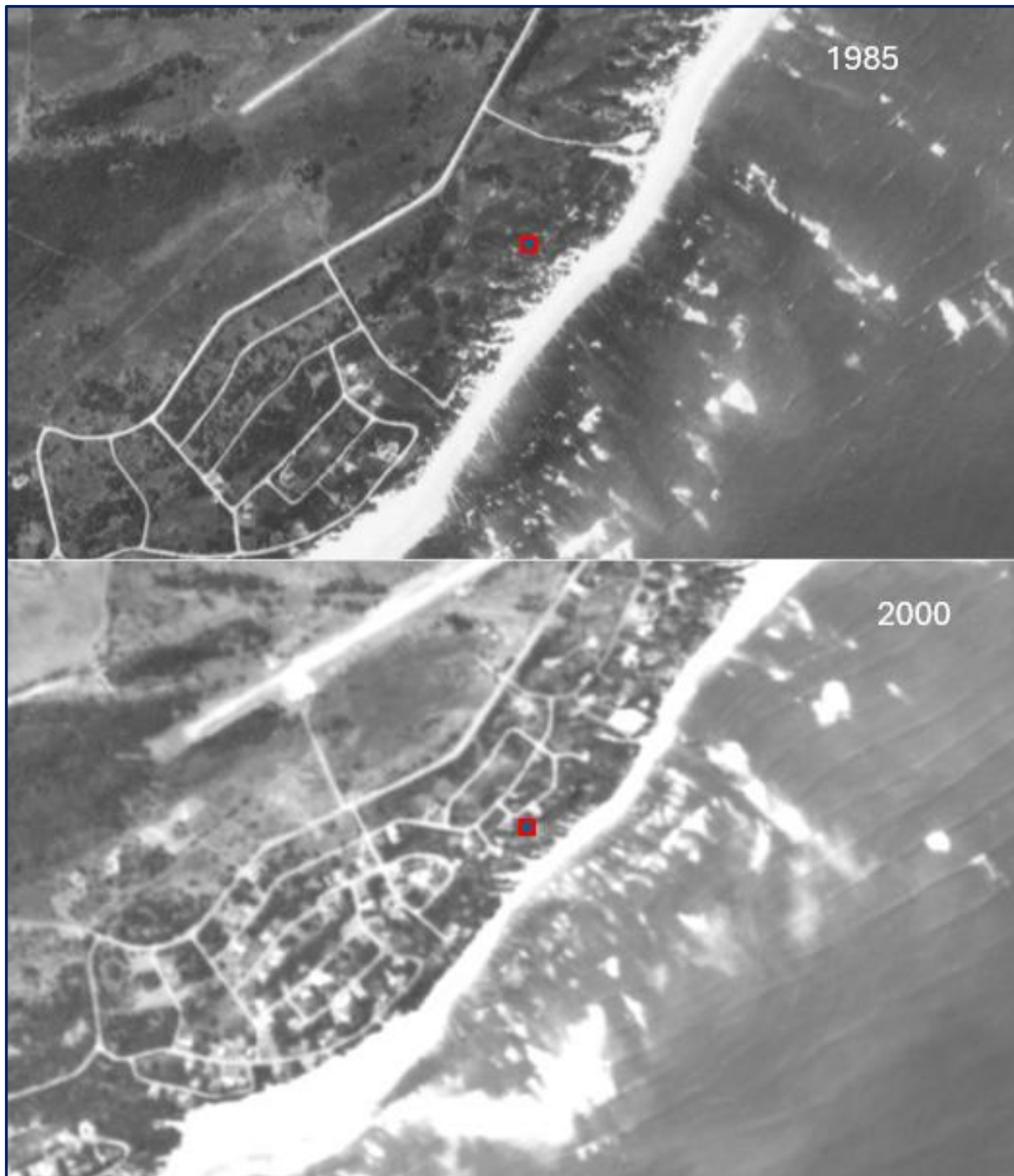


Figure 13: Historical aerial images for 1985 and 2000 of the coastline in the area of Erf 1363 (estimate as red square)



## 4. GROUNDCOVER

Indicate the types of groundcover 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

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 <sup>E</sup>	Natural veld with scattered aliens <sup>E</sup>	Natural veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	Gardens
Sport field	Cultivated land	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.

## B.8 Terrestrial Biodiversity

Desktop research and a site visit has been carried out by the EAP. The STR indicates a low sensitivity for terrestrial biodiversity (Figure 14). The site falls within 100 meters of the High-water mark (HWM) of the sea; the HWM seems to correspond to mapped seashore vegetation. The vegetation is mapped as southeastern Strandveld of fynbos biome (NATVEG, 2024) (Figure 15) however the vegetation is mapped as St Francis Dune Thicket (least concern) (NatVEG map, 2019) (Figure 16); the vegetation on site is typical of dune vegetation and verified as representative of St Francis Dune Thicket. In terms of section 52 of NEMBA (Activity (a)(i)), the vegetation unit St Francis Dune Thicket, has a *Least Concern* status as per National Biodiversity Assessment (2022). In terms of the CBA classification (ECBCP 2019), no designated Critical Biodiversity Areas or Ecological Support Areas overlap with the site; no remnant ecosystems mapped on site, and no CBA or ESA (ECBCP, 2019) mapped on site



Figure 14: Low sensitivity for terrestrial biodiversity (STR, 2025)



Figure 15: Site falls within 100 meters of the High water mark of the sea (HWM seems to correspond to mapped seashore vegetation); Vegetation mapped as southeastern strandveld of fynbos biome (NATVEG, 2024);

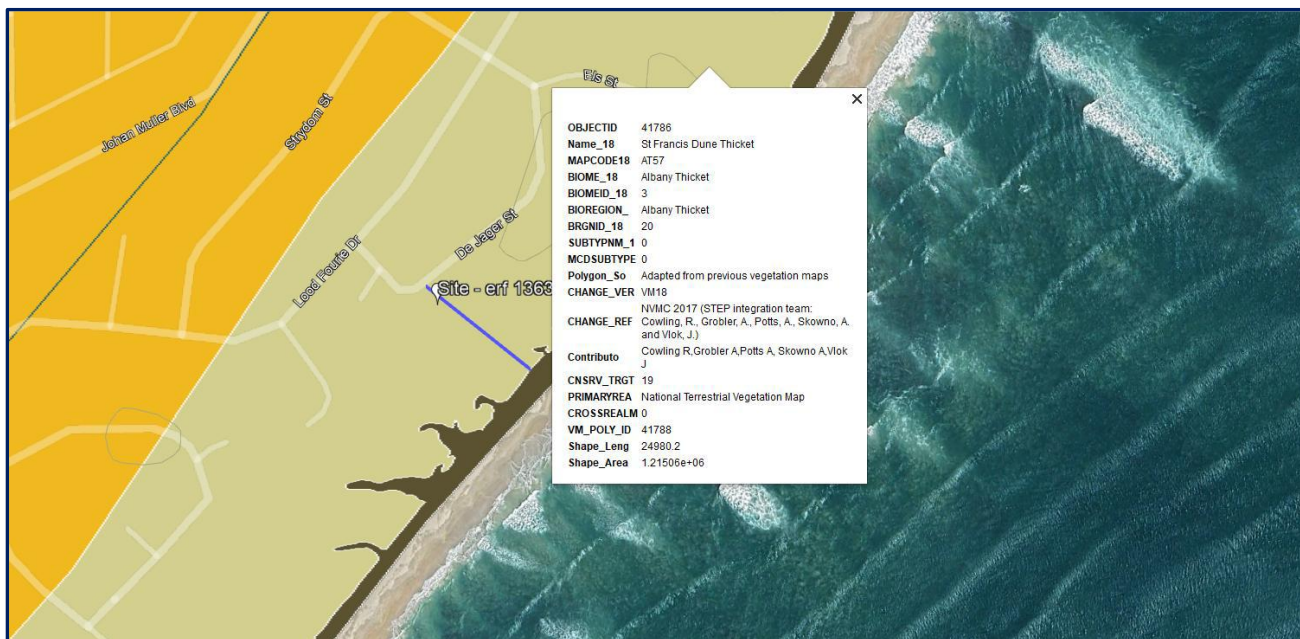


Figure 16: Vegetation mapped as St Francis Dune Thicket (least concern) (NatVEG map, 2019)



Figure 17: No remnant ecosystems mapped on site, CBA or ESA (ECBCP, 2019) mapped on site; St Francis dune thicket corresponds to 2019 VEGMAP and likely to be the historical vegetation on the site



Figure 18: No CBA or ESA (ECBCP, 2019) mapped on site;



Figure 19: No aquatic CBA or ESA (ECBCP, 2019) mapped on site;

# EAP Services

The National Biodiversity Assessment (NBA) is the primary tool for monitoring and reporting on the state of biodiversity in South Africa and informs policies, strategic objectives, and activities for managing and conserving biodiversity more effectively. Ecosystem protection level is an indicator of how well represented an ecosystem type is in the protected area network. It has been used as a headline indicator in national reporting in South Africa since 2005. The outcome of the most recent National Biodiversity Assessment or Red Listed Ecosystem Status (2022) indicate that St Francis Dune Thicket has a Least Concern conservation status, which indicates that more than 60 % of the unit remains, and that ecosystem functioning is not under imminent threat by loss of natural habitat.

The terrestrial biodiversity is verified as low sensitivity for the site.

## Indigenous flora on site

The STR indicates a medium sensitivity for indigenous flora.

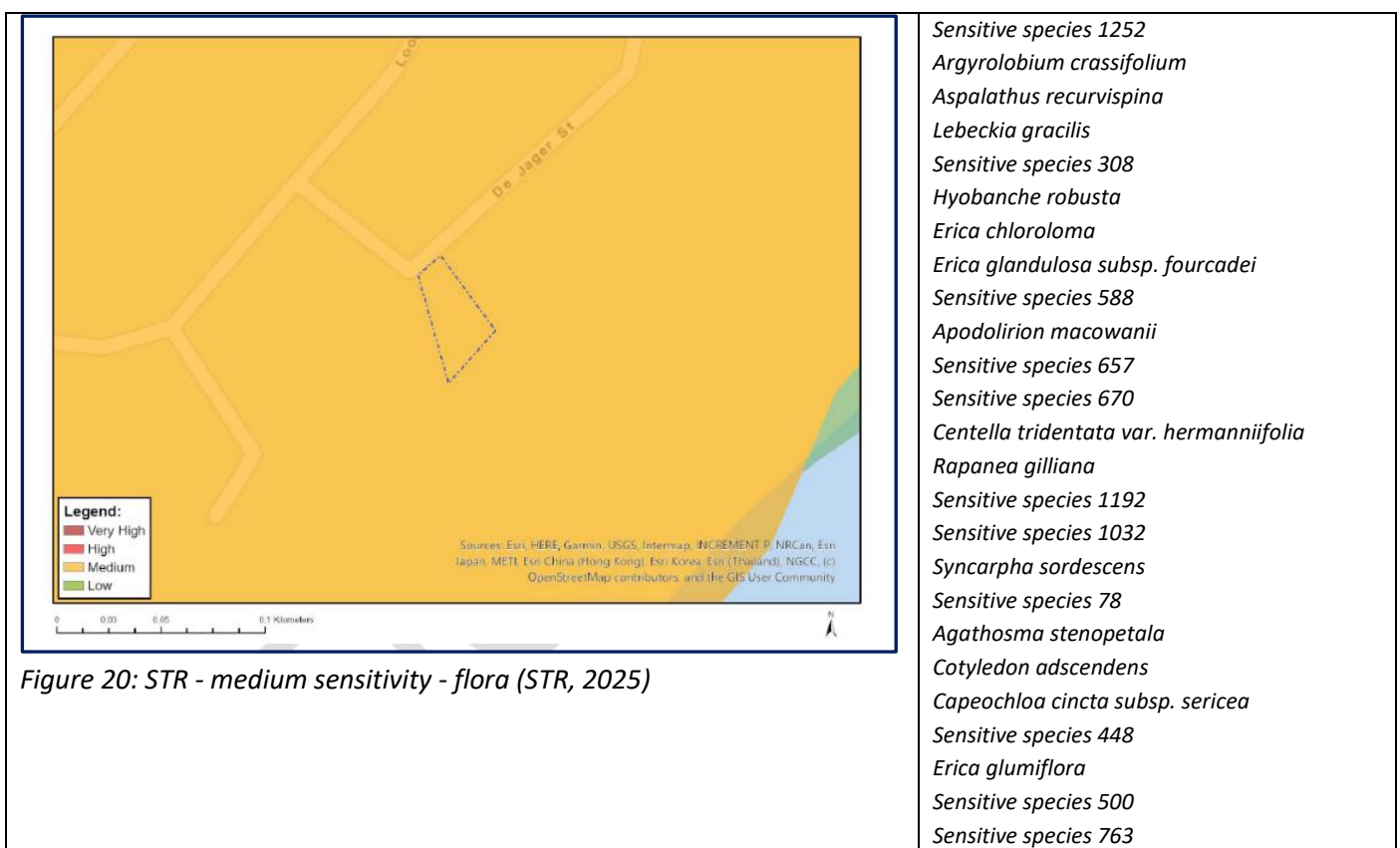


Figure 20: STR - medium sensitivity - flora (STR, 2025)

## St Francis Dune Thicket (NBA, 2022)

**Type history:** STEP map - Algoa Dune Thicket (36 %), Colchester Strandveld (20 %), St. Francis Dune Thicket (38 %); 2012 VEGMAP – AZs 1 Algoa Dune Strandveld (88 %), FFd 11 Southern Cape Dune Fynbos (7 %)

**Distribution:** This thicket unit occurs in the Eastern Cape Province. In coastal stretches from near the Tsitsikamma River Mouth (west of Oyster Bay) eastward to the Sundays River Mouth.

**Vegetation and Landscape Features:** Flat to moderately undulating coastal dunes. A mosaic of low (1 - 3m) thicket, occurring in small bush clumps dominated by small trees and woody shrubs, in a mosaic of low (1 - 2 m) asteraceous fynbos. Thicket clumps are best developed in fire-protected dune slacks, and the fynbos shrubland occurs on upper dune slopes and crests. The fynbos component in the vegetation diminishes from west to east, with *Portulacaria afra* occurring occasionally east of Port Elizabeth.

**Geology and Soils:** The vegetation type is mostly restricted to the Schelm Hoek Formation with the main land types being Ha and Ia.

**Climate:** The MAP is between 397 mm and 868 mm. The mean monthly maximum is 25.21 °C in February and the mean monthly minimum is 8.31 °C in July. Altitude ranges from 0 - 221 masl.

Conservation Target: 19 %; Conserved in Cape Recife Nature Reserve, Sardinia Bay Nature Reserve, Nelson Mandela Bay Metropolitan University Private Nature Reserve, Rebelsrus Private Nature Reserve

Area transformed: 14.13 %

**Threat activities:** Mining, alien invasions by *Acacia cyclops*, urban sprawl, erosion low

**Protection Level:** Poorly protected

**Important Taxa: (d=dominant, e=South African endemic, et=possibly endemic to a vegetation type)**

## Small tree

*Olea capensis*, *Pterocelastrus tricuspidatus* (d), *Sideroxylon inerme* (d), *Tarchonanthus littoralis* (d)

## Succulent shrub

*Cotyledon adscendens*, *Carpobrotus acinaciformis* (e), *Cotyledon orbiculata* (e), *Crassula nudicaulis*, *Euphorbia mauritanica*, *Gasteria acinacifolia* (e), *Portulacaria afra*, *Zygophyllum morgsana*, *Aloe africana* (d)

## Low shrub

*Coleonema pulchellum* (d), *Erica chloroloma*, (e), *Erica glumiflora* (d), *Erica zeyheriana* (e), *Eriosephalus africanus* var. *paniculatus* (e), *Felicia echinata* (e), *Morella cordifolia* (d), *Muraltia spinosa* (d), *Phyllica ericoides* (d), *Syncarpha sordescens* (d)

## Graminoid

*Andropogon eucomus*, *Cymbopogon pospischilii*, *Cynodon dactylon* (d), *Ehrharta calycina*, *Eustachys paspaloides*, *Digitaria eriantha*, *Pentasmeris heptameris*, *Pentameris pallida*, *Restio eleocharis* (d), *Stenotaphrum secundatum*, *Thamnochortus cinereus* (e), *Themeda triandra* (d), *Tristachya leucothrix*, *Imperata cylindrica* (d)

## Tall shrub

*Azima tetraacantha* (d), *Carissa bispinosa* (d), *Mystroxyton aethiopicum* subsp. *aethiopicum* (e), *Cassine peragua*, *Cussonia thyrsoiflora* (d), *Euclea racemosa* (d), *Grewia occidentalis*, *Gymnosporia buxifolia*, *Gymnosporia capitata* (e), *Lycium cinereum*, *Lycium ferocissimum*, *Maytenus procumbens*, *Metalasia muricata* (d), *Olea exasperata* (d), *Osteospermum moniliferum* (d), *Passerina rigida* (d), *Putterlickia pyracantha* (d), *Robsonodendron maritimum* (e), *Searsia crenata* (d), *Searsia glauca* (e), *Searsia pterota* (e), ), *Rapanea gilliana* (d)

## Geophytic herb

*Brunsvigia littoralis* (e)

## Herb

*Pelargonium suburbanum* subsp. *suburbanum* (e), *Agathosma stenopetala* (e), *Aspalathus cliffortiifolia* (et), *Aspalathus recurvispina* (et), *Othonna rufibarbis* (et)

## Herbaceous climber

*Cynanchum natalitium* (e), *Rhoicissus digitata*, *Solanum africanum* (e) Woody succulent climber, *Cynanchum viminalis* (e)

## Woody climber

*Asparagus aethiopicus*

Land cover and remnant vegetation data reflects the site is comprised of natural and degraded St Francis dune thicket vegetation. Thicket plants such as *Olea capensis*, *Sideroxylon inerme* (d), *Rhus longispina*, *Pelargonium sp.* *Agathosma sp.* (e), *Cussonia thyrsoiflora* (d), *Euclea racemosa* (d), *Grewia occidentalis* and *Carpobrotus and Crassula sp.* occur on site. Some invasive Rooikrans (*Acacia cyclops*) trees occurs in the surrounding area. The five (5) meter area between the development site and the northern neighbour is designated to be retained as open space area. There is one Milkwood tree which occurs adjacent to this area; the Milkwood tree is protected in terms of the National Forest Act; this tree will be retained and will not be disturbed by the proposed development.

No Endangered or Critically Endangered flora species were confirmed to be present nor known to be present in the affected area. PNCO (Provincial Nature Conservation Ordinance) permits are unlikely to be required as no species protected in terms of the provincial PNCO were recorded within the actual proposed footprints.

The Eastern Cape Biodiversity Conservation Plan – Terrestrial (2019,) indicates the site falling outside of any designated CBA or ESA areas. No CBAs or ESA’s are thus likely to be affected by proposed development of the dwelling on the erf within an urban area.

## Terrestrial Fauna

The STR indicates a High sensitivity for animal species (Figure 21).

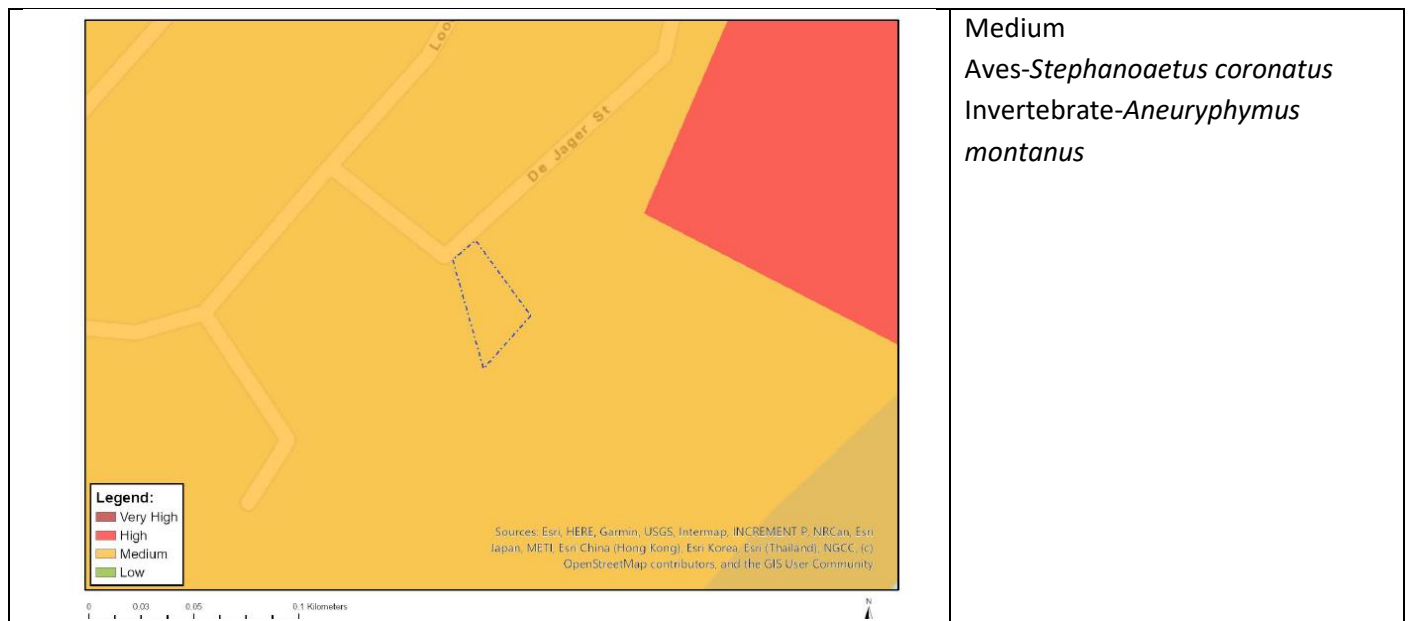


Figure 21: STR indicates a medium sensitivity for Animal species

The site is not situated within proximity of any Key Biodiversity Areas or Important Bird Areas. No Endangered or Critically fauna species were found to be present nor likely to be affected by the scale of activity; some may occur as transient visitors as they are known from the broader area and are mobile species (i.e. birds, small mammal). No faunal species of conservation concern is likely to be directly or indirectly affected significantly by the proposed activity. Suitable habitat for these species is well represented in the surrounding area. The limited size of the development footprint, and type of development, presents no significant risk to these species if they do visit in a transient manner. Fauna sensitivity related to the proposed activity is therefore low.

## Terrestrial Biodiversity Sensitivity

An overall vulnerability assessment of site, incorporating key vegetation and ecological indicators was undertaken and includes the following key criteria:

- relative levels of *intactness* in terms of overall loss of indigenous vegetation cover.
- presence, diversity, and abundance of *species of special concern* (weighted in favour of local endemic species).
- extent of *invasion* (severity and overall ecological impact), as well as the degree to which successful rehabilitation could take place.
- overall degradation incorporating above factors.
- relative importance of the vegetation communities relative to regional conservation status - indicated as vulnerability of the area because of loss.

### *Intactness*

Three basic classes are differentiated as follows:

- **Low:** > 75 % of original vegetation has been removed or lost; and/or no species of special concern present that are critically endangered, endangered, or endemic with highly localised distribution.
- **Moderate:** 25 - 75 % of original vegetation has been removed/lost; and or presence of species of special concern but not having high conservation status or high levels of endemism or highly localised distributions.
- **High:** < 25 % of original vegetation has been removed or lost; and or presence of species with a highly endemism and or high conservation status (endangered or critically endangered).

Intactness for the site is **High**.

### *Alien Invasion*

Three classes are differentiated as follows:

- **Low:** no or few scattered individuals.
- **Moderate:** individual clumps of invasives present but cover less than 50% of original area.
- **High:** dense, impenetrable stands of invasives present, or cover > 50 % of area with substantial loss functioning. Rehabilitation will most likely require specialised techniques over an extended period (> 5 years).

Alien invasion for the site is **LOW**.

INTACTNESS	INVASION		
	LOW	MODERATE	HIGH
High	Pristine	Near Pristine	Moderately Degraded
Moderate	Near Pristine	Moderately Degraded	Severely Degraded
Low	Moderately Degraded	Severely Degraded	Transformed

### *Degradation*

Overall Degradation is determined from the above alien invasion and intactness scores, according to the following matrix:

Degradation for the site is **Low to medium** (slightly transformed)

### *Overall Sensitivity score*

Overall vulnerability (or Sensitivity) of the vegetation within the site is calculated according to the following matrix which combines degradation and overall conservation status of the vegetation units of the site.

Overall sensitivity is moderate.

DEGRADATION	CONSERVATION STATUS			
	LEAST THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED
Severely degraded/ Transformed	Very Low	Low	Moderate	Moderate - High
Moderately degraded	Low	Moderate	High	High
Ecologically Pristine or near Pristine	<b>Moderate</b>	Moderate - High	High	Very High (No-Go area)

## 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 <sup>AN</sup>

5.9 Heavy industrial <sup>AN</sup>

5.10 Power station

5.11 Office/consulting room

5.12 Military or police base/station/compound

5.13 Spoil heap or slimes dam<sup>A</sup>

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<sup>A</sup>

5.22 Train station or shunting yard <sup>N</sup>

5.23 Railway line <sup>N</sup>

5.24 Major road (4 lanes or more) <sup>N</sup>

5.25 Airport <sup>N</sup>

5.26 Harbour

5.27 Sport facilities

5.28 Golf course

5.29 Polo fields

5.30 Filling station <sup>H</sup>

5.31 Landfill or waste treatment site

5.32 Plantation

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- 5.33 Agriculture
- 5.34 River, stream or wetland
- 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 (describe) – Dune and coastal

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

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:

If YES, specify:

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

If YES, specify and explain:

If YES, specify:

## 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 palaeontological sites, on or close (within 20m) to the site?

YES	NO
No	

If YES, explain:

The STR indicates a low sensitivity for the archaeological and cultural heritage theme. THE STR indicates a Features with a Very High paleontological sensitivity. A single residential dwelling will be developed on the erf.

No further assessment is deemed necessary, however mitigation measures to prevent unnecessary impact on heritage resources are recommended and will be included in the EMPr submitted with the BAR (this report).

No palaeontology assessment is deemed to be necessary for the proposed development on the residential erf as the development will only be 200m2 and no rezoning is necessary. Mitigation measures to prevent unnecessary impact on paleontological resources are recommended and will be included in the EMPr submitted with the BAR .It is recommended that if a specialist is deemed necessary then this take place during construction so a search of the dune sand moved can take place and a preconstruction phase the vegetation is intact and there is dense ground cover which would prevent a valuable assessment at pre-construction stage.

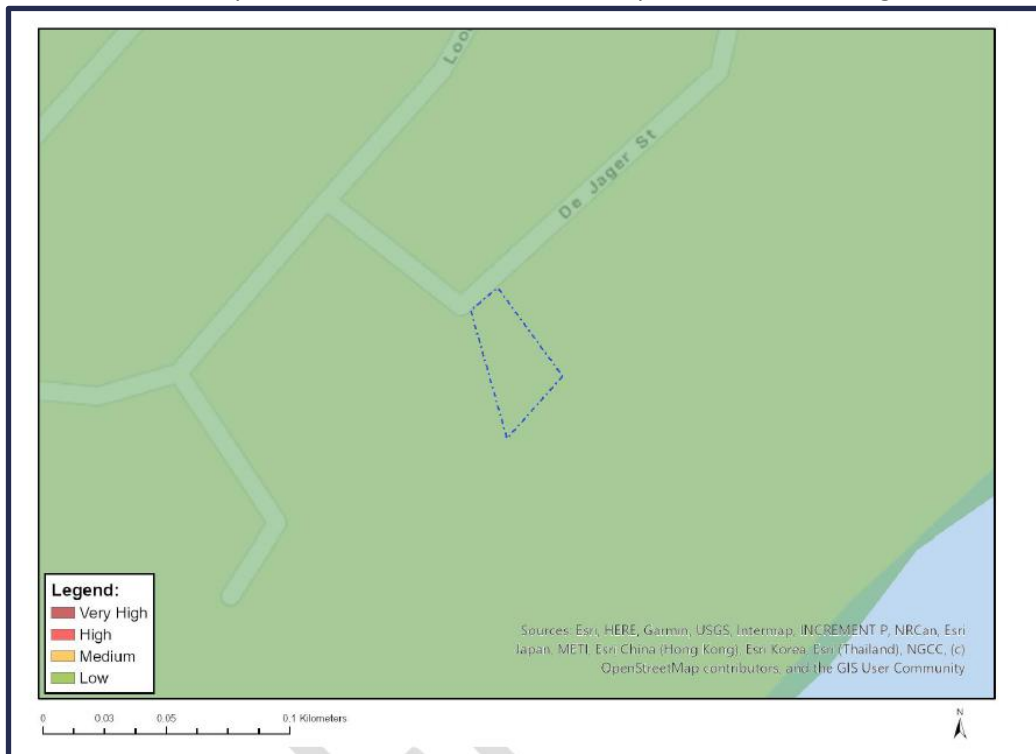


Figure 22:Low sensitivity indicated for archaeological and cultural heritage theme



Figure 23: Medium sensitivity indicated for paleontology theme

The preapplication draft Basic Assessment will be submitted to the ECHRA for comment. Further guidance provided will be followed. A chance find procedure is included as a mitigation which will be required to be followed should archaeological / palaeontological sites be exposed during clearing and excavation activities. .

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: The maximum development will be 1600m2 and is not deemed necessary for a specialist to carry out an assessment for the proposed development.

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO

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.

**Note: Permits will be applied for if required during excavation activities.**

## 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 subregulation 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;
- (b) and state—
  - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;

- (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
- (iv) 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.

Notice of intention to submit an application for an EA in terms of the NEMA and encourage registration of interested and affected parties (IAPS) have been distributed as follows:

- Two notice boards will place on site - 15 January to 16 February 2026;
- Adverts will be placed in The Kouga Express : 15 January to **16 February 2026**
- Notice of intent to develop or submit EA application were sent to the landowner, adjacent landowners, relevant state departments, stakeholders and other identified potential IAPs. .
- A 30-day registration has been provided: 15 January to 16 February 2026;
- The post application draft BAR will be distributed to all IAPs for a 30 day review and comment period: 1 June – 1 July 2026

**Refer to Appendix E: Comments and Response Report**

### 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

## EAP Services

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	Email
DFFE - Forestry	BLayini@dffe.gov.za
DWS	TshatshuP@dws.gov.za BloemM@dws.gov.za jackv@dws.gov.za
DFFE Oceans and Coast	TMbambo@dffe.gov.za OCEIA@dffe.gov.za NJSithole@dffe.gov.za tmhlana@dffe.gov.za
ECHRA	ayanda.mncwabe-mama@ecsrac.gov.za lungiswam@ecphra.org.za
EC Roads	Randall.Moore@ectransport.gov.za; Monde.Manga@ectransport.gov.za
Dept of Agriculture (EC)	Ruffus.Maloma@drdar.gov.za Masixole.matinise@drdar.gov.za
DEDEAT	Andries.Struwig@dedea.gov.za dayalan.govender@dedea.gov.za
SANBI	V.Zikishe@sanbi.org.za
KLM <ul style="list-style-type: none"> <li>• Infrastructure and Engineering</li> <li>• Planning, Development and Tourism</li> <li>• Community Services</li> <li>• Environmental</li> </ul>	jdutoit@kouga.gov.za abotha@kouga.gov.za aswart@kouga.gov.za fkettledas@kouga.gov.za nsiwela@kouga.gov.za; ymlindazwe@kouga.gov.za; mengelbrecht@kouga.gov.za
Ward 12	ward12@kouga.gov.za
Sarah Baartman DM	kmakgoka@sbdm.co.za zsomi@cacadu.co.za ksanyamandwe@sbdm.co.za mmbanga@sbdm.co.za cmabindla@sbdm.co.za ted@sbdm.co.za pmkate@sbdm.co.za

List of authorities from whom comments have been received:

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Notice of intention to submit an application for an EA in terms of the NEMA and encourage registration of interested and affected parties (IAPS) have been distributed as follows:

- Two notice boards will place on site - 15 January to 16 February 2026;
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- A 30-day registration has been provided: 15 January to 16 February 2026;
- The post application draft BAR will be distributed to all IAPs for a 30 day review and comment period: 1 June – 1 July 2026

Refer to Appendix E: Comments and Response Report

## 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 subregulation 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?

YES	NO
-----	----

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Notice of intention to submit an application for an EA in terms of the NEMA and encourage registration of interested and affected parties (IAPS) have been distributed as follows:

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- Adverts will be placed in The Kouga Express : 15 January to 16 February 2026
- Notice of intent to develop of submit EA application were sent to the landowner, adjacent landowners, relevant state departments, stakeholders and other identified potential IAPS. .

- A 30-day registration has been provided: 15 January to 16 February 2026;

- The post application draft BAR will be distributed to all IAPs for a 30 day review and comment period: 1 June – 1 July 2026

Refer to Appendix E: Comments and Response Report

No comments received to date.

One registration received to date: DFFE Oceans and coast

Refer to appendix E – draft Public participation and comments and response report

## 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.

Notice of intention to submit an application for an EA in terms of the NEMA and encourage registration of interested and affected parties (IAPS) have been distributed as follows:

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- Adverts will be placed in The Kouga Express : 15 January to 16 February 2026
- Notice of intent to develop of submit EA application were sent to the landowner, adjacent landowners, relevant state departments, stakeholders and other identified potential IAPs. .
- A 30-day registration has been provided: 15 January to 16 February 2026;
- The post application draft BAR will be distributed to all IAPs for a 30 day review and comment period: 1 June – 1 July 2026.

Refer to Appendix E: Comments and Response Report

No comments received to date.

One registration received to date: Oceans and Coast

Refer to appendix E – draft Public participation and comments and response report

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):

Notice of intention to submit an application for an EA in terms of the NEMA and encourage registration of interested and affected parties (IAPS) have been distributed as follows:

- Two notice boards will place on site - 15 January to 16 February 2026;
- Adverts will be placed in The Kouga Express : 15 January to 16 February 2026
- Notice of intent to develop of submit EA application were sent to the landowner, adjacent landowners, relevant state departments, stakeholders and other identified potential IAPs. .
- A 30-day registration has been provided: 15 January to 16 February 2026;
- The post application draft BAR will be distributed to all IAPs for a 30 day review and comment period. 1 June – 1 July 2026.

Refer to Appendix E: Comments and Response Report

No comments received to date.

One registration received to date: Oceans and Coast

Refer to appendix E – draft Public participation and comments and response report

## 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)

**Direct impacts:**

**Indirect impacts:**

**Cumulative impacts:**

## D.2.1 PLANNING AND DESIGN PHASE AND SUBSEQUENT CONSTRUCTION AND OPERATION AS APPLICABLE

<b>Alternative:</b>	<b>Dwelling within dynamic coastal area</b>						
NEMA LN Activity	EA prior to development within 100m of HWM; clearance indigenous vegetation						
NEMBA/ PNCO / NFA	Permits for scc and / or protected trees if and as required						
HRA Section 38	Permit for any archaeological, palaeontological resource that may be uncovered during construction / maintenance activities if and as required						
NEMWA	Waste management hierarchy – avoid, reduce, reuse, recycle, dispose						
NEMBA, CARA	AIS to be removed by landowner						
NEM: ICMA	Activity within the 100m inland high-water mark of the sea						
<b>Aspect</b>	<b>Site Selection and development area – dune instability and coastal erosion</b>						
<b>Impact 1:</b>	<b>Placement of structures and infrastructure within sensitive areas – coastal erosion and sand inundation risk susceptibility</b>						
<b>Nature of impact:</b>	Direct (site and proposed structures) and cumulative (neighbouring site can exacerbate erosion if not developed correctly)						
<b>Description of impact</b>	Based on the current understanding of the drivers influencing coastal processes, it is apparent that coastal erosion is expected to remain a persistent issue. The factors contributing to this phenomenon include rising sea levels, limited sediment supply, and the low elevation of the existing dune systems. As a result, the retreat of both the shoreline and associated dunes are anticipated to continue in response to ongoing changes in sea level and the dynamics with the underlying geology. These processes collectively indicate that coastal erosion will be an enduring challenge for the area.						
<b>Impact Rating</b>	Impact Status	Negative Impact		Negligible to negative low impact		Negligible to negative low impact	
	Impact Criteria	Baseline (current) / no go alternative		Without mitigation (proposed site layout 1)		With mitigation	
	Spatial	Activity	1	Site	2	Activity	1
	Duration	Short term	2	Short term	2	Short term	2
	Frequency	Rare	1	Rare	1	Rare	1
	Intensity	Medium Low	2	High	5	Medium high	3
	Severity	Negative Low	5	Negative Medium	8	Negative Low	6
	Consequence	Negative medium	6	Negative medium	10	Negative Low	7
	Probability	Slight	2	expected	5	Plausible	3
	Impact Significance	Negative Low	8	Negative medium	15	Negative Low	10

	Mitigation	Possible
	Confidence	High
<b>Mitigation Measures</b>	<p>The extent and rate are uncertain, but steps can be followed to reduce it as much as possible locally. The following should be encouraged by local landowners:</p> <ul style="list-style-type: none"> <li>• Beach access areas should be of such character that it does not funnel the dominant winds (south-westerly and easterly winds) towards infrastructure. Pathways should be at right angles/perpendicular to the prevailing and strongest wind directions to limit sand propagation along the pathway (Tinley, 1985). Based on the wind data, beach access pathways and structures should be constructed in a south-easterly direction for Paradise Beach.</li> <li>• Reduce the number of beach access pathways. A single convenient/accessible pathway for several properties in a ~500m range can be selected that meets the directional criteria, the other pathways should be abandoned and revegetated.</li> <li>• Encourage dense indigenous vegetation along the dunes – limit dune vegetation disturbance as much as possible through cutting, harvesting and developing multiple pathways.</li> <li>• Encourage smaller foredunes to form to store sand and form a buffer during erosive events. See section on brush packs below.</li> <li>• Private properties should not clear dune vegetation and replant with lawns outside of the accepted fire break corridor as lawn grass has very shallow roots compared to the natural deeper-rooted dune vegetation, and it changes local near-ground wind profiles (accelerating sand transport). The longer roots of the indigenous dune vegetation help to anchor and stabilise the dunes, especially near the beach-dune interface where dune erosion is often a problem. Properties close to the beach should aim to have dense indigenous dune vegetation around their perimeter to slow any erosional threats despite the obstruction of the view.</li> <li>• If beach access pathways are formalised with infrastructure, use low-impact ecologically friendly and recyclable materials as they are built within the dynamic zone and are likely to be damaged/removed by infrequent high seas. This will limit the onsite and off-site damage if the structures are impacted. Beach access structures with a minimalist design and more frequent maintenance can be more dynamic in the future as the coastal zone adapts to future water levels and storm intensity.</li> <li>• Parabolic dunes move westward and can threaten infrastructure with sand inundation. As the parabolic dunes are dependent on sand supply, the best way to mitigate its development and propagation is to stabilise the bare sand immediately towards the east of the area affected by sand inundation through a network of hummock dunes. This should be initiated with anchored brushwood clumps (alien tree biomass that does not contain seeds; ~1 to 5 m diameter brush packs) at roughly 5 to 10 m spacings in a grid-type pattern. 5 m spacings should be used where blowouts are to be rehabilitated and larger 10 m spacings where dune hummocks are to be established. The brushwood area should be planted with indigenous sand-binding pioneer dune vegetation that will allow some sediment movement but will reduce the rate of transport. The brushwood will accumulate sand with the</li> </ul>	

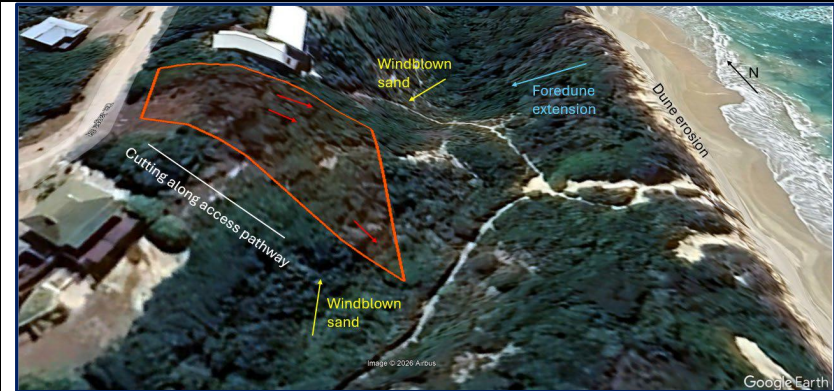
## EAP Services

	<p>hope of creating a network of hummock dunes that can trap sand on the seaward side (foredune area), slow the wind velocity along the foredune surface and the blowout and act as a buffer against sea surges. It is important to leave a strip of unvegetated foredune that can erode and build up frequently as this will prevent steep dangerous dune cliffs from forming during storm events.</p>
<b>Impact 2</b>	<b>Design considerations to reduce damage due to dune instabilities</b>
<b>Nature of impact:</b>	Direct (site and proposed structures) and cumulative (neighbouring site can exacerbate erosion if not developed correctly)
<b>Description of impact</b>	<p>The dominant wind directions are from the south-west and east. Windblown sand is likely to be transported from these directions, especially from unvegetated patches. Maintaining a dense vegetation cover will trap and stabilise the sand to some extent and avoid the nuisance of sand encroachment. The house design should keep this in mind in terms of doorways and outside spaces. A raised structure would allow sand transport under the structure with less nuisance inside the buildings.</p> <p>Erf 1363 is partly located on a dune crest with a large part of the property that will be developed sloping towards the south-east. There are smaller undulations on the Erf 1363 and a frontal dune ~ 50 m towards the east. Dune instabilities are possible along the face of the dune due to increased loadings (buildings and wet periods with saturated sands), thus movement in a south easterly direction. The depth of the instability is likely to be shallow (sub-metre to several metres); Design of the foundations of the building should take this into account.</p> <p>The westward extension of the frontal dune is likely as the beach and primary dunes migrate westwards as the sea level rises. The eastward part of the property could be raised (inundated by sand) in future years as the frontal dune migrates onto the property. The rate of movement is not known at this stage.</p> <p>There is a pan-handle Erf to the south of Erf 1363 that will access the property from De Jager Street. Its development can lead to excavations to grade the driveway exposing several metres of dune sand adjacent to Erf 1363. Retaining features will likely be put in place along the driveway, but shifts of the dune layers are possible over time, especially under wet saturated conditions. These shifts can affect the stability of the dune on Erf 1363. To avoid these possible shifts, it is advised that the foundations/pylons of the building on Erf 1363 extend down as far as possible to an elevation like that of the lowest point of the driveway excavations/property to the as advised by an engineer. This will allow movements of the upper part of the dune without impacting the foundations of the building on Erf 1363. The risk of these shifts is less towards the north of Erf 1363.</p>

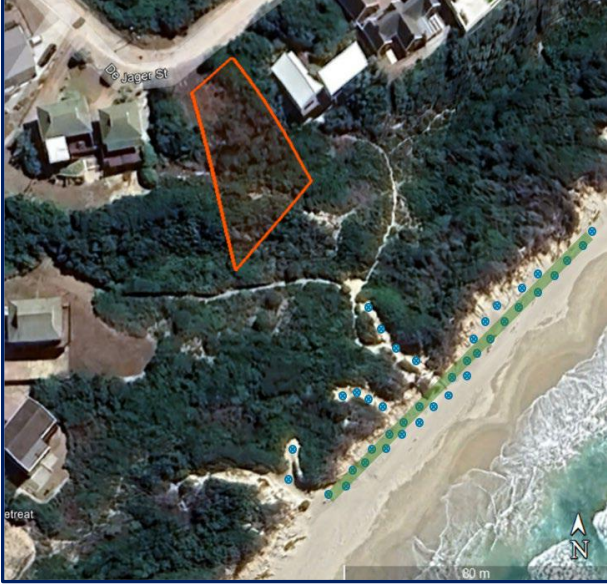
The Kouga Maintenance Management Plan for the Coastal Area between the Kromme and Kabeljous beaches, and the Seekoei Estuarine Functional Zone, indicates that dune restoration - sand traps, brush packing and sand barriers is a high priority and should start within 1 – 2years of the approval of the environmental authorisation and the maintenance management plan (CEN, IEM Unit, 2024).



Satellite image showing Erf 1363 (orange outline) in relation to the steep eroding foredunes (yellow dashed line) and blowouts (van der Waal, 2026).



Oblique image indicating the likely processes in the future. The small red arrows indicate possible dune instabilities

		<p>Planned interventions (included in the EMPr and maintenance management plan prepared for KLM CEN IEM Unit, 2025) along the coast to trap sand with brushwood piles (blue circles) and establish pioneer dune vegetation (green highlight); no footpaths should be created in this area.</p>																																																																																						
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<b>Mitigation Measures</b>	<p>Coastal degradation may be mitigated by:</p> <ul style="list-style-type: none"> <li>• minimizing dune disturbance</li> <li>• reducing the number of beach access pathways; no footpaths should be created in this area.</li> <li>• reintroducing pioneer dune vegetation</li> </ul>																																																																																							

# EAP Services

	<ul style="list-style-type: none"> <li>establishing brush structures to trap sand (mitigation is planned in this area according to the EMP and MMP prepared for KLM)</li> <li>Building designs should account for these considerations to mitigate risks associated with dune instability and sand encroachment. Additional geotechnical data for the development footprint would further inform foundation design</li> </ul>																																																																																		
<b>Aspect</b>	<b>Sewage Treatment</b>																																																																																		
<b>Impact 1:</b>	<b>Treatment of sewage generated</b>																																																																																		
<b>Nature of impact:</b>	Direct; cumulative																																																																																		
<b>Description of impact</b>	There is no municipal sewage treatment service provided for the land portion. Sewage therefore needs to be managed by the landowner on site. An increase in nutrients levels such as phosphates and/or nitrates in run-off during floods (both surface and groundwater) to the adjacent dune system could occur due to leaks or spillages from or inundations of conservancy tanks storing domestic sewage from the proposed new dwelling. These impacts could take place during both the construction and operational phases. The direct impact of the existing septic tank is rated as negative of low significance; additional sewage management (1 dwelling at estimated 100 - 200 liters / day per person; average of 4 persons per dwelling; 400 - 800 liters/day; The impact is rated as negative low with mitigation in place.																																																																																		
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	Intensity	low	1	
	Severity	Negative medium	10	
	Consequence	Negative medium high	13	
	Probability	Slight	2	
	Impact Significance	Negative medium	15	
	Confidence	High		
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>• Septic tanks are not recommended; conservancy tank must be suitably sized for number of persons expected and managed correctly</li> <li>• A service level agreement must be in place for regular servicing of tanks</li> <li>• Proof of service is to be kept of record for life of operation</li> <li>• The proposed on-site conservancy tanks should be constructed, operated and maintained and sealed at all times according to the design specifications to prevent leakage and emptied regularly to prevent overtopping,</li> <li>• Care should be taken, particularly during rainfall events and flooding events when conservancy tanks may be inundated to prevent nutrient-rich water from flowing into surrounding dune system</li> </ul>			

## D.2.2 CONSTRUCTION PHASE AND DECOMMISSIONING AS APPLICABLE AND MAINTENANCE DURING OPERATIONS AS REQUIRED

<b>Alternative:</b>	<b>Dwelling within dynamic coastal area</b>
NEMA LN Activity	EA prior to development within 100m of HWM; clearance indigenous vegetation
NEMBA/ PNCO / NFA	Permits for scc and / or protected trees if and as required
HRA Section 38	Permit for any archaeological, palaeontological resource that may be uncovered during construction / maintenance activities if and as required
NEMWA	Waste management hierarchy – avoid, reduce, reuse, recycle, dispose
NEMBA, CARA	AIS to be removed by landowner
NEM: ICMA	Activity within the 100m of high-water mark of the sea
<b>Aspect</b>	<b>Preconstruction and preoperational Planning requirements</b>
<b>Description:</b>	The land portion falls within 100 meters of HWM of the sea and within the dynamic coastal environment and therefore requires an environmental authorisation to be issued as part of the planning phase of the project. Part of the EA process is the draft EMPR which requires approval from the CA (DEDEAT). If the EA is obtained, then the EMPR is legally binding, and the applicant must ensure that EM requirements are included in the budget at proposal phase. The dwelling is planned to be used by the applicant as it is close to the sea for coastal activities such as surfing and kiteboarding. The conditions of the EA be legally binding on the owner. Monitoring must be undertaken by an appointed ECO during construction, and appointment should commence prior to construction so there is a clear understanding of baseline conditions to which comparisons can be made at a later point.
<b>Impact</b>	<b>Inadequate planning and <i>Non-compliance with Conditions of the Environmental Authorisations</i></b>
<b>Nature of impact:</b>	Direct / Indirect / cumulative as applicable
<b>Description of impact</b>	Budget allocated for environmental management tends to be inadequate for construction projects. Organisational Structure – implementing agents may or may not have adequate capacity and competency to ensure appropriate and adequate environmental management. Poor environmental management planning and / or lack of budget for mitigation and management (EMPr requirements) “ <i>without mitigation</i> ” impacts can be expected during construction / operational phase.
<b>Impact Rating</b>	As per impacts identified for planning, construction / operational phase as applicable without / with mitigation implemented

<p><b>Mitigation Measures</b></p>	<ul style="list-style-type: none"> <li>• An Environmental Control Officer (ECO) should be appointed prior to the start of construction phase to ensure all preconstruction requirements required in terms of the EA (if attained) are in place</li> <li>• Prior to commencement of construction, during the site establishment phase, the ECO must work closely with the design and construction team (i.e. architect, appointed contractor, resident engineer, site surveyor as applicable) to ensure designs, location of structures, location of construction laydown areas and no-go areas are aligned to conditions of EA (if attained) prior to start of construction.</li> <li>• Carry out flora and fauna search and rescue prior to the start of construction;</li> <li>• Ensure permits are in place timeously – allow at least 3 months before commencement.</li> <li>• Environmental Awareness and training– Ensure all labour are informed and plant operators are aware of risks, issues, do’s and don’ts and no-go areas</li> <li>• ECO to audit the site monthly during construction of remaining infrastructures</li> <li>• An external audit every two years recommended to be carried out during operational phase and include any maintenance activities carried out for the two-year period</li> <li>• The development area is to include:             <ul style="list-style-type: none"> <li>○ Development of dwelling to be a maximum of 300m<sup>2</sup> with a small lookout point and bridge pathway</li> <li>○ Access from existing access road to each of the driveways; development of driveway to allow for parking of two additional vehicles per dwelling</li> <li>○ Maximum of 1.4 meter width footpath (distance of 15 meters) to look out point (maximum 20m<sup>2</sup>) equipped with safety poles</li> <li>○ Placement of rainwater harvesting storage tanks recommended due to intermittent and frequent water shortages in the area</li> <li>○ Stormwater management requirements – type and footprint to be informed after detailed designs compiled by suitably qualified engineer</li> <li>○ Placement of conservancy tank and suitable service vehicle access to tank; conservancy tank to be sized by suitably qualified engineer.</li> <li>○ Placement of electrical reticulation requirements; solar power recommended instead of unreliable and high impact coal power</li> <li>○ Placement of waste management area recommended to manage recyclables and general and electronic waste</li> </ul> </li> </ul>
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- Laydown area for contractors (to be rehabilitated at end of construction stage as required and monitored for 3 months post construction as required); Laydown areas will include waste receptacles, skips, ablution facilities, materials required, staff lunch area, delivery area etc.
- A site plan to be compiled by the contractor in conjunction with ECO to identify most suitable laydown area on the site and to ensure the following:
  - Sequence of construction events is taken into account when deciding on a contractor laydown area;  
The sequence of events recommended is as follows:
    - Stage 1: To be completed within 24 months of EA approval (if attained)
      - Approval of final designs of dwelling
    - Stage 2: To be completed within 24 months of EA approval (if attained):
      1. Contractor laydown area selected taking into account dune area and small size of sit; sequence of events and planning prior to construction is recommended to take place in conjunction with the appointed ECO and landowner. The area should include areas for waste management facilities, hazardous substances facilities. Ablution facilities, area for subsoils, areas for topsoils and vegetation; areas for building material required
      2. Pegging of dwelling, access, walkway, lookout point, laydown area
      3. Search of SCC within pegged areas and rescue
      4. Application for permits if required for any SCC identified
      5. Rescue of SCC to similar habitat outside development area (repeat as required throughout construction phase)
      6. Laydown area established (include waste management facilities, hazardous substances facilities. Ablution facilities, area for subsoils, areas for topsoils and vegetation; areas for building material required; site office as required; no housing of contractors on site permitted.
      7. Construction and Installation of services and stormwater management measures as per engineer recommendations
    - Stage 4: Rehabilitation of laydown area (3 months follow up and close out audit)
      - If designated laydown area stand for more than 3 months until start of next construction activity, rehabilitation with suitable indigenous grass must be applied to ensure no bare areas are on the site if not in use for construction purposes. To take place by each responsible contractor as required and as

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	required by the ECO, with 3-month rehabilitation monitoring period as required per scope of work carried out by contractor / subcontractor. Rehabilitate with indigenous vegetation similar to plants occurring in surrounding area.						
<b>Aspect</b>	<b>Site clearing, excavations, construction, installation</b>						
<b>Impact 1:</b>	<b>Loss of heritage, archaeological, palaeontological resources.</b>						
<b>Nature of impact:</b>	Direct (loss of resource / damage to resource / collection of resource)						
<b>Description of impact</b>	The STR indicates a low sensitivity for heritage and medium for paleontology. The development footprint will not exceed 5000m <sup>2</sup> ; the maximum development footprint will be 1600m <sup>2</sup> . Due to the nature of the development, deep excavations are not expected. . Excavation activities can unearth archaeological / palaeontological resources and result in unnecessary disturbance if management measures are not in place; mitigation measures are provided to prevent unnecessary impacts. The preapplication draft basic assessment report (this report) will be submitted to the ECPHRA . The BAR will be updated with any comments / additional measures provided by the ECPHRA as required.						
<b>Impact Rating</b>	Impact Status	<b>Negligible</b>		Negative Impact		Positive Impact	
	Impact Criteria	No go alternative		Without mitigation		With mitigation	
	Spatial	-	-	Activity	1	Activity	1
	Duration	-	-	Very short	1	Very short	1
	Frequency			rare	1	Rare	1
	Intensity			Low	1	Low	1
	Severity			Negligible	3	Negligible	3
	Consequence			Negligible	4	Negligible	4
	Probability			Plausible	3	Plausible	1
	<b>Impact Significance</b>	<b>Negligible</b>		<b>Low</b>		<b>7</b>	
	Mitigation	Possible					
Confidence	High						
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>• Induction / Pre-construction training to be done with construction workers on importance of notifying site foreman and ECO and landowner to any potential findings of palaeontological / archaeological resources</li> <li>• Monitoring during excavations to be done on ongoing basis by the construction team and any sites exposed to be reported to the ECO and landowners and include photographs and coordinates, who must report the find to the ECPHRA. Steps provided by ECPHRA regarding the find to be followed.</li> </ul>						

	<ul style="list-style-type: none"> <li>Any chance findings as a result of maintenance activities to report to ECPHRA for lifetime of operations.</li> </ul>						
<b>Impact 2:</b>	<b>Unnecessary loss of vegetation and disturbance to fauna</b>						
<b>Nature of impact:</b>	Direct (loss of vegetation, disturbance to fauna)						
<b>Description of impact</b>	<p>Unnecessary clearing and disturbance result in a number of environmental impacts if not managed correctly. By their nature, construction projects involving large numbers of workers using heavy machinery, with movement of materials over a large area are likely to create more disturbance to the natural environment (and watercourses) than necessary.</p> <p>The vegetation on the proposed development site, in particular the proposed footprint is common and widespread in the surrounding area. The footprint is small and only that vegetation which is necessary to be cleared will be. Assembling of structures of the dwelling will take place offsite for some of the components and will be installed with minimal interference to the dune system and intact vegetation. The aim of the development is to keep the dune system intact as far as possible. All AIS (wattle in / rooikranz is common on dunes) should be removed but immediately replaced with a small thicket tree or shrub (soil binding) and interplanted with <i>carpobrotus / bulbine</i> or similar succulent for additional soil binding activity. No Sensitive plant or Animal species identified as per the National Environmental Screening Tool were found to be present or likely to be present or would be affected by the proposed activity. The site is not designated CBA or ESA.</p>						
<b>Impact Rating</b>	Impact Status	Negligible		Negative Impact		Negative Impact	
	Impact Criteria	No go alternative (baseline)		Without mitigation		With mitigation	
	Spatial	Activity	1	Site	2	Activity	1
	Duration	Long term	5	Long term	5	Long term	5
	Frequency	rare	1	Seldom	3	rare	1
	Intensity	Low	1	Low	1	Low	1
	Severity	Low	7	Medium	9	Low	7
	Consequence	Low	8	Medium	11	Low	8
	Probability	Slight	2	Plausible	3	Slight	2
	<b>Impact Significance</b>	<b>Low</b>	<b>10</b>	<b>Medium</b>	<b>14</b>	<b>Low</b>	<b>10</b>
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<p><b>Construction and maintenance as required (include in training to contractors and subcontractors)</b></p> <ul style="list-style-type: none"> <li>Search and rescue to be carried out prior to construction and relevant permits applied for. Relocate flora, keep rehabilitation, store and reuse / dispose as required. Ground-dwelling animals /nests / eggs must be searched for.</li> </ul>						

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	<ul style="list-style-type: none"> <li>• No clearing outside of the identified development area is to take place. No go areas include the remaining area outside the designated dwelling footprint and laydown area.</li> <li>• The importance of No-go areas must be clearly communicated to site workers and contractors through a site induction, which is required each time new workers enter the site. No stockpiling, dumping, littering or traversing this sensitive area is permitted and should be cordoned off for the during of the construction period. Fines should be imposed for non-compliance to this condition / measure.</li> <li>• No animals are to be harmed or killed during the course of operations. Workers are NOT allowed to snare any faunal species. Contractual fines to be imposed on any employee who is found attempting to harm fauna on site or in surrounding areas.</li> <li>• If any animals are seen on site, a photo / video should be taken if possible (to assists in identification) and all fauna encountered on site should be reported to the ECO immediately. This is important when:             <ul style="list-style-type: none"> <li>○ An animal is harmed or compromised in any way during construction.</li> <li>○ Any animal with limited mobility is found on site (e.g. tortoises, moles, chameleons).</li> <li>○ Any potentially dangerous animal is encountered. This includes any potentially venomous animal (e.g. snakes, scorpions)</li> <li>○ For any assistance with snake removals/relocations, identifications or bite treatment contact the African Snakebite Institute.</li> </ul> </li> <li>• As far as possible, work should be undertaken by hand using spades, pickaxes etc. However, it is acknowledged that some use of heavy vehicles for safe construction will be required; this must be restricted as far as practically possible and remain within development area at all times.</li> <li>• Check delineated footprints area not exceeded</li> </ul>				
<b>Impact 3:</b>	<b>Stormwater Runoff Causing Erosion</b>				
<b>Nature of impact:</b>	Direct (loss of vegetation and soil, erosion) and cumulative (disturbance to dune system)				
<b>Description of impact</b>	Elevated erosion and sediment mobilization is possible due to clearing of vegetation, destabilization of the dune adjacent to the proposed development during construction, as well as during operation. Increased runoff from the site to the dune system and ponding as a result of heavy rains, high tides and storm surges must be prevented through effective stormwater management during construction and operations so the average flow is not exacerbated by hard surface runoff. Intact vegetation with minimal bare soil will be a helpful mitigation measures against floodwaters and increased storm activity expected with climate changes. .				
<b>Impact Rating</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Impact Status</td> <td style="width: 25%;">Negligible</td> <td style="width: 25%;">Negative Impact</td> <td style="width: 25%;">Negative Impact</td> </tr> </table>	Impact Status	Negligible	Negative Impact	Negative Impact
Impact Status	Negligible	Negative Impact	Negative Impact		

Impact Criteria	No go alternative (baseline)		Without mitigation		With mitigation	
	Spatial			Site	2	Activity
Duration			Short	2	Very short	1
Frequency			Seldom	3	Infrequent	2
Intensity			Low – medium	2	Low	1
Severity			Medium	7	Negligible	4
Consequence			Medium	9	Negligible	5
Probability			Expected	5	Plausible	3
Impact Significance			Medium	14	Low	8
Mitigation	Possible					
Confidence	High					
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>• An appropriate stormwater management plan should be implemented to ensure that (if necessary) all runoff from the site is collected in suitable detention ponds or sumps and that only sediment-free, good quality water of a reasonable quantity is allowed to flow into the surrounding natural environment and ponding and over saturation is prevented.</li> <li>• During the construction phase it may be necessary to construct temporary stormwater containment and control measures (e.g. temporary cut-off berms) to prevent erosion and sediment-laden water causing erosion and dune impacts.</li> <li>• All erodible areas within the construction site should be stabilized using appropriate (best practice) methodologies and erosion protection works and all disturbed areas should be rehabilitated with appropriate indigenous vegetation.</li> <li>• Particular attention should be given to prevention of damage to the adjacent dune systems and to stabilizing any sign of erosion, preferably by establishing dense stands of suitable indigenous vegetation acting as sand traps.</li> <li>• Ensure that heavy machinery does not compact soil or disturb vegetation outside of these demarcated footprint areas</li> <li>• Ensure stockpiled materials and other mobile materials are banded with sandbags to prevent their loss during rainfall and covered / wetted to prevent windblown dust.</li> <li>• Ensure that construction activities do not cause any preferential flow paths and concentrated surface runoff during rainfall events.</li> <li>• Do not blanket clear the site; ensure that vegetation clearing is conducted in parallel with the construction progress of the planned sequence of events to minimise erosion and runoff.</li> <li>• Reduce transport of sediment from development area through use of mulch fencing/ biodegradable coir logs / soil saver biodegradable matting</li> </ul>					

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	<ul style="list-style-type: none"> <li>Consider that materials, temporary toilets, leaked fuel and litter can be washed away during heavy rainfall and must therefore be bunded, secured, covered or surrounded by sandbags as appropriate. The ECO must inspect these areas for compliance.</li> <li>Check weather reports for rainfall predictions on a weekly and daily basis. Postpone work during rainfall and ensure the site has been prepared to prevent wash off of materials as required</li> <li>Progressively place back subsoil, then topsoil and mulch and revegetate exposed areas once construction has been completed in the area with suitable indigenous vegetation.</li> </ul>																																																																								
<b>Impact 4:</b>	<b>Soil disturbance</b>																																																																								
<b>Nature of impact:</b>	Direct (soil erosion, soil loss, damage to soil structure); Indirect (sedimentation, impact on surrounding vegetation)																																																																								
<b>Description of impact</b>	Mismanagement of soil leads to damage of soil structure and loss of soil. The construction of the applicants preferred dwelling design will entail bringing assembled components to the site so that and installation will minimise clearing and the need and the use of heavy machinery for excavations. With appropriate mitigation this impact could readily be reduced to low significance.																																																																								
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<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>Construction disturbance to be within the development area and within the footprint of the applicable construction activity</li> <li>The site should be cleared in a phased manner as per sequence of construction activities and be suitably stockpiled / composted within boundaries of the erf, on a level area that will not be disturbed by construction, for later use for levelling, rehabilitation and landscaping on the site.</li> </ul>																																																																								



# EAP Services

	<ul style="list-style-type: none"> <li>Covered with shade cloth to prevent loss of soil/ erosion / dust generation. Practice 'first out, last in' for soil excavated. Topsoil is highly valuable for use in landscaping at the end of the construction activity.</li> <li>Stockpile soil at a maximum 1.5-meter height</li> <li>Excavated materials to be re used as far as possible (i.e. as fill material);</li> <li>Excavation materials not re-used are to be removed off site as quickly as possible and disposed at an appropriately licensed waste site. Replace subsoil first, followed with the stored topsoil and composted vegetation.</li> <li>No driving on soil stockpiles permitted</li> <li>Excavations by hand and other access required as far as possible and only may be used for installation of the walkway and lookout point</li> </ul>																																																																																			
<b>Impact 5:</b>	<b><i>AIS Displacing indigenous flora and fauna</i></b>																																																																																			
<b>Nature of impact:</b>	Direct and indirect and cumulative (Aquatic; terrestrial)																																																																																			
<b>Description of impact</b>	During construction, alien invasive species / weeds currently not on site could be introduced through the construction process. During construction, a negligible impact is expected with mitigation in place. Regular monitoring and early eradication should enable a cost-effective control of alien invasive species. A weed and AIS management programme is recommended after construction to counter the weed proliferation that would be expected after construction.																																																																																			
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<b>Mitigation Measures</b>	<p><b>Construction and maintenance as required (include in training to contractors and subcontractors)</b></p> <ul style="list-style-type: none"> <li>Ensure the site kept is free of AIS seeds and plants</li> <li>Ensure topsoil that is purchased is weed free</li> </ul>																																																																																			

## EAP Services

	<ul style="list-style-type: none"><li>• Check for weed regrowth in stockpiles and within development area and pull-out plant as soon as it is detected to avoid expensive AIS management in the long term; make use of guideline provided during training to identify the common AIS in the area.</li><li>• All AIS within the site construction footprint to be removed on an ongoing basis (as required ) by the appointed construction team per construction activity and for 3 months following end of construction activity.</li><li>• Any required removal of AIS within this footprint / any required rehabilitation with suitable indigenous vegetation / grass seed will remain the responsibility of the appointed contractor; Budget for this task must be included in the quote to landowner for carrying out the required scope of works.</li><li>• All AIS removed must be placed in a designated area on site and removed offsite as quickly as possible to a suitably licensed general waste site.</li><li>• After construction, the landowner is responsible for the vegetation maintenance per land portion and to resume ongoing AIS clearing and revegetation as required.</li><li>• When removing AIS ensure the area is not left bare and use mulch, indigenous seeds and plants local to the area, to hold soil in place (have mulch, seeds, seedlings ready prior to clearing)</li></ul>
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# EAP Services

AIS common in area	Biological control	Mechanical control	Chemical control	Specific management measure
 <p>Western coastal rooikrans (<i>Acacia cyclops</i>)</p>	<p>Seed feeding weevils (<i>Melanterius servulus</i>)– reduces seed production; Midge -(<i>Dasineura diels</i>) induces galls on the ovary, introduce and can control seed production.</p>	<p>Hand pulling seedlings; Pulled out either by hand or using a tree popper. This is the most preferred method of control.</p>	<p>YES – after cutting apply herbicide to stumps to prevent growth</p>	<p>Plants MUST be pulled out roots and all for this method to be effective. Minimise soil disturbance to reduce seed germination.</p> <p>Regular follow-up treatments are necessary to control seedlings and regrowth.</p>
 <p>Castor Oil Plant (<i>Ricinus communis</i>)</p>		<p>Yes – hand remove prior to seed, bag and dispose</p>	<p>Yes</p>	
<b>Impact 6:</b>	<b>General Waste pollution</b>			
<b>Nature of impact:</b>	Direct and indirect and cumulative (Sensitive Coastal environment, disturbance to flora and fauna; health impacts, visual impacts)			
Description of impact	This impact mainly concerns the proper management of construction related waste materials.			
<b>Impact Rating</b>	Impact Status	Negligible	Negative Impact	Negative Impact

	Impact Criteria	No go / baseline – no waste impacts from construction		Without mitigation		With mitigation	
	Spatial			Site	2	Activity	1
	Duration			short	2	Very short	1
	Frequency			Regular	4	Seldom	3
	Intensity			Low	1	Low	1
	Severity			Medium	7	Low	5
	Consequence			Medium	9	Low	6
	Probability			Possible	4	Plausible	3
	Impact Significance			Medium	13	Low	9
	Mitigation	Possible					
Confidence	High						
<b>Impact 7:</b>	<b><i>Hazardous materials management</i></b>						
<b>Nature of impact:</b>	Direct and indirect and cumulative (Sensitive Coastal environment, disturbance to flora and fauna; health impacts, visual impacts).						
<b>Description of impact</b>	<p>The following hazardous materials require strict management and disposal:</p> <ul style="list-style-type: none"> <li>• Chemical pollutants (e.g. hydrocarbons, paint and cleaning fluids) associated with site-clearing, pile-driving for stilts and earth-moving machinery could wash into the watercourse.</li> <li>• Hazardous materials &amp; chemical pollutants stored on site and used in construction could accidentally spill or be washed into the surrounding environment</li> <li>• Uncured concrete and dry cement powder could contaminate the watercourse – e.g. due to heavy rains during construction. It is important to note that uncured cement is highly alkaline and could significantly raise the pH of any water in contact with it to levels lethal to aquatic life.</li> </ul> <p>Spillages of diesel, petrol, oil, paints, clears and other harmful chemicals; these substances may potentially enter the surrounding environment. During construction there will be a short-term risk of chemical pollution, which could potentially result in impacts of low to moderate significance.</p>						
<b>Impact Rating</b>	Impact Status	Negligible		Negative Impact		Negative Impact	
	Impact Criteria	No go / baseline		Without mitigation		With mitigation	
	Spatial	-	-	Local	2	Activity	1
	Duration	-	-	short	2	Very short	1
	Frequency	-	-	Regular	4	Seldom	3
	Intensity	-	-	Low to medium	2	Low to medium	2

	Severity	-	-	Medium	8	Low	6
	Consequence	-	-	Medium	10	Low	7
	Probability	-	-	Expected	5	Plausible	3
	Impact Significance	-	-	Medium	15	Low	<b>10</b>
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<p><b>Waste management</b></p> <ul style="list-style-type: none"> <li>• Construction materials and waste generated needs to be carefully managed to ensure impacts on the environment are reduced.</li> <li>• Waste management must follow waste hierarchy – avoid, reduce, reuse, recycle, dispose</li> <li>• Waste management plan to be put in place by the contractor to deal with all general waste streams and ensure the plan is aligned to mitigation measures; Possible waste streams:             <ul style="list-style-type: none"> <li>• Subsoils not reused</li> <li>• Construction rubble (broken bricks, cement, concrete spills)</li> <li>• General waste items (paper, tins, plastic, metals, organic, cleared vegetation not for reuse)</li> <li>• Hazardous materials / waste that may be used /generated:                 <ul style="list-style-type: none"> <li>o Fuels, oils, oil-based paints, turpentine etc</li> <li>o Spillage of hazardous materials</li> </ul> </li> </ul> </li> <li>• An incident/complaints register must be established and maintained on-site.</li> <li>• Suitable storage, drip trays, mixing trays, bins, skip to be provided as required</li> <li>• Waste management area on site – The designated laydown area must have areas marked out for eating, resting, waste receptables (secure with lockable lids for small general waste items; skip for rubble with tarpaulin for covering; hazardous material storage area; emergency response spill kits, required drip trays and cement mixing containers; hazardous waste storage receptacle; and sanitation (cleaning drinking, washing water and toilets).</li> <li>• Identify closest registered waste site</li> <li>• Bins / skip must be available for collection, separation and storage of waste streams - i.e. general waste (plastic, paper, tin, glass, organic etc ), construction waste (wood, concrete, metal scrap etc), hazardous waste (fuels, oils, chemical). Area to be designated for storage of subsoils, construction rubble.</li> <li>• Keep rubble separate from stockpiles of soils.</li> </ul>						

- Maintain records of disposal
- Under no circumstances may solid waste be burnt or buried on site / surrounding area; Any waste cement should be allowed to dry and stored in skip at the site for safe offsite disposal. No waste cement should be discarded in aquatic habitats under any circumstance.
- No Littering; consider implementing fines for litter
- Provide adequate bins for disposal of personal waste (e.g. lunch wrappers) as well as a waste area for larger waste materials (e.g. concrete rubble).
- All workers must be made aware that no rubbish may be disposed of in aquatic habitats or any other place beside the waste bins provided under any circumstance. Fines to be issued accordingly.
- All solid waste collected must be disposed of at a registered waste disposal site on a regular basis; waste materials must be removed from site as quickly as possible and not stockpiled on site. A certificate of disposal must be obtained by the construction site manager and kept on file and be made available for review at any time.
- Corrective action must be undertaken immediately if a complaint is received.
- Upon the completion of construction, the area will be cleared of all construction materials.

#### Hazardous materials management

- Strict use and management of all hazardous materials used or stored on site during construction.
- Strict management of potential sources of pollution (hydrocarbons from vehicles & machinery, cement during construction, etc.).
- Access and hard surfaces should be constructed using porous grass block pavers, which allow water to soak away, minimising surface run-off. This would prevent surface flow due to heavy rains washing harmful chemicals into the surrounding environment.
- Containment and treatment of all contaminated water to ensure only clean water is allowed to flow into the adjacent watercourse.
- Any concrete mixing (dagha) that may be required should be done using mixing trays equipped with raised side and placed; cement is a pollutant that must not be allowed to leave the development area.
- Do not leave machinery / vehicles running unnecessarily. Service machines and vehicles regularly to prevent unnecessary fumes and leaks.

	<ul style="list-style-type: none"> <li>• Ensure cleaning materials, volatile materials and other hazardous materials (e.g. chemicals) are securely stored within a suitable sealable non-corrosive container. Ensure lids are secure to avoid unnecessary release into the environment. Store on a bunded area covered with roof and secure with lock and key.</li> <li>• If machinery using fuels and oil required for construction (i.e. generators, compactors) refuelling must take place with drip tray / on designated bunded area and roofed area – refuelling to take place only within designated area within identified laydown area within development area.</li> <li>• Drip trays must be placed under such equipment when standing; Any required machinery must be parked in designated area within designated area within identified laydown area within development area.</li> <li>• All hazardous materials and waste stored under lock and key</li> <li>• In the event of a major spill or leak of contaminants, the relevant administering authority must be immediately notified as per the notification of emergencies/incidents.</li> <li>• Spill kit in place - Any spills must receive the necessary clean-up action. Appropriate arrangements to be made for appropriate collection and disposal of all cleaning materials, absorbents, and any contaminated soils. This must be stored in separate designated container on site for offsite disposal at licensed waste disposal site.</li> <li>• Spilled cement or concrete must be cleaned up as soon as possible and disposed of at a suitably licensed waste disposal site.</li> <li>• Site to be monitored regularly for contaminant spillages and if detected, contact spillage remediation companies.</li> <li>• Cover stockpiles of building materials like cement, sand and other powders. Regularly inspect stockpiles for spillages and store away from waterways or drainage areas.</li> </ul>					
<b>Impact 8:</b>	<b>Water Quality – Elevated Nutrient and Bacterial Levels through incorrect sewage management on site</b>					
<b>Nature of impact:</b>	Direct / Indirect / cumulative as applicable					
<b>Description of impact</b>	During the construction and operational phases there will be a low risk of sewage effluent entering the surrounding area, which could potentially result in impacts of moderate significance in the receiving environment. However, with appropriate mitigation this potential impact could readily be reduced to low significance.					
<b>Impact Rating</b>	Impact Status	Negative Impact		Negative Impact		Negative Impact
	Impact Criteria	No-go / baseline		Without mitigation		With mitigation
	Spatial		Local	3	Activity	1
	Duration		Very short	1	Very short	1

	Frequency			Infrequent	2	Rare	1
	Intensity			Low to medium	2	Low	1
	Severity			Low	5	Negligible	3
	Consequence			Low	8	Negligible	4
	Probability			Plausible	3	Slight	2
	<b>Impact Significance</b>			<b>Medium</b>	<b>11</b>	<b>Low</b>	<b>6</b>
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>Adequate ablution facilities must be provided for all construction staff and strict supervision provided to ensure sewage contamination of the site does not take place.</li> <li>Ablution facility to be provided as necessary at a ratio of 1:10; ablution facility must be secured to prevent being blown over and must be placed within development / laydown area;</li> <li>Ablution facility to be regularly serviced registered company on a regular basis. Service slips to be kept on record by site manager for audit purposes.</li> <li>The proposed on-site conservancy tank should be constructed, operated and maintained according to the design specifications to prevent leakage and emptied regularly to prevent overtopping,</li> <li>Care should be taken, particularly during rainfall events and flooding events when conservancy tanks may be inundated due to high groundwater levels, to prevent nutrient-rich water from flowing into the surrounding area</li> <li>Ensure no disposal of items that can cause blockages / malfunctioning of system is not flushed down toilets.</li> </ul>						
<b>Impact 9:</b>	<b><i>Unintentional and uncontrolled fires can have high significant impacts on the social and natural environment</i></b>						
<b>Nature of impact:</b>	Direct (fire) and indirect (visual, smoke, smog)						
<b>Description of impact</b>	Unintentional and uncontrolled fires can have high significant impacts on the social and natural environment. Site is approximately 741m2 in extent and comprised of intact thicket vegetation, aeolian sands and dune systems. Some Rooikrantz is growing in surrounding dune areas. Thicket is not fire driven and the site is considered to have a moderate fire risk. Clearing rooikrans and ongoing indigenous landscaping will decrease the fire risk.						
<b>Impact Rating</b>	Impact Status	Negative		Negative Impact		Negative Impact	
	Impact Criteria	No go / baseline		Without mitigation		With mitigation	
	Spatial	Site	2	Local	3	Site	2
	Duration	Very short	1	Very short	1	Very short	1
	Frequency	Rare	1	Rare	1	Rare	1

# EAP Services

	Intensity	Low to medium	2	Medium	3	Low to medium	2
	Severity	Low	4	Low	5	Low	4
	Consequence	Medium	6	Medium	8	Low	6
	Probability	Plausible	3	Plausible	3	Plausible	3
	Impact Significance	Low	9	Medium	11	Low	9
	Mitigation	Possible					
	Confidence	High.					
<b>Mitigation Measures</b>	<p><b>Construction and maintenance as required (include in training to contractors and subcontractors)</b></p> <ul style="list-style-type: none"> <li>No cigarette butts or burning substances are permitted to be released into the environment. All cigarette butts to be extinguished first and then disposed of in a waste receptacle provided.</li> <li>No burning of waste – put in place waste management measures to ensure waste is moved off site timeously, particularly AIS slashed material which can be a fire risk if it is not chipped and spread.</li> <li>Fire response measures to be in place at risk areas along site (I,e fire extinguishers, fire emergency response water)</li> <li>If a fire is detected it must be attended to immediately.</li> <li>Fire emergency response measures and associated training to be in place.</li> <li>Ensure emergency numbers are on hand for fire response in the area.</li> <li>Contractors are encouraged to be in close contact with South African weather Services at all times to receive early warning details of floods, droughts, high winds and potential fires in the area and plan accordingly</li> </ul>						
<b>Impact 10:</b>	<b>Traffic and road - Personnel vehicles, construction vehicles, deliveries / collections, machinery</b>						
<b>Nature of impact:</b>	<b>Direct and cumulative</b>						
<b>Description of impact</b>	The development area is located in an urban area. Access to the land portion is via de Jager Road. Construction will involve transporting of workers to and from the site on a daily basis; delivery of building materials and site visits by relevant service providers. With mitigation in place, the impact is expected to be low to negligible.						
<b>Impact Rating</b>	Impact Status	Negligible		Negative Impact		Negative Impact	
	Impact Criteria	No go alternative (baseline)		Without mitigation		With mitigation	
	Spatial	-	-	Activity	1	Activity	1
	Duration	-	-	Very short	1	Very short	1
	Frequency	-	-	Seldom	3	infrequent	2
	Intensity	-	-	Low	1	Low	1
	Severity	-	-	Low	5	Low	4

	Consequence	-	-	Low	6	Low	5
	Probability	-	-	Probable	4	Slight	2
	<b>Impact Significance</b>	-	-	<b>Low</b>	<b>10</b>	<b>Low</b>	<b>7</b>
	Mitigation	Possible					
	Confidence	High					
	<ul style="list-style-type: none"> <li>Entrance to the site only permitted from designated access point provided by landowner</li> <li>Ensure strict access control to and from the construction site at all times.</li> <li>All construction vehicles are to be monitored to ensure they are not overly full so the likelihood of spillage of debris is prevented. Ensure any debris spilled onto roads is cleared up.</li> <li>Any loose materials transported to / from site must be covered.</li> <li>Surrounding area and roads should be monitored for debris and materials associated with the proposed development and cleaned up as soon as such becomes apparent.</li> <li>All materials to be delivered in a safe manner at designated delivery area located within footprint of the development site; ensure sufficient space is allocated in the construction site plan to provide safe turning for larger trucks.</li> <li>Speed travelled by construction vehicles must be kept to a minimum and speed limits enforced; contractors and service providers are to travel slowly and avoid collisions with wildlife.</li> <li>No transport of construction machinery / materials to or from the site to take place on public holidays or weekends.</li> <li>Contractor to minimise trips to and from site as far as practically possible.</li> <li>All vehicles are to be in good working order and equipped with spare parts (tyre etc) to avoid breakdowns along the private road and disrupting other users of the road.</li> </ul>						
<b>Impact 11:</b>	<b>Noise impacts</b>						
<b>Nature of impact:</b>	Noise impacts disturbing nearby residents						
<b>Description of impact</b>	The site is located in a urban area with the nearest neighbouring dwelling is located approximately 30 meters from the development site. The beach is south of the development, and the dunes prevent line of sight from the beach to the development area. Sources of noise during construction phase include construction personnel, vehicles and any machinery used for clearing of vegetation, levelling, and excavation. Any noise generated is likely to be experienced by those close to the construction activity. With mitigation measures in place, the noise impacts will be short-lived and considered to be negative and of low significance.						
<b>Impact Rating</b>	Impact Status	Negative		Negative Impact		Negative / Negligible Impact	
	Impact Criteria	No go / baseline – not applicable		Without mitigation		With mitigation	

# EAP Services

	Spatial			Activity	1	Activity	1
	Duration			Very short	1	Very short	1
	Frequency			Seldom	2	Rare	1
	Intensity			Low to medium	2	Low	1
	Severity			Low	5	Negligible	3
	Consequence			Low	6	Negligible	4
	Probability			Plausible	3	Slim	1
	<b>Impact Significance</b>			<b>Low</b>	<b>9</b>	<b>Negligible</b>	<b>5</b>
	Mitigation	Possible					
	Confidence	High.					
<b>Impact 12:</b>	<b>Visual impacts</b>						
<b>Nature of impact:</b>	Direct (receptors)						
<b>Description of impact</b>	Sources of visual impacts during construction phase include poor housekeeping and poor waste management. Construction will take approximately 6 - 24 months to complete. Receptors of visual impacts during construction includes the neighbouring residents in the area. Strict implementation of all mitigation measures will minimise visual impacts.						
<b>Impact Rating</b>	Impact Status	Negative		Negative Impact		Negative / Negligible Impact	
	Impact Criteria	No go / baseline – not applicable		Without mitigation		With mitigation	
	Spatial			Activity	1	Activity	1
	Duration			Short – medium	3	Short – medium	3
	Frequency			Regular	4	Seldom	3
	Intensity			Low to medium	2	Low	1
	Severity			Low	9	Negligible	7
	Consequence			Low	10	Negligible	8
	Probability			Plausible	3	Slight	2
	<b>Impact Significance</b>			<b>medium</b>	<b>13</b>	<b>Low</b>	<b>10</b>
	Mitigation	Possible					
	Confidence	High.					
<b>Mitigation Measures</b>	<b>Construction and maintenance as required (include in training to contractors and subcontractors)</b>						
	<ul style="list-style-type: none"> <li>Sufficient notice to be given to the residents with an indication of a work schedule and expected work commencing on their households</li> </ul>						

# EAP Services

	<ul style="list-style-type: none"> <li>Working hours to be restricted to daytime hours (i.e. 7:30 am – 5:30pm)</li> <li>No major construction work to take place after hours or on Sundays or on public holidays.</li> <li>A complaints register should be kept to document complaints and the corrective action taken.</li> <li>Keep working area as small as possible in identified developable area.</li> <li>No loud music to be allowed on site.</li> <li>All vehicles and machinery must be kept in good working condition.</li> <li>Ensure good housekeeping by putting in place required mitigation measures (soil, waste management as applicable)</li> </ul>																																																																																				
<b>Impact 13:</b>	<b>Income generation</b>																																																																																				
<b>Nature of impact:</b>	Direct (employment, sourcing of materials and associated services) and indirect (skills development and transfer of skills)																																																																																				
<b>Description of impact</b>	Construction phase of the development will result in positive impacts through direct employment, sourcing of materials and associated services required. Skills development is expected to result from associated opportunities. An estimated 10 employment opportunities will be created during the planning and construction phase. Local labour (local reputable contractor) should be sourced from the local area as far as possible to enhance the benefits of employment creation to the immediate area . Materials and any required professional services should also be sourced locally as far as possible. The project will offer temporary employment to contractors which is a positive social impact. Indirect skills development is also expected which is a permanent positive impact.																																																																																				
<b>Impact Rating</b>	<table border="1"> <thead> <tr> <th>Impact Status</th> <th colspan="2"></th> <th colspan="2">Positive Impact</th> <th colspan="2">Positive Impact</th> </tr> <tr> <th>Impact Criteria</th> <th colspan="2">No go / baseline</th> <th colspan="2">Without mitigation</th> <th colspan="2">With mitigation</th> </tr> </thead> <tbody> <tr> <td>Spatial</td> <td>-</td> <td>-</td> <td>Local</td> <td>3</td> <td>Local</td> <td>3</td> </tr> <tr> <td>Duration</td> <td>-</td> <td>-</td> <td>Very short</td> <td>1</td> <td>Very short</td> <td>1</td> </tr> <tr> <td>Frequency</td> <td>-</td> <td>-</td> <td>Rare</td> <td>1</td> <td>Rare</td> <td>1</td> </tr> <tr> <td>Intensity</td> <td>-</td> <td>-</td> <td>Low</td> <td>1</td> <td>Low</td> <td>1</td> </tr> <tr> <td>Severity</td> <td>-</td> <td>-</td> <td>Negligible</td> <td>3</td> <td>Low</td> <td>3</td> </tr> <tr> <td>Consequence</td> <td>-</td> <td>-</td> <td>Low</td> <td>6</td> <td>Low</td> <td>6</td> </tr> <tr> <td>Probability</td> <td>-</td> <td>-</td> <td>Probable</td> <td>4</td> <td>Expected</td> <td>5</td> </tr> <tr> <td><b>Impact Significance</b></td> <td>-</td> <td>-</td> <td><b>Low</b></td> <td><b>10</b></td> <td><b>Medium</b></td> <td><b>11</b></td> </tr> <tr> <td>Mitigation</td> <td colspan="6">Possible</td> </tr> <tr> <td>Confidence</td> <td colspan="6">High.</td> </tr> </tbody> </table>	Impact Status			Positive Impact		Positive Impact		Impact Criteria	No go / baseline		Without mitigation		With mitigation		Spatial	-	-	Local	3	Local	3	Duration	-	-	Very short	1	Very short	1	Frequency	-	-	Rare	1	Rare	1	Intensity	-	-	Low	1	Low	1	Severity	-	-	Negligible	3	Low	3	Consequence	-	-	Low	6	Low	6	Probability	-	-	Probable	4	Expected	5	<b>Impact Significance</b>	-	-	<b>Low</b>	<b>10</b>	<b>Medium</b>	<b>11</b>	Mitigation	Possible						Confidence	High.					
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<b>Mitigation Measures</b>	<b>Construction and maintenance as required (include in training to contractors and subcontractors)</b> <ul style="list-style-type: none"> <li>Use local reputable contractor</li> </ul>																																																																																				

# EAP Services

	<ul style="list-style-type: none"> <li>• Use local materials, where possible.</li> <li>• Make use of local services where required and possible</li> <li>• Do not pay any cash wages on site to minimise criminal risk to employees</li> <li>• Ensure requirements of Health And Safety Act and Labour Act are in place as required</li> </ul>
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## D.2.3 OPERATIONAL PHASE

<b>Alternative:</b>	<b>Dwelling within dynamic coastal area</b>						
NEMA LN Activity	EA prior to development within 100m of HWM; clearance indigenous vegetation						
NEMBA/ PNCO / NFA	Permits for scc and / or protected trees if and as required						
HRA Section 38	Permit for any archaeological, palaeontological resource that may be uncovered during construction / maintenance activities if and as required						
NEMWA	Waste management hierarchy – avoid, reduce, reuse, recycle, dispose						
NEMBA, CARA	AIS to be removed by landowner						
NEM: ICMA	development within 100m of HWM of sea						
<b>Aspect</b>	<b>Residential dwelling</b>						
<b>Impact 1:</b>	<b><i>AIS and indigenous flora and erosion and dune stability</i></b>						
<b>Nature of impact:</b>	Direct and indirect (fauna) and cumulative (dune, coastal, terrestrial)						
<b>Description of impact</b>	Ongoing removal of AIS (and replacement with indigenous) during operations on the site can result in a positive impact if implemented and lead to natural rejuvenation of indigenous vegetation, if implemented, and can, in the long term result in attracting of indigenous birds, invertebrates and reptiles to the site due to habitat and forage creation on the site. The dunes will be more stable with a permanent vegetation; the owner must minimise walking through the dune vegetation as far as possible and avoid creating multiple tracks through the vegetated area.						
<b>Impact Rating</b>	Impact Status	Negative Impact		Positive Impact			
	Impact Criteria	No go / current		With mitigation			
	Spatial	Activity	1	Local	3	Activity	1
	Duration	Medium	3	Medium to long	4	Very short	1
	Frequency	Seldom	3	Seldom	3	Infrequent	2
	Intensity	Low	1	Low	1	Low	1

# EAP Services

	Severity	Medium	7	Medium	8	Negligible	4
	Consequence	Medium	8	Medium	11	Low	5
	Probability	Slight	2	Probable	4	Slim to slight	6
	<b>Impact Significance</b>	Low	10	Medium	15	Low	7
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>• The landowners are to responsible for the vegetation maintenance per land portion and to resume ongoing AIS clearing and revegetation as required.</li> <li>• All AIS removed must be placed in a designated area on site and removed offsite as quickly as possible to a suitably licensed general waste site.</li> <li>• When removing AIS ensure the area is not left bare and use mulch, indigenous seeds and plants local to the area, to hold soil in place (have mulch, seeds, seedlings ready prior to clearing)</li> <li>• Follow working for water guidelines / ARC guidelines – Working for water: <a href="mailto:wfw@dwaf.gov.za">wfw@dwaf.gov.za</a> National Department of Agriculture: <a href="mailto:Declaredweedsandinvaders@nda.agric.za">Declaredweedsandinvaders@nda.agric.za</a> Agricultural Research Council for biocontrol: <a href="http://www.arc.agric.za">www.arc.agric.za</a></li> </ul>						

# EAP Services

AIS Identification guide	Biological control	Mechanical control	Chemical control	Specific management measure
 <p data-bbox="219 587 680 616">Western coastal rooikrans (<i>Acacia cyclops</i>)</p>	<p data-bbox="703 236 996 491">Seed feeding weevils (<i>Melanterius servulus</i>)– reduces seed production; Midge -(<i>Dasineura diels</i>) induces galls on the ovary, introduce and can control seed production.</p>	<p data-bbox="1014 236 1332 416">Hand pulling seedlings; Pulled out either by hand or using a tree popper. This is the most preferred method of control.</p>	<p data-bbox="1350 236 1653 341">YES – after cutting apply herbicide to stumps to prevent growth</p>	<p data-bbox="1671 236 2027 416">Plants MUST be pulled out roots and all for this method to be effective. Minimise soil disturbance to reduce seed germination.</p> <p data-bbox="1671 464 2027 569">Regular follow-up treatments are necessary to control seedlings and regrowth.</p>
 <p data-bbox="219 1200 607 1228">Castor Oil Plant (<i>Ricinus communis</i>)</p>		<p data-bbox="1014 703 1332 767">Yes – hand remove prior to seed, bag and dispose</p>	<p data-bbox="1350 703 1397 727">Yes</p>	
<b>Impact 2:</b>	<b>Property value</b>			
<b>Nature of impact:</b>	Direct (Landowner) and indirect and cumulative (KLM)			
<b>Description of impact</b>	The landowner would like to develop a residential dwelling and lookout point on the property and make use of the property to enjoy coastal activities such as kite boarding and surfing. The site is situated within Paradys beach. The development of the dwelling			

# EAP Services

	will increase the value of the property significantly. There will an increase in local rates and taxes to the KLM, which will offer additional funds for upgrading/maintenance works on services and infrastructure within the local area that will benefit the local community.						
<b>Impact Rating</b>	Impact Status	Positive		Positive		Positive Impact	
	Impact Criteria	No go / baseline		Without mitigation		With mitigation	
	Spatial	Site	2	Site	2	Site	2
	Duration	Very short	1	Very short	1	Very short	1
	Frequency	Rare	1	Rare	1	Rare	1
	Intensity	Low to medium	2	Medium	3	Medium to high	4
	Severity	Low	4	Low	5	Low	6
	Consequence	Low	6	Low	7	Medium	8
	Probability	Plausible	3	Probable	4	Expected	5
	<b>Impact Significance</b>	<b>Low</b>	<b>9</b>	<b>Medium</b>	<b>11</b>	<b>Medium</b>	<b>13</b>
	Mitigation	Possible					
Confidence	High.						
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>Implement recommended mitigation measures and any conditions of the EA (if attained)</li> </ul>						
<b>Impact 3:</b>	<b>Water Quality – Elevated Nutrient and Bacterial Levels</b>						
<b>Nature of impact:</b>	Direct / Indirect / cumulative as applicable						
<b>Description of impact</b>	There will be a low risk of sewage effluent entering the surrounding area, which could potentially result in impacts of moderate significance in the receiving aquatic environment. However, with appropriate mitigation this potential impact could readily be reduced to low significance. Due to the proposed conservancy tank sanitation system, the potential risk that domestic effluent could contaminate the area is highly unlikely provided the system is maintained and operated effectively and adequate precautions taken to prevent spillages.						
<b>Impact Rating</b>	Impact Status	Negative Impact		Negative Impact		Negative Impact	
	Impact Criteria	No-go / baseline		Without mitigation		With mitigation	
	Spatial	Local	3	Local	3	Activity	1
	Duration	Medium	3	Very short	1	Very short	1
	Frequency	regular	4	Infrequent	2	Rare	1

	Intensity	Low to medium	2	Low to medium	2	Low	1
	Severity	Medium	9	Negligible	5	Negligible	3
	Consequence	Medium	12	Negligible	8	Negligible	4
	Probability	Probable	4	Plausible	3	Slight	2
	<b>Impact Significance</b>	<b>Medium</b>	<b>16</b>	<b>Medium</b>	<b>11</b>	<b>Low</b>	<b>6</b>
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>The proposed on-site conservancy tanks should be constructed, operated and maintained according to the design specifications to prevent leakage and emptied regularly to prevent overtopping.</li> <li>Care should be taken, particularly during rainfall events and flooding events when conservancy tanks may be inundated due to high groundwater levels, to prevent nutrient-rich water from flowing into the surrounding area.</li> <li>Ensure no disposal of items that can cause blockages / malfunctioning of system is not flushed down toilets.</li> <li>Install the sewage and wastewater infrastructure according to applicable national SANS standards, DWS Guidelines and adhere to municipal regulations &amp; by-laws.</li> <li>Monitoring of water quality (e.g. determination of E. coli levels) immediately upstream and downstream of the proposed development site should be undertaken at regular intervals (e.g. at least twice a year) in order to detect any pollution emanating from the site due to overloading or poor management of the conservancy tank sanitation system</li> <li>It is recommended that the existing septic tank be replaced with a conservancy tank (which is a closed system) with sufficient capacity.</li> <li>Ensure the waste is regularly pumped out whenever the tank is full by a licensed hauling company ('Honey Sucker Service' to remove the content to the closest Wastewater Treatment Works once the tank is full). Keep record of service for audit purposes.</li> </ul>						
<b>Impact 4:</b>	<b>Stormwater Runoff Causing Erosion</b>						
<b>Nature of impact:</b>	Direct (loss of vegetation and soil, erosion) and cumulative (disturbance to dune system)						
<b>Description of impact</b>	Elevated erosion and sediment mobilization is possible due to clearing of vegetation and resultant destabilization of the dunes and land adjacent to the development during operations. This could result in increased sediment run-off from disturbed areas on the site during heavy rains, river flood events, exceptionally high tides due to storm surges and (in the long term) to sea level rise when the sensitive banks are over-topped and eroded						

	<p>Any disturbance of the dune system and removal of ground cover during both site preparation and the construction phase in the absence of appropriate stabilisation measures, could result in increased erosion. The Maintenance Management Plan for the Coastal Area between the Kromme and Kabeljous beaches, and the Seekoei Estuarine Functional Zone, Kouga Municipality indicates that dune restoration - sand traps, brush packing and sand barriers is a high priority and should start within 1 – 2years of the approval of the environmental authorisation and the maintenance management plan.</p> <p>Unless all disturbed areas are adequately stabilized with vegetation (or well-designed erosion-protection works) which are adequately maintained, erosion could occur during heavy rains and floods. The proposed development has taken the dune system into consideration and it is recommended to maintain dense ground cover to prevent erosion. With appropriate mitigation the likelihood of elevated erosion and increased sediment mobilization is considered to be low and should readily be reduced to an insignificant impact with appropriate mitigation.</p>						
<b>Impact Rating</b>	Impact Status	Negligible		Negative Impact		Negative Impact	
	Impact Criteria	No go alternative (baseline)		Without mitigation		With mitigation	
	Spatial	Site	2	Site	2	Activity	1
	Duration	Short	2	Short – medium	3	Very short	1
	Frequency	Seldom	3	Seldom	3	Rare	1
	Intensity	Low	1	Low – medium	2	Low	1
	Severity	Low	6	Medium	8	Negligible	3
	Consequence	Low	8	Medium	10	Negligible	4
	Probability	Slim	2	Plausible	3	Plausible	3
	Impact Significance	Low	10	Medium	13	Low	7
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>• Avoid making footpaths through dune vegetation; make use of walkway and lookout point and designated footpaths in the area.</li> <li>• The lookout point is recommended for cleaning of surfing equipment due to space constraints and to avoid disturbance to dune vegetation and dune sands</li> <li>• Establishing dense stands of suitable indigenous vegetation within the erf boundary</li> <li>• Stormwater tanks to be installed to capture water from roofing structures.</li> <li>• The rainwater and gutter system to be designed by an approved competent person.</li> </ul>						

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	<ul style="list-style-type: none"> <li>The planned access and driveways will need to include suitable stormwater management measures to manage the anticipated runoff during storm events. Permeable pavers are recommended (if required) to allow quick infiltration of water to the permeable soils below</li> <li>Check weather reports for rainfall predictions on a weekly and daily basis. Do not carry out maintenance work during rainfall and ensure the site has been prepared to prevent wash off of materials as required</li> <li>Progressively place back subsoil, then topsoil and mulch and revegetate exposed areas once maintenance activity has been completed</li> </ul>						
<b>Impact 5:</b>	<b>General Waste pollution</b>						
<b>Nature of impact:</b>	Direct and indirect and cumulative (Disturbance to flora and fauna; health impacts, visual impacts)						
<b>Description of impact</b>	This impact mainly concerns the proper management of operational related waste materials						
<b>Impact Rating</b>	Impact Status	Negative Impact		Negative Impact		Negative Impact	
	Impact Criteria	No go / baseline		Without mitigation		With mitigation	
	Spatial	Activity	1	Site	2	Activity	1
	Duration	Very short	1	short	2	Very short	1
	Frequency	Infrequent	2	Infrequent	2	Infrequent	2
	Intensity	Low	1	Low	1	Low	1
	Severity	Medium	4	Medium	5	Medium	4
	Consequence	Medium	5	Medium	8	Medium	5
	Probability	slim	1	slight	2	slim	1
	Impact Significance	Low	6	Low	10	Low	6
	Mitigation	Possible					
Confidence	High						
<b>Impact 6:</b>	<b>Hazardous substance management</b>						
<b>Nature of impact:</b>	Direct and indirect and cumulative (disturbance to flora and fauna; health impacts, visual impacts).						
<b>Description of impact</b>	Spillages of diesel, petrol, oil, paints, clears and other harmful chemicals. These substances may potentially enter the surrounding environment.						
<b>Impact Rating</b>	Impact Status	Negligible		Negative Impact		Negative Impact	
	Impact Criteria	No go / baseline		Without mitigation		With mitigation	
	Spatial			Local	2	Activity	1

	Duration			short	2	Very short	1
	Frequency			Regular	4	Seldom	3
	Intensity			Low to medium	2	Low to medium	2
	Severity			Medium	8	Low	6
	Consequence			Medium	10	Low	7
	Probability			Expected	5	Plausible	3
	Impact Significance			Medium	15	Low	<b>10</b>
	Mitigation	Possible					
	Confidence	High					
<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>Identify closest registered waste site</li> <li>Under no circumstances may any solid waste be burnt or buried on site / surrounding area</li> <li>Waste management must follow waste hierarchy – avoid, reduce, reuse, recycle, dispose</li> <li>Specific area must be designated for general waste management at each dwelling. i.e. plastic, paper, tin, glass, organic</li> <li>Ensure regular offsite removal of waste to suitably licensed disposal / transfer site</li> <li>Specific area must be designated for storage of all hazardous materials and substances required for operations and / or maintenance. Ensure cleaning materials, volatile materials and other hazardous materials (e.g. chemicals) are securely stored within a suitable sealable non-corrosive container. Ensure lids are secure to avoid unnecessary release into the environment. Store on a bunded area covered with roof and secure with lock and key. Recommended to place this under the dwelling adjacent to lockable garage.</li> </ul>						
<b>Impact 7:</b>	<b><i>Unintentional and uncontrolled fires can have high significant impacts on the social and natural environment</i></b>						
<b>Nature of impact:</b>	Direct (fire) and indirect (visual, smoke, smog)						
<b>Description of impact</b>	Unintentional and uncontrolled fires can have high significant impacts on the social and natural environment. Site is approximately 735m2 in extent and comprised of intact thicket vegetation, aeolian sands and dune systems. Some Rooikrantz is growing in surrounding dune areas. Thicket is not fire driven and the site is considered to have a moderate fire risk. Clearing rooikrans and ongoing indigenous landscaping will decrease the fire risk.						
<b>Impact Rating</b>	Impact Status	Negative		Negative Impact		Negative Impact	
	Impact Criteria	No go / baseline		Without mitigation		With mitigation	
	Spatial	Site	2	Local	3	Site	2
	Duration	Very short	1	Very short	1	Very short	1
	Frequency	Rare	1	Rare	1	Rare	1

	Intensity	Low to medium	2	Medium	3	Low to medium	2
	Severity	Low	4	Low	5	Low	4
	Consequence	Medium	6	Medium	8	Low	6
	Probability	Plausible	3	Plausible	3	Plausible	3
	Impact Significance	Low	9	Medium	11	Low	9
	Mitigation	Possible					
	Confidence	High.					
<b>Mitigation Measures</b>	<p><b>Landowners</b></p> <ul style="list-style-type: none"> <li>• No fires beyond boundary of portion</li> <li>• No cigarette butts or burning substances are permitted to be released into the environment. All cigarette butts to be extinguished first and then disposed of in a waste receptacle provided.</li> <li>• No burning of waste – put in place waste management measures to ensure waste is moved off site timeously, particularly AIS slashed material which can be a fire risk if it is not chipped and spread.</li> <li>• Fire response measures to be in place at risk areas along site (l,e fire extinguishers, fire emergency response water)</li> <li>• If a fire is detected it must be attended to immediately.</li> <li>• Ensure emergency numbers are on hand for fire response in the area.</li> <li>• Regularly check South African weather Services at all times to receive early warning details of floods, droughts, high winds and potential fires in the area and plan accordingly</li> </ul>						

## D.2.4 DECOMMISSIONING AND CLOSURE PHASE (ALTERNATIVE (PREFERRED ALTERNATIVE))

This phase is applicable to the decommissioning of all existing structures as required. Planning and Construction phase impacts and mitigations are relevant to decommissioning of any structures.

## 3 CLIMATE CHANGE ASSESSMENT

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

- 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;
- 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;

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- c) whether, and to what extent, the proposed development will result in the release of greenhouse gas (GHG) emissions;
- d) whether the proposed development is necessary to achieve long term decarbonisation goals;
- e) the impact of the development on social, economic, natural and built environment that are crucial for climate change, adaptation and resilience;
- f) the projected impact of climate change on proposed development; and surrounding environment, and implications for the development.
- g) Explanation of how the impacts is 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
- h) whether, and to what extent, the impacts identified in (a) -(g) can be mitigated.

### Climate Change

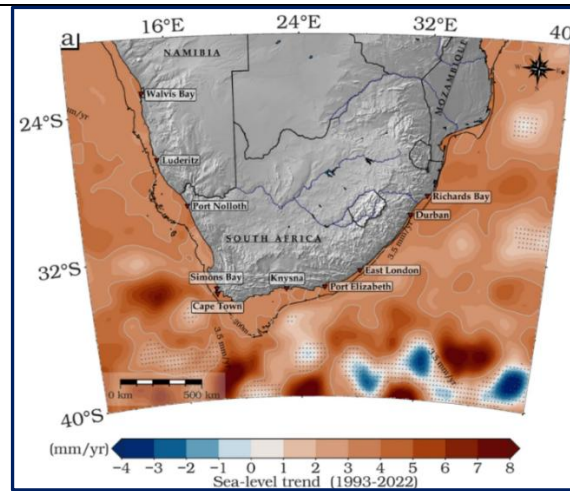
The Sarah Baartman Coastal Management Programme was finalised in January 2020. The broad objectives to which the EA application process and recommended mitigation measures of the proposed development attempt to align to are listed below:

- *Apply a risk-averse approach in development planning, where high risk areas are avoided, and where important biodiversity areas, unique habitats, ecological processes and other natural areas are protected.*
- *Manage the coastal environment and its catchment area to be resilient to the impacts of climate change.*
- *Allow ecological processes to function and avoid disturbance to dynamic coastal areas.*
- *Facilitate information sharing and transparency to allow for participatory management of the coastal zone and informed decision-making.*
- *Maintain good coastal water quality that is safe for recreational exposure and resource use, and that is needed by natural organisms to persist.*
- *Plan for sustainable coastal development that protects natural habitats and archaeological/cultural/heritage features and the ecological processes that support these, and enhances the livelihoods and well-being of the local community.*
- *Prioritise low impact development that is suitable to the area and retains 'sense of place'.*
- *The coast must be developed in a manner that allows for safe access and enjoyment by all people.*
- *Coastal development must be designed to build resilience to the impacts of climate change and sea-level rise.*

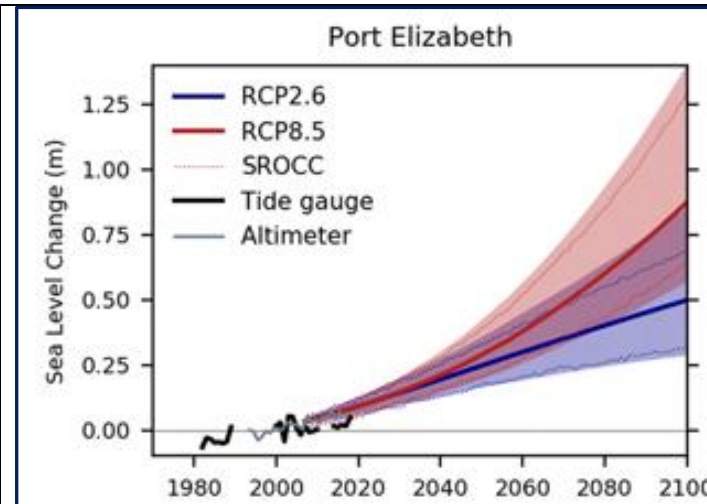
The Kouga Maintenance Management Plan for the Coastal Area between the Kromme and Kabeljous beaches, and the Seekoei Estuarine Functional Zone, indicates that dune restoration - sand traps, brush packing and sand barriers is a high priority and should start within 1 – 2years of the approval of the environmental authorisation and the maintenance management plan.

### Sea level rise and future trends

The predicted sea level rise for South Africa varies by region, but recent studies indicate that coastal areas in the region of Port Elizabeth is experiencing sea level rise at a rate ranging from 1.2 to 2.9 mm per year. These values are similar to the global average of 3.3 mm. Some areas of South Africa, such as Cape Town, measured nearly double the global rate (Kemgang Ghomsi et al., 2025). Sea level rise is likely to continue over the next decade and beyond, with possible changes in the sea level ranging between 0.25 m and 1.25 m by 2100. These regional variations are driven by warming ocean waters, melting glaciers, melting ice sheets and rising landmasses (partly offsetting rising sea levels).



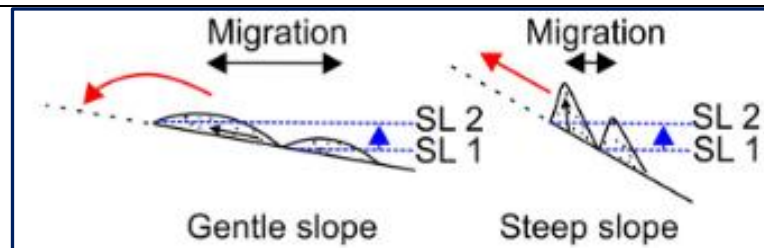
Sea level rise trends from 1993 to 2022 for the South African coastline (Kemgang Ghomsi et al., 2025)



Sea level rise predictions for Port Elizabeth (Allison et al., 2022)

In an assessment of likely future scenarios of the South African coastline Cooper and Green (2023) proposed several models of likely change. The model that applies most to the Paradise Beach coast, is a beach and dune system that is underlain by a bedrock platform. As the dunes along the Paradise Beach section of the coastline are low in elevation, the supply of sediment from these locations to the beach will be very limited. As these beaches and dunes are underlain by bedrock, the dynamic will be different in that the shoreline and beach will retreat in relation to the elevated sea level and the intersecting underlying bedrock. The angle of the underlying bedrock will influence the rate of shoreline retreat, with shallow bedrock platforms experiencing larger retreat rates compared to steeper bedrock platforms. Most of the *Paradise Beach* shoreline is formed on this rocky platform and therefore it is likely to follow this model along most of the shoreline.

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Conceptual model of beach dynamics in relation to sea level rise on a bedrock platform (SL1 is the present-day level and SL2 the elevated sea level)(Cooper and Green, 2023)

<b>Impact 1:</b>	<b>Impact of development on climate change</b>																																																																			
<b>Nature of impact:</b>	Direct																																																																			
<b>Description of impact</b>	The site has an existing dwelling. Energy saving measures will be incorporated into the design; a combination of gas, Eskom electricity and solar will be used. Designs will incorporate orientation and insulation. Glazing and aluminium will be incorporated for the windows and door to assist with energy efficiency and withstanding coastal elements. Solar panels are recommended to be included as part to the design of the dwelling to augment supply demand (from non-renewable resources) of the residency; the impact of this development on climate change is negligible.																																																																			
<b>Impact Rating</b>	<table border="1"> <tr> <td>Impact Status</td> <td colspan="2">Negative Impact</td> <td colspan="2">Negative Impact</td> </tr> <tr> <td rowspan="2">Impact Criteria</td> <td colspan="4">Impact significance</td> </tr> <tr> <td colspan="2">Without mitigation</td> <td colspan="2">With mitigation</td> </tr> <tr> <td>Spatial</td> <td>Site</td> <td>2</td> <td>Activity</td> <td>1</td> </tr> <tr> <td>Duration</td> <td>Very short</td> <td>1</td> <td>Very short</td> <td>1</td> </tr> <tr> <td>Frequency</td> <td>Infrequent</td> <td>2</td> <td>Rarely</td> <td>1</td> </tr> <tr> <td>Intensity</td> <td>Low</td> <td>1</td> <td>Low</td> <td>1</td> </tr> <tr> <td>Severity</td> <td>Low</td> <td>4</td> <td>Negligible</td> <td>3</td> </tr> <tr> <td>Consequence</td> <td>Low</td> <td>6</td> <td>Negligible</td> <td>4</td> </tr> <tr> <td>Probability</td> <td>Plausible</td> <td>3</td> <td>Slim</td> <td>1</td> </tr> <tr> <td><b>Impact Significance</b></td> <td><b>Low</b></td> <td><b>9</b></td> <td><b>Negligible</b></td> <td><b>5</b></td> </tr> <tr> <td>Mitigation</td> <td colspan="4">Possible</td> </tr> <tr> <td>Confidence</td> <td colspan="4">High</td> </tr> </table>				Impact Status	Negative Impact		Negative Impact		Impact Criteria	Impact significance				Without mitigation		With mitigation		Spatial	Site	2	Activity	1	Duration	Very short	1	Very short	1	Frequency	Infrequent	2	Rarely	1	Intensity	Low	1	Low	1	Severity	Low	4	Negligible	3	Consequence	Low	6	Negligible	4	Probability	Plausible	3	Slim	1	<b>Impact Significance</b>	<b>Low</b>	<b>9</b>	<b>Negligible</b>	<b>5</b>	Mitigation	Possible				Confidence	High			
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<b>Impact 2:</b>	<b>Risk of climate change on property</b>																																																																			
<b>Nature of impact</b>	<b>Cumulative</b> (combined effect of changes to the environment caused by multiple human activities over space and time)																																																																			

# EAP Services

<b>Description of impact</b>	Predicting the extent of the coastal erosion can be based on the slope of the wave planed bedrock underlying the beach and the dunes. Unfortunately, this information is not available at present.																																																																			
<b>Impact Rating</b>	<table border="1"> <tr> <td data-bbox="533 304 965 336">Impact Status</td> <td colspan="2" data-bbox="976 304 1480 336">Negative Impact</td> <td colspan="2" data-bbox="1491 304 2022 336">Negative Impact</td> </tr> <tr> <td data-bbox="533 344 965 376" rowspan="2">Impact Criteria</td> <td colspan="4" data-bbox="976 344 2022 376">Impact significance</td> </tr> <tr> <td colspan="2" data-bbox="976 376 1480 408">Without mitigation</td> <td colspan="2" data-bbox="1491 376 2022 408">With mitigation</td> </tr> <tr> <td data-bbox="533 408 965 440">Spatial</td> <td data-bbox="976 408 1301 440">Site</td> <td data-bbox="1312 408 1480 440">2</td> <td data-bbox="1491 408 1749 440">Activity</td> <td data-bbox="1760 408 2022 440">1</td> </tr> <tr> <td data-bbox="533 440 965 472">Duration</td> <td data-bbox="976 440 1301 472">Long term</td> <td data-bbox="1312 440 1480 472">6</td> <td data-bbox="1491 440 1749 472">Long term</td> <td data-bbox="1760 440 2022 472">6</td> </tr> <tr> <td data-bbox="533 472 965 504">Frequency</td> <td data-bbox="976 472 1301 504">Rare</td> <td data-bbox="1312 472 1480 504">1</td> <td data-bbox="1491 472 1749 504">Rare</td> <td data-bbox="1760 472 2022 504">1</td> </tr> <tr> <td data-bbox="533 504 965 536">Intensity</td> <td data-bbox="976 504 1301 536">Medium High</td> <td data-bbox="1312 504 1480 536">4</td> <td data-bbox="1491 504 1749 536">Medium</td> <td data-bbox="1760 504 2022 536">3</td> </tr> <tr> <td data-bbox="533 536 965 568">Severity</td> <td data-bbox="976 536 1301 568">Medium High</td> <td data-bbox="1312 536 1480 568">11</td> <td data-bbox="1491 536 1749 568">Medium High</td> <td data-bbox="1760 536 2022 568">10</td> </tr> <tr> <td data-bbox="533 568 965 600">Consequence</td> <td data-bbox="976 568 1301 600">Medium High</td> <td data-bbox="1312 568 1480 600">13</td> <td data-bbox="1491 568 1749 600">Medium</td> <td data-bbox="1760 568 2022 600">11</td> </tr> <tr> <td data-bbox="533 600 965 632">Probability</td> <td data-bbox="976 600 1301 632">Plausible</td> <td data-bbox="1312 600 1480 632">3</td> <td data-bbox="1491 600 1749 632">Plausible</td> <td data-bbox="1760 600 2022 632">3</td> </tr> <tr> <td data-bbox="533 632 965 663"><b>Impact Significance</b></td> <td data-bbox="976 632 1301 663">Medium High</td> <td data-bbox="1312 632 1480 663"><b>16</b></td> <td data-bbox="1491 632 1749 663">Medium</td> <td data-bbox="1760 632 2022 663"><b>14</b></td> </tr> <tr> <td data-bbox="533 663 965 695">Mitigation</td> <td colspan="4" data-bbox="976 663 2022 695">Difficult</td> </tr> <tr> <td data-bbox="533 695 965 715">Confidence</td> <td colspan="4" data-bbox="976 695 2022 715">Medium</td> </tr> </table>				Impact Status	Negative Impact		Negative Impact		Impact Criteria	Impact significance				Without mitigation		With mitigation		Spatial	Site	2	Activity	1	Duration	Long term	6	Long term	6	Frequency	Rare	1	Rare	1	Intensity	Medium High	4	Medium	3	Severity	Medium High	11	Medium High	10	Consequence	Medium High	13	Medium	11	Probability	Plausible	3	Plausible	3	<b>Impact Significance</b>	Medium High	<b>16</b>	Medium	<b>14</b>	Mitigation	Difficult				Confidence	Medium			
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Mitigation	Difficult																																																																			
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<b>Mitigation Measures</b>	<ul style="list-style-type: none"> <li>As per mitigation measures for planning, construction and operational phase</li> </ul>																																																																			

## 4. 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 taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Several impacts were identified for construction and operational phase. Measures are recommended to mitigate anticipated impacts. The potential impacts associated with the proposed development are considered to be of negative of low to medium significance without any mitigation. However, all potential impacts should readily be reduced to low significance provided the construction work and ongoing operation of the development are carried out with due diligence and the appropriate mitigation measures, as recommended in this report, are adhered to. No negative impacts of high or very high significance were identified. The development is expected to have a positive impact on local employment and property value.

Due to the dynamic nature of the site within a coastal environment, the dwelling is recommended to be designed in such a way to prevent instability of the dunes and to prevent erosion. Maintaining a dense vegetation cover will trap and stabilise the sand to some extent and avoid the nuisance of sand encroachment. The house design should keep this in mind in terms of doorways and outside spaces. A raised structure would allow sand transport under the structure with less nuisance inside the buildings. The eastward part of the property could be raised (inundated by sand) in future years as the frontal dune migrates onto the property. The rate of movement is not known at this stage. To avoid these possible shifts, it is advised that the foundations/pylons of the building on Erf 1363 extend down as far as possible along the southwestern side of the building (engineering advise recommended on depths). This will allow movements of the upper part of the dune without impacting the foundations of the building on Erf 1363. The risk of these shifts is less towards the north of Erf 1363.

The draft basic assessment report will be distributed for a 30-day review and comment period. The report will then be updated to address all comments received and the final report will then be submitted to the DEDEAT for a 107-day decision making phase. The basic assessment report and appendices aim to provide all relevant information required for the competent authority to make an informed decision on the NEMA EA application.

### **Alternative A (preferred alternative)**

Due to the dynamic nature of the site within a coastal environment, the dwelling is recommended to be designed in such a way to prevent instability of the dunes and to prevent erosion. Maintaining a dense vegetation cover will trap and stabilise the sand to some extent and avoid the nuisance of sand encroachment. The house design should keep this in mind in terms of doorways and outside spaces. A raised structure would allow sand transport under the structure with less nuisance inside the buildings. The eastward part of the property could be raised (inundated by sand) in future years as the frontal dune migrates onto the property. The rate of movement is not known at this stage. To avoid these possible shifts, it is advised that the foundations/pylons of the building on Erf 1363 extend down as far as possible along the southwestern side of the building (engineering advise recommended on depths). This will allow

## EAP Services

movements of the upper part of the dune without impacting the foundations of the building on Erf 1363. The risk of these shifts is less towards the north of Erf 1363.

Detailed site layout plans and designs will be provided once environmental authorisation is in place; the site layout and designs will align to the relevant conditions of the EA (if attained) and accompanying mitigation measures contained within an approved Environmental Management Plan Report (EMPr).

Based on the scope of work, the preconstruction and planning phase is estimated to take a further 24 months to complete; the construction of the dwelling is expected to take between 6 – 24 months to complete. Refer to Appendix A for the proposed site development plan; Refer to Appendix C for the concept designs.

### **No-go alternative (compulsory)**

The 'no-go' option assumes the site remains in its current state, and there will be no temporary construction impacts or long-term positive impact for the landowner.

## 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	<input type="checkbox"/>
<input type="checkbox"/>	NO

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):

Not applicable

The EMPr will contain all recommended mitigation measures, updated to address comments received as applicable, and submitted post application with the draft basic assessment report for a 30-day review and comment period.

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:

The EMPr will contain all recommended mitigation measures, updated to address comments received as applicable, and submitted post application with the draft basic assessment report for a 30-day review and comment period. All recommended mitigation measures should be contained in an authorisation.

A preapplication meeting is planned to be held with the DEDEAT. The application for EA will then be submitted to the DEDEAT and on acceptance of application the draft BAR will be distributed to interested and affected parties for a 30-day comment and review period and then updated to a Final BAR for a 107-day decision making by the competent authority.

## SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports – Site verification report

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information – Impact Assessment Methodology

## References

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Adré Marshall & Delia Marshall (2024) A River Runs Through It: Reading the Text and Context of a River, *English Academy Review*, 41:1, 6-20, DOI: 10.1080/10131752.2023.2282338

A Coastal Management Programme for the Sarah Baartman District Municipality, 2019, CEN Integrated Environmental Management Unit

Development and Maintenance Management Plan for the Coastal Area between the Kromme and Kabelous beaches, and the Seekoei Estuarine Functional Zone, Kouga Municipality:2024, CEN Integrated Environmental Management Unit <https://environmentcen.co.za/wp-content/uploads/2024/08/01-Kouga-Coastal-Areas-FBAR.pdf>