



# Eco Route

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## AMENDED DRAFT BASIC ASSESSMENT REPORT FOR

### The Proposed Development of a Primary Dwelling and Access Road on Portion 79 of Farm 205, Ruygte Valley, Sedgefield, Western Cape

*In terms of the National Environmental Management Act, 1998 (Act No.  
107 of 1998), and the Environmental Impact Assessment Regulations,  
2014 (as amended).*



**PREPARED FOR:** DANIEL SEVENSTER AND PARTNERS INC.  
**PREPARED BY:** ECO ROUTE ENVIRONMENTAL CONSULTANCY  
**DEPARTMENT REF:** 14/12/16/3/3/1/3235  
**AUTHOR:** BIANCA GILFILLAN (EAPASA REG 2023/7929)  
**DATE:** JANUARY 2026

**AMENDED DRAFT BASIC ASSESSMENT REPORT:**  
**The Proposed Development of a Primary Dwelling and Access Road on Portion 79 of Farm 205, Ruygte Valley, Sedgefield, Western Cape**  
**DFFE REF: 14/12/16/3/3/1/3235**

*“On 08 December 2014, the Minister of Environmental Affairs promulgated regulations in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), viz, the NEMA Environmental Impact Assessment (EIA) Regulations 2014, (GN R982, R983, R984 and R985 of 04 December 2014) as amended. The NEMA EIA Regulations, 2014 and listing notices were subsequently amended on 07 April 2017 (refer to GN R324, R325, R327 of 07 April 2017) and are being referred to as NEMA EIA Regulations, 2014, as amended. The same referencing would apply to the listing notice containing the listed activities that would require Environmental Authorisation.*

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## Introduction

The property is located east of Cola Beach within the Groenvlei rural area of Sedgefield, Western Cape, and measures approximately 5.1576 hectares. The southern boundary of the property adjoins Coastal Public Property, while the site borders Portion 78 of Farm Ruygte Valley No. 205, which is zoned Agriculture Zone I and managed as a private nature reserve adjacent to the Lake Pleasant Private Nature Reserve.

According to the Western Cape Biodiversity Spatial Plan (2025), the northern portion of the site is classified as Critical Biodiversity Area 1 (CBA 1), while the southern portion is mapped as a degraded Critical Biodiversity Area 2 (CBA 2), largely as a result of historical disturbance and invasion by *Acacia cyclops*.

The site falls within the Knysna Municipal Area and is primarily accessed via Groenvlei Beach Road, a gravel road providing access toward the beach at the western boundary of the Goukamma Nature Reserve. A Public Servitude Road (Bushy Way, SG Diagram 6532/61) runs along the northern boundary of the property and connects to the N2 via the Groenvlei Divisional Road (DR 1594). This servitude route is currently overgrown and will require limited clearing and pruning along existing disturbed paths to allow vehicle access, thereby minimising vegetation loss.

The property forms part of a smallholding area subdivided in 1961 from Portion 70 (originally Portion 38 of Lake Pleasant Estate). The site remains undeveloped land and is zoned Agriculture Zone I in terms of the Knysna Zoning Scheme By-Law (1992), which permits one dwelling as a primary right. Title deed conditions imposed by Lake Pleasant Estate (Pty) Ltd require owner consent for additional dwellings and building plan approval, which will be sought from Knysna Municipality.

The site supports Goukamma Strandveld (classified as Vulnerable in the SANBI Vegetation Map, 2025) and patches of Western Cape Milkwood Forest within the CBA 1 area. The southern degraded CBA 2 portion is dominated by alien thicket vegetation. Prominent sandstone sea cliffs exceeding 80 m in height occur along the southern coastal boundary. The property is therefore situated on elevated terrain approximately 80 m above mean sea level, well above the active shoreline. Surrounding natural areas, including the proposed Goukamma Nature Reserve buffer expansion, contribute to regional ecological connectivity and the functioning of the coastal corridor.

Portions of the property fall within the broader 100-metre High Water Mark (HWM) inland zone, as identified for coastal management purposes under the National Environmental Management: Integrated Coastal Management Act, 2008 (ICMA). The HWM, as reflected on available mapping products, is indicative in nature and not a gazetted or legislatively fixed development setback line, but rather a planning tool used to identify areas potentially influenced by coastal processes such as storm surge, wave run-up, and long-term sea-level rise.

Importantly, development within the HWM requires careful risk-based assessment and mitigation, provided that site-specific coastal risk has been assessed and appropriate mitigation measures are implemented. The purpose of the HWM is therefore to inform risk-averse planning and decision-making rather than to function as an absolute exclusion area. This constraint has been explicitly considered during the site planning and layout process.

While complete avoidance of the 100 m HWM zone is not feasible due to the configuration of the property and the presence of other environmental constraints (including CBA 1 areas and Milkwood Forest), the amended preferred layout has been refined through a constraints-led design process to avoid geotechnically sensitive areas, **including the previously identified D7 structurally weak zone**. The revised footprint avoids the most sensitive coastal features, including the active shoreline, coastal cliffs, and areas of elevated erosion and instability risk, as confirmed through specialist geotechnical and engineering assessment. The amended layout therefore represents the least constrained and lowest-risk development option, informed by the updated Site Constraints Map and supported by specialist investigations.

The proposed development comprises a main dwelling, three small self-contained units, staff accommodation, an equipment shed, and associated parking and access infrastructure. The landowners currently intend to utilise the additional units for private family and guest accommodation. From a planning perspective, the proposed rezoning provides a tourism-compatible land-use framework required for multiple accommodation units on agriculturally zoned land and is aligned with long-term conservation and land-management objectives.

Vehicular access will be provided via a 3 m-wide gravel access road approximately 220 m in length, terminating in a parking area comprising four parking bays with a total area of approximately 765 m<sup>2</sup>. The total building footprint is approximately 525 m<sup>2</sup>, and pedestrian access to the units will be provided via elevated timber boardwalks to minimise soil compaction and disturbance to underlying vegetation.

The total development footprint, including buildings, access road, parking, and boardwalks, amounts to approximately 1 375 m<sup>2</sup>, representing less than 2.7% of the total site area. Approximately 97.3% of the property will remain in a natural and rehabilitated state, ensuring that the overwhelming majority of the site continues to function as a conservation landscape.

All service infrastructure will be off-grid, comprising rainwater harvesting and storage systems, solar power generation, conservancy tanks for wastewater management, and off-site waste disposal via municipal collection services. The architectural design incorporates lightweight, eco-sensitive materials, including timber, steel, glass, and natural stone, to ensure visual integration with the surrounding dune and coastal landscape.

Mitigation Commitments

- Register a conservation easement (±4.25 ha) with the Western Cape Nature Conservation Board.
- Apply for rezoning to Open Space III (Nature Conservation Area), formalising long-term conservation management alongside private residential use.
- Implement an Alien Invasive Species Management Plan, with annual monitoring by a registered ecologist.
- Obtain the required National Forests Act permit prior to any disturbance of Western Cape Milkwood Forest.

The proposal aligns with the Knysna Spatial Development Framework (2020), which supports low-impact rural living and private conservation initiatives beyond the urban edge. By locating development within a degraded CBA 2 area, applying sensitive design principles, and committing to long-term conservation management, the proposed development achieves an appropriate balance between residential use and biodiversity protection within Ward 1 of the Knysna Local Municipality.

**Scope of assessment and contents of basic assessment reports**

Appendix 1 of Regulation 982 of the 2014 EIA Regulations describes the contents required to complete a basic assessment report. The table below indicates how Appendix 1 requirements were incorporated into the basic assessment report:

Scope of assessment and content of basic assessment reports	Index
(1) A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include -	
Regulatory Requirement	BAR Section
(1)(a) Details of the Environmental Assessment Practitioner (EAP), including expertise and curriculum vitae	Section A

(1)(b) Location of the activity, including: (i) 21-digit Surveyor General Code, (ii) Physical address and/or farm name, (iii) Coordinates where applicable	Section B
(1)(c) A plan indicating the location of the proposed activity and associated infrastructure	Section C
(1)(d) Description of the scope of the proposed activity, including: (i) Listed and specified activities triggered, (ii) Description of activities, structures and infrastructure	Section D
(1)(e) Description of the policy and legislative context, including: (i) Applicable legislation, policies, plans and tools (ii) Compliance with and response to the same	Section E
(1)(f) Motivation for the need and desirability of the proposed development	Section F
(1)(g) Motivation for the preferred site, activity and technology alternative	Section G
(1)(h) Description of the process followed to reach the preferred alternative, including:	
• Details of alternatives considered	Section H
• Public participation process undertaken in terms of Regulation 41	Section H
• Summary of issues raised by I&APs and responses	Section H (Comments & Responses Report)
• Environmental attributes associated with the alternatives	Section H
• Impacts and risks identified for each alternative, including nature, extent, duration, probability and significance	Section H
• Impact assessment methodology	Section I
• Positive and negative impacts on the environment and community	Section H
• Mitigation measures and residual risks	Section H & EMPr
• Outcome of the site selection / alternatives assessment	Section G & H
• Motivation where alternatives were screened out	Section G & H
• Concluding statement indicating the preferred alternative	Section H

## Section A

### Details of the EAP that prepared the draft Basic Assessment Report

Consultation Basic Assessment Report has been compiled by:	Eco Route Environmental Consultancy
Environmental Assessment Practitioner:	Bianca Gilfillan
Highest Qualification:	BSc. Hons. Environmental Science, ND and BTECH: Environmental Management
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## Expertise of the EAP, including a Curriculum Vitae

### EXPERIENCE AND COMPETENCY– Environmental Impact Assessment

Name of Team member and role	Project	Notes
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Basic Assessment Applications for Municipalities in the Western Cape Region and ASLA Devco (Pty)Ltd, including Hessequa Municipality, Cape Agulhas Municipality, Matzikama Municipality, etc.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Low-cost housing development in Swellendam.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Various residential developments along the West Coast incl. Langebaan, Jacobsbaai, St Helena Bay, Dwarskersbos and Elands Bay.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Extension and development of Zweletemba Township (Worcester) abutting the Hex River, including river flood mitigation works.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of resorts, tourist facilities, golf courses and residential accommodation at Quaggaskloof, Worcester.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Applications for equestrian estates in the West Coast and Boland areas.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Upgrade of the Water Treatment Works in Vanryhnsdorp.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Optimisation of existing Radnor Compost Facility, Parow and establishment of a Materials Recovery Facility (MRF), a Refuse Transfer Station (RTS) and a Composting Facility - i.e. an Integrated Waste Management Facility (IWMF).	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Rezoning and construction of an incinerator at Swartklip Products, Khayelitsha.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Extension of the Khayelitsha Railway Line, Cape Town.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development and upgrading of various service stations, convenience stores and car wash facilities for ENGEN Petroleum Ltd.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Construction of a pipeline from the Potsdam Wastewater Treatment Works (WWTW) to a reservoir, Durbanville.	Environmental Authorisation was obtained.

<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Relocation of a golf course and development of tourist facilities and residential accommodation at Clanwilliam Dam, Clanwilliam.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of chicken farms and upgrading of abattoirs, Cape Town.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Wind farm development in Hopefield and Beaufort West.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Rerouting and establishment of a new pipeline at the Lebanon mountain area.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of housing units at Royal Palms, Paarl.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of a waste disposal site in Murraysburg, Beaufort West.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner – Environmental Control Officer	<ul style="list-style-type: none"> <li>• Soil erosion as a result of wildfires in the Cape Peninsula Mountains.</li> <li>• Zweetemba Township extension, Worcester.</li> <li>• Mfuleni flood relief housing project.</li> <li>• Extension of Khayelitsha Railway Line, Cape Town.</li> <li>• Various projects in sensitive environments for Sentech, the City of Cape Town, Breede Valley Municipality, Shoprite Checkers Properties, etc.</li> <li>• Housing developments in Dwarskersbos, Veldrift and Laaiplek.</li> <li>• Housing development in Atlantis, Kanonkop.</li> <li>• Construction of substations in Cape Town for COCT.</li> <li>• Low-cost housing in Swellendam for the Municipality.</li> </ul>	Approval obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner- Audits	<ul style="list-style-type: none"> <li>• Boskloof Farm Eurepgap compliance for the use of "virgin land" for export vineyards.</li> <li>• Food and human health safety at Protea Boerdery, Worcester, for Eurepgap.</li> <li>• ISO 14000 Management systems.</li> <li>• Various Filling Service Stations</li> </ul>	Approval obtained.

### **CURRICULUM VITAE (CV)**

<b>Position Title and No.</b>	Senior Environmental Assessment Practitioner
<b>Name of Expert:</b>	Bianca Gilfillan
<b>Date of Birth:</b>	20/12/1981
<b>Country of Citizenship/Residence</b>	South Africa

**Education:**

**Institution:** University of Technology: CPUT

**Year:** 2002

**Degree:** National Diploma in Environmental Management

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**Institution:** University of Technology: CPUT  
**Year:** 2003  
**Degree:** BTECH: Environmental Management

**Institution:** University of the Western Cape  
**Year:** 2009  
**Degree:** BSc. Hons in Environmental Science

**Institution:** Stellenbosch University  
**Year:** present  
**Degree:** MPhil.: Environmental Management

**Employment record relevant to the assignment:**

Period	Employing organization and your title/position. Contact info for references	Country	Summary of activities performed relevant to the Assignment
2003 -2021	Senior Environmental Assessment Practitioner  Reference: Mr Dupré Lombaard	South Africa	Basic Assessment Reports, Scoping and EIA Reports, Environmental Control Officer, Environmental Management Programmes, Audits
2021-2024	Senior Environmental Assessment Practitioner	South Africa	<p>Environmental Impact Assessments and Environmental Impact Reports pertaining to:</p> <ul style="list-style-type: none"> <li>• Residential Developments</li> <li>• Industrial Developments</li> <li>• Game Farm Management</li> <li>• Air quality license applications</li> <li>• Environmental Management Programmes</li> <li>• Environmental Control Officer</li> <li>• Filling stations</li> <li>• Agricultural Developments</li> <li>• Audits</li> </ul> <p>Environmental Management Programmes &amp; Frameworks pertaining to:</p> <ul style="list-style-type: none"> <li>• Residential Developments</li> <li>• Industrial Developments</li> <li>• Water use license</li> <li>• Applications</li> <li>• Filling stations</li> <li>• Air quality license applications</li> </ul>

**Membership in Professional Associations:***International Association for Impact Assessment and EAPASA***Language Skills:**

Languages	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

**Adequacy for the Assignment:**

Detailed Tasks Assigned to Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrate the Capability to Handle the Assigned Tasks
{List all deliverables/tasks as in TECH- 5 in which the Expert will be involved)	Ms Gilfillan has successfully completed a variety of Environmental Impact Assessment applications and Environmental Management Programme reports. Her expertise encompasses the assessment of diverse development projects, contributing significantly to well-informed planning and decision-making processes.

**Certification :**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Bianca Gilfillan



22 January 2026

Name of Expert

Signature

Date

**Section B****Location Information**

<b>Province:</b>	Western Cape
<b>District Municipality:</b>	Garden Route Municipality
<b>Local Municipality:</b>	Knysna Municipality
<b>Ward number(s):</b>	Ward 1
<b>Nearest town(s):</b>	Knysna
<b>Erf name(s) and number(s):</b>	79/205

## Property Information

<b>Erf Number</b>	Portion 79/205
<b>Surveyor General 21-digit code:</b>	C03900000000020500079
<b>Zoning:</b>	Agriculture Zone I
<b>Urban Edge:</b>	Outside
<b>Applicant name:</b>	Daniel Sevenster and Partners In
<b>Registration number (if the applicant is a company):</b>	2008/004690/21
<b>Trading name (if any):</b>	The Optical Center Sandton
<b>Responsible person name:</b>	Mr Daniel Sevenster
<b>Responsible position, e.g. Director, CEO, etc.:</b>	Director
<b>Physical address of applicant:</b>	Shop L14D lower level ENTRANCE 4 Sandton City Shopping Center 83 Rivonia Rd, Sandhurst, Sandton
<b>Postal code:</b>	2196
<b>Telephone:</b>	(011) 883 1312
<b>Fax:</b>	0832973398
<b>E-mail:</b>	<a href="mailto:Daniel.Sevenster@gmail.com">Daniel.Sevenster@gmail.com</a>
<b>GPS point middle of property:</b>	
<b>Portion 0</b>	- 34°0'54.38S 22°50'31.21E
<b>Portion 79</b>	- 34°2'23.85S 22°49'28.57E

## Property Description

Portion 79 of Farm Ruygte Valley No. 205 is situated east of Cola Beach within the Groenvlei rural area of Sedgefield, Western Cape, and measures approximately 5.1576 hectares. The property is bounded to the south by Coastal Public Property, adjoins Portion 78 of Farm Ruygte Valley No. 205 — a privately managed nature reserve zoned Agriculture Zone I — and lies adjacent to the Lake Pleasant Private Nature Reserve to the east.

According to the Western Cape Biodiversity Spatial Plan (WCBS, 2025), the northern portion of the property is classified as a Critical Biodiversity Area 1 (CBA1), while the southern portion is mapped as a degraded Critical Biodiversity Area 2 (CBA2). The site supports Goukamma Strandveld, classified as Vulnerable in the SANBI Vegetation Map (2025), with patches of Western Cape Milkwood Forest occurring within the CBA1 area. The degraded CBA2 portion is dominated by *Acacia cyclops*. The southern coastal boundary is characterised by steep sandstone sea cliffs exceeding 80 metres in height, forming a visually prominent and environmentally sensitive geological feature. The site is therefore situated on elevated terrain approximately 80 metres above mean sea level, well above the active shoreline.

The property forms part of a smallholding area subdivided in 1961 from Portion 70 (originally Portion 38 of Lake Pleasant Estate). The site remains undeveloped land and is zoned Agriculture Zone I in terms of the Knysna Zoning Scheme By-Law (1992), which permits one dwelling house as a primary right. Title deed conditions imposed by Lake Pleasant Estate (Pty) Ltd require written consent for the establishment of additional dwellings and approval of building plans, which will be sought from the relevant authorities.

Access to the site is provided via Groenvlei Beach Road, a gravel road leading toward the western beach of the Goukamma Nature Reserve, as well as a Public Servitude Road (Bushy Way, SG Diagram 6532/61) that connects to the N2 via the Groenvlei Divisional Road (DR 1594). Bushy Way is currently overgrown and will require limited clearing strictly along existing disturbed tracks to enable vehicular access, thereby minimising vegetation loss.

Figure 1 illustrates the Updated Site Constraints Map, indicating vegetation types (CBA1 and CBA2), slope contours, access routes, the indicative 100 m High Water Mark (HWM) buffer, and the proposed amended development area on Portion 79 of Farm Ruygte Valley No. 205 (Appendix B1).

#### Coastal Context and High Water Mark (HWM)

Portions of the property fall within the broader 100-metre High Water Mark (HWM) inland zone, as defined for coastal management purposes under the National Environmental Management: Integrated Coastal Management Act, 2008 (ICMA). The HWM, as depicted on available mapping products, represents an indicative planning and risk-screening tool, rather than a gazetted or legislatively fixed development setback line. Its purpose is to identify areas potentially influenced by coastal processes such as storm surge, wave run-up, erosion, and long-term sea-level rise. Importantly, development within the HWM requires careful risk-based assessment and mitigation, provided that site-specific coastal risk has been assessed and appropriate mitigation measures are implemented. The HWM, therefore, functions as a trigger for environmental assessment and precautionary planning rather than an absolute exclusion area.

This constraint has been explicitly considered during the site planning and layout process. While complete avoidance of the 100 m HWM zone is not feasible due to the configuration of the property and the presence of other environmental constraints — including CBA1 areas and Milkwood Forest — the amended preferred development footprint has been positioned to avoid the most sensitive coastal features. These include the active shoreline, coastal cliffs, and areas of elevated erosion, flooding, and instability risk.

The revised layout further avoids the geotechnically constrained D7 zone, thereby reducing long-term structural and erosion risk. Specialist geotechnical and engineering assessments confirm that the selected footprint represents the least constrained and lowest-risk development option within a highly sensitive coastal environment.

#### Proposed Development

The amended preferred development comprises a main dwelling and three small self-contained accommodation units clustered within a single compact development node, together with associated access, parking, and pedestrian boardwalk infrastructure. The landowners intend to utilise the additional units for private family and guest accommodation within a conservation-compatible land-use framework.

The total building footprint associated with the preferred alternative is approximately  $\pm 1\,375\text{ m}^2$ , inclusive of buildings, access infrastructure, and associated disturbed areas. This represents approximately 2.7% of the total property area ( $\pm 5.16\text{ ha}$ ), ensuring that more than 97% of the site remains in a natural or rehabilitated state. The updated Constraints Map confirms that the preferred layout is confined to degraded portions of the site, avoids CBA1 and indigenous forest areas, and excludes mapped high-risk coastal erosion and flood zones. The limited and clustered footprint supports long-term biodiversity protection, dune stability, and preservation of the scenic coastal landscape.

All service infrastructure will operate off-grid and will comprise rainwater harvesting tanks, sealed conservancy tanks for wastewater management, solar power generation, and off-site waste disposal via municipal collection services. The architectural design adopts an environmentally sensitive approach, utilising lightweight materials such as timber, steel, glass, and natural stone to blend with the surrounding landscape and minimise excavation and visual intrusion.

Although zoned Agriculture Zone I, the site is unsuitable for commercial agriculture due to its ecological sensitivity, steep slopes, and the presence of Critical Biodiversity Areas. The proposed development supports private conservation use consistent with the findings of the Terrestrial Biodiversity Assessment and Town Planning Report and reinforces long-term ecological stewardship of the property.

### Geotechnical and Physical Context

The site forms part of a coastal dune system underlain by fossilised sandstone formations dipping southwards at approximately 45 degrees. According to the Preliminary Geotechnical Report (Rock Hounds, 2024) and the Civil and Structural Engineering Confirmation (2025), subsurface conditions comprise loose to medium-dense sandy loam and fine sand with organic-rich top layers. These soils are highly permeable but structurally weak, necessitating careful foundation and stormwater design to prevent erosion and instability.

### Key engineering recommendations include:

- use of reinforced raft or piled foundations suitable for low-bearing soils (G7–G9).
- avoidance of deep box cuts, with structures following natural contours to maintain slope stability.
- natural dispersion of stormwater in accordance with Sustainable Urban Drainage System (SUDS) principles; and
- immediate rehabilitation of disturbed dune areas using locally indigenous vegetation.

Vegetation within the upper 65 m contour comprises coastal forest and thicket, transitioning to shrubland toward the coast. Analysis of historical satellite imagery indicates long-term stability of the dune system, with consistent vegetation cover recorded between 2005 and 2024.

Climatic modelling indicates a marginal projected increase in seasonal rainfall and no indication of unacceptable coastal flooding risk in the short to medium term, subject to appropriate design and stormwater management. While portions of the property fall within the 100 m HWM trigger area, the amended preferred development footprint is located outside mapped high-risk erosion and flood zones and represents the lowest practicable risk position within a constrained coastal environment.

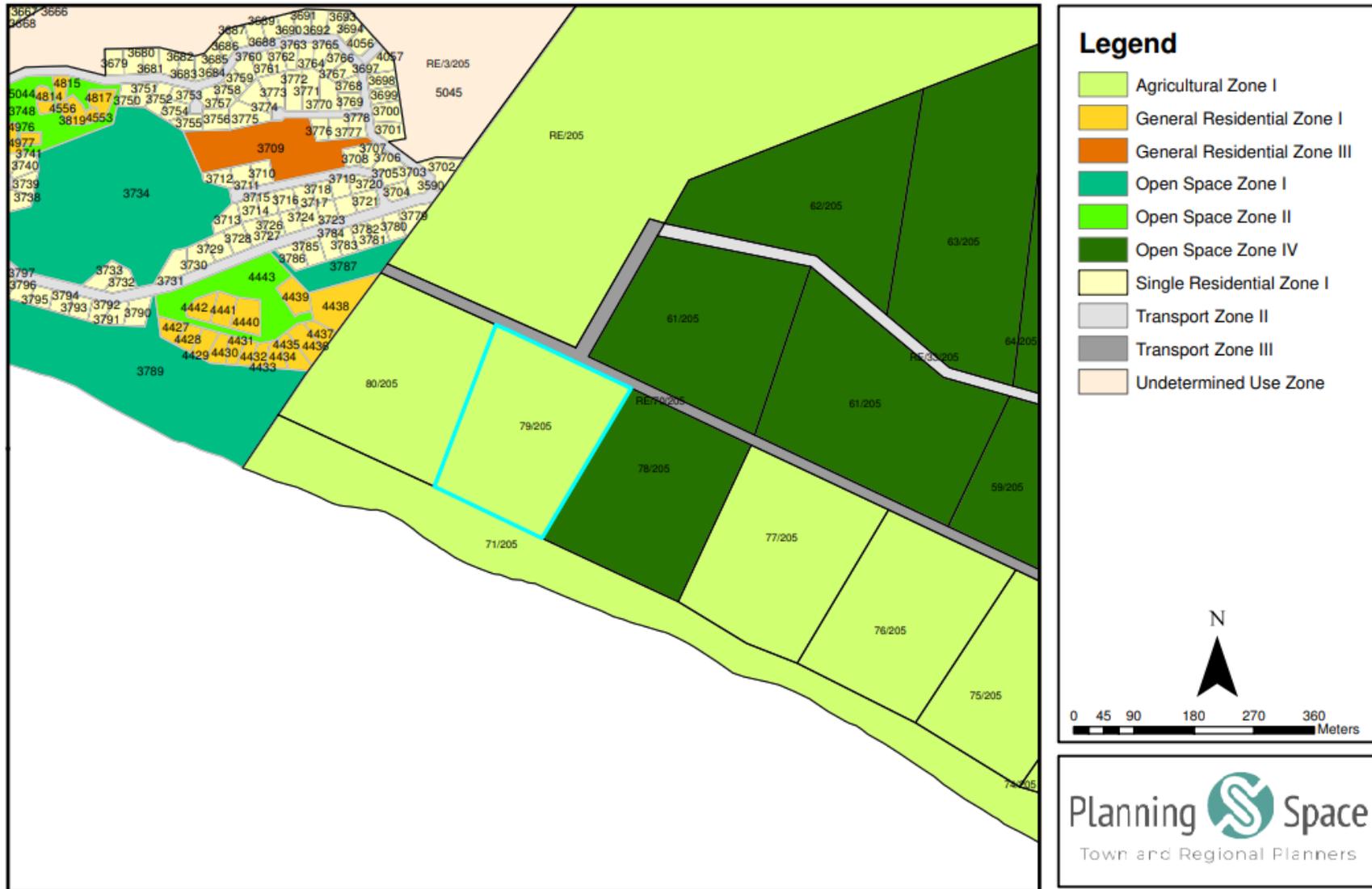
## Section C - Locality Map



**FIGURE 1: LOCALITY MAP**

**DIAGRAM 3 : ZONING MAP**

**PORTION 79 OF FARM RUYGTE VALLY NO. 205**



**FIGURE 2: ZONING MAP, TOWN PLANNING REPORT, PLANNING SPACE, TOWN AND REGIONAL PLANNERS**

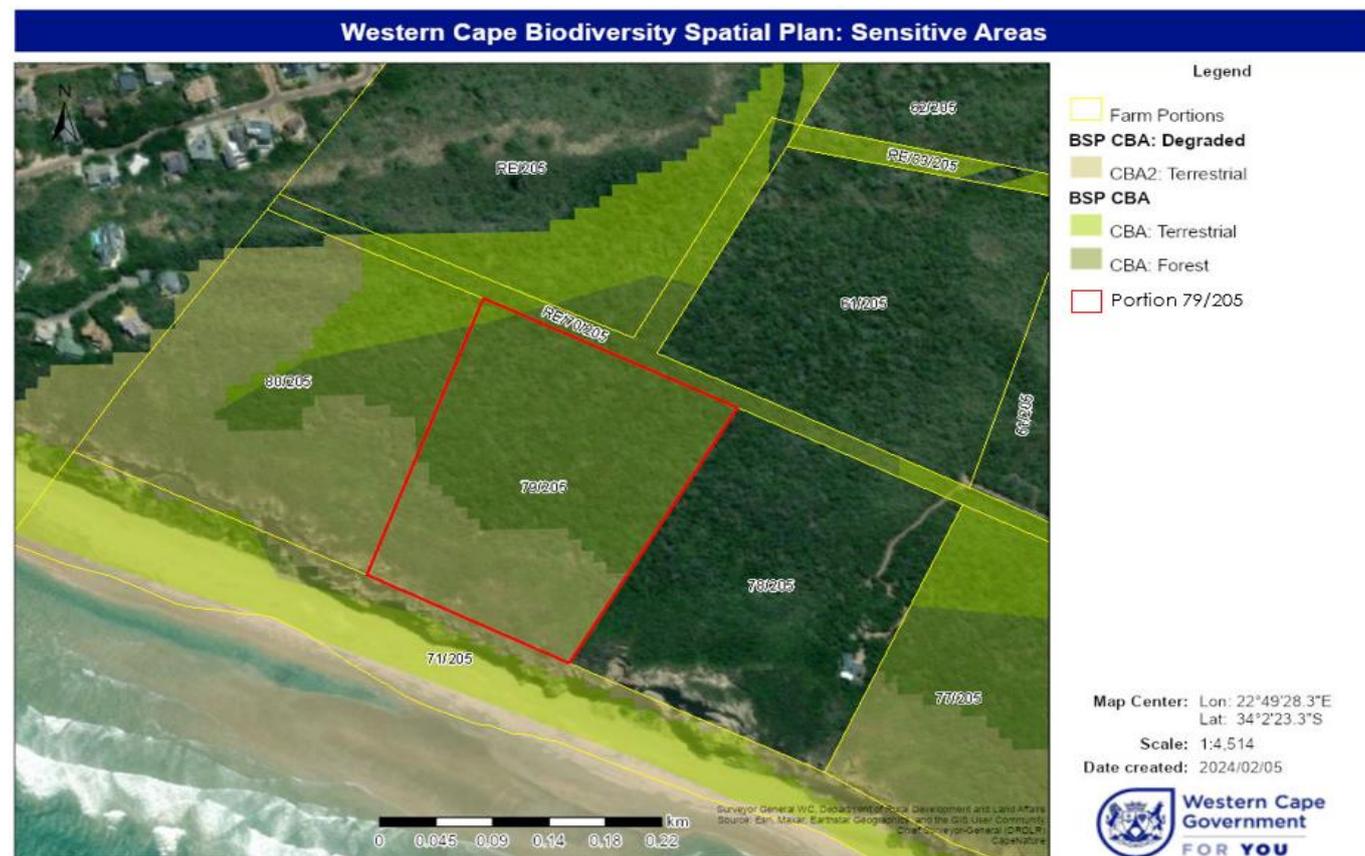
**LOCALITY MAP:**



**FIGURE 3: THE 100-METER HIGH-WATER MARK**

# Site Sensitivities and Detailed Approach for the Proposed Development

The Western Cape Biodiversity Spatial Plan (WC BSP) designates the property as situated within a Critical Biodiversity Area (CBA:1 – to maintain and CBA:2 – to restore), including features related to terrestrial biodiversity and forest regions.



**FIGURE 4: WESTERN CAPE BIODIVERSITY SPATIAL PLAN (2017) PROTECTED AREAS (CBA 1 AND CBA 2)**



**FIGURE 5: SANBI ORIGINAL ECOSYSTEM STATUS INDICATING GOUKAMMA DUNE THICKET**

## SANBI Ecosystem Status: Remaining



**FIGURE 6: SANBI REMAINING ECOSYSTEM STATUS STILL INCLUDING GOUKAMMA DUNE THICKET**

### Critical Biodiversity Area 1:

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

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

### Critical Biodiversity Area 2:

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

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



indicative 100-metre High Water Mark (HWM) buffer defined under the National Environmental Management: Integrated Coastal Management Act, 2008.

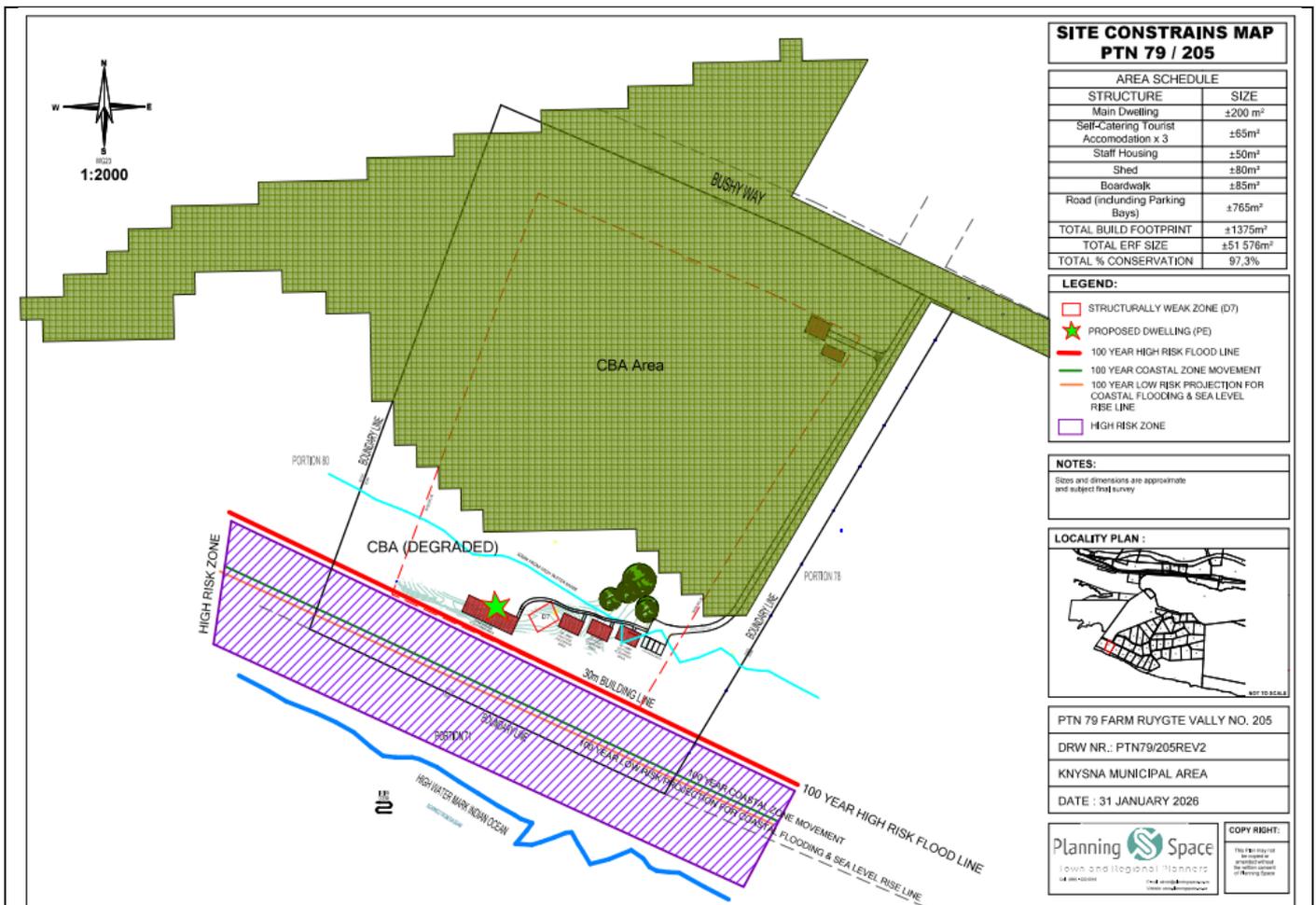
In contrast, the 100-year high-risk coastal hazard projection indicates that the coastal hazard zone could extend further inland, potentially reaching the vicinity of Lookout Point, located approximately 50 metres from the present coastal cliff edge, as reflected on the Site Constraints Map (Figure 1; Appendix B1).

Coastal flooding projections for the year 2100 similarly suggest that the 100-year coastal flood line may extend to approximately the same inland position. Analysis of historical satellite imagery between 2005 and 2024 indicates long-term relative stability of the coastal system, with an observed inland movement of approximately 6 metres over a 20-year period. When conservatively extrapolated over a 100-year timeframe, this suggests a potential inland advance of approximately 30 metres.

This projected inland movement is broadly consistent with the lower-risk coastal hazard scenario identified in the Preliminary Geotechnical and Geomatic Report. However, coastal processes are inherently dynamic and subject to variability, uncertainty, and episodic extreme events. For this reason, the development layout does not rely on a single hazard contour or projection line, but instead adopts a precautionary, constraints-led planning approach.

As reflected on the Site Constraints Map (Figure 1; Appendix B1), the preferred development footprint has been positioned landward of mapped high-risk erosion and flood zones and outside areas of known geotechnical instability. Coastal risk projections, slope constraints, biodiversity sensitivity, and access limitations were assessed collectively to inform the final layout. The resulting configuration represents the lowest practicable coastal risk option within a highly constrained environment and is consistent with risk-averse planning principles required under NEMA and ICMA.

Accordingly, while portions of the property fall within the broader HWM trigger zone, the proposed development avoids active coastal processes, respects long-term erosion projections, and incorporates engineering and rehabilitation measures that maintain dune stability and ecological integrity. The layout therefore achieves an appropriate balance between lawful land use and long-term coastal resilience.



**FIGURE 9: UPDATED SITE CONSTRAINTS MAP SHOWING VEGETATION TYPES (CBA1, CBA2), SLOPE CONTOURS, ACCESS ROUTES, AND PROPOSED DEVELOPMENT AREA ON PORTION 79 OF FARM RUYGTE VALLEY NO. 205, SEDGEFIELD. SOURCE: APPENDIX B1 – SITE CONSTRAINTS MAP (2026).**

## Section D

### Description of the scope of the proposed activity

Portion 79 of Farm Ruygte Valley No. 205, situated east of Cola Beach within the Groenvlei rural area of Sedgefield, Western Cape, measures approximately 5.1576 hectares. The property is bounded to the south by Coastal Public Property, adjoins Portion 78 of Farm Ruygte Valley No. 205—a private nature reserve zoned Agriculture Zone I—and lies adjacent to the Lake Pleasant Private Nature Reserve to the east. According to the Western Cape Biodiversity Spatial Plan (WCBS, 2025), the northern portion of the property is classified as a Critical Biodiversity Area 1 (CBA1), while the southern portion is designated as a degraded Critical Biodiversity Area 2 (CBA2). The site supports Goukamma Strandveld (classified as Vulnerable in the SANBI Vegetation Map, 2025), with patches of Western Cape Milkwood Forest occurring within the CBA1 area. The degraded CBA2 portion is dominated by *Acacia cyclops*.

The southern coastal boundary is characterised by steep sandstone cliffs exceeding 80 metres in height, forming a visually prominent and environmentally sensitive geological feature. The property forms part of a smallholding area subdivided in 1961 from Portion 70 (originally Portion 38 of Lake Pleasant Estate). The site remains undeveloped and is zoned Agriculture Zone I in terms of the Knysna Zoning Scheme By-Law (1992), which permits one dwelling house as a primary land-use right. Title deed conditions imposed by Lake Pleasant Estate (Pty) Ltd require written

consent for the establishment of additional dwellings and approval of building plans, which will be sought from the relevant authorities. Access to the site is provided via Groenvlei Beach Road, a gravel road leading toward the western beach of the Goukamma Nature Reserve, as well as a Public Servitude Road (Bushy Way, SG Diagram 6532/61) that connects to the N2 via the Groenvlei Divisional Road (DR 1594). Bushy Way is currently overgrown and will require limited clearing along existing disturbed tracks only, in order to enable vehicular access while minimising vegetation loss.

Portions of the property fall within the 100-metre High Water Mark (HWM) buffer, as defined under the National Environmental Management: Integrated Coastal Management Act, 2008. The presence of the HWM represents a significant spatial and environmental constraint on development within the southern portion of the site. This constraint has been explicitly considered during the site planning and layout process. While complete avoidance of the HWM buffer is not feasible due to the configuration of the property and the presence of other environmental constraints, the proposed development footprint has been positioned to avoid the most sensitive coastal features, including the active shoreline, steep coastal cliffs, and areas associated with higher-risk coastal hazard projections.

The preferred layout represents the least constrained and lowest-risk development option available, as informed by the Site Constraints Map (Figure 1; Appendix B1) and supported by the engineering and geotechnical assessments.

The Applicant proposes the development of a primary residence, three additional self-contained accommodation units, a parking area, and a garage/storeroom on Portion 79 of Farm Ruygte Valley No. 205. Vehicular access to the site will be provided via a gravel access road less than 3 metres wide, routed through existing disturbed areas within dense vegetation, as illustrated on the Site Constraints Map (Figure 1; Appendix B1).

The proposed development comprises a main dwelling ( $\pm 200 \text{ m}^2$ ), three small self-contained units ( $\pm 65 \text{ m}^2$  each), staff accommodation ( $\pm 50 \text{ m}^2$ ), an equipment shed ( $\pm 80 \text{ m}^2$ ), and associated parking and access infrastructure. The landowners currently plan to utilise the additional units for private family and guest accommodation. From a planning perspective, the proposed rezoning provides a tourism-compatible land-use framework required for multiple accommodation units on agriculturally zoned land and is aligned with long-term conservation and land-management objectives.

Vehicular access will lead to a parking area of approximately  $660 \text{ m}^2$ , from which pedestrian access to the main dwelling and accommodation units will be provided via elevated timber boardwalks, reducing soil compaction and disturbance to underlying vegetation. The development concept is to establish a low-impact private retreat within a natural coastal landscape. The architectural design will utilise lightweight, environmentally sensitive materials, including timber, steel, glass, and natural stone, enabling the structures to blend visually with the surrounding environment and minimising excavation. The total development footprint is approximately  $1\,375 \text{ m}^2$ , representing less than 2.7% of the property. Approximately 97.3% of the site remains protected under conservation-compatible land use.

As a result, approximately 97.3% of the site will remain in a natural or near-natural state. According to the Preliminary Geotechnical and Geomatic Report (Rock Hounds, 2024) and the Civil and Structural Engineering Confirmation (Marius van Coller, Pr Eng, 2025), the proposed development area (located at approximately 75 m above mean sea level) lies above the 100-year high-risk coastal erosion line and within a geotechnically feasible zone, provided that appropriate slope-stabilisation and stormwater-management measures are implemented. The preferred development footprint avoids structurally weak zones and areas of elevated erosion risk identified on the Site Constraints Map. The Western Cape Biodiversity Spatial Plan (2025) identifies the northern portion of the property as CBA 1 (Critical Biodiversity Area – Maintain) and the southern portion as CBA 2 (Critical Biodiversity

Area – Restore). The proposed development footprint is located entirely within the degraded CBA 2 area, thereby avoiding intact forest and higher-value biodiversity within the CBA 1 zone.

The Terrestrial Biodiversity Assessment (2025) confirms that the property supports Goukamma Strandveld (Vulnerable, SANBI VegMap 2025). The coastal margin comprises parabolic dunes with Knysna Sand Fynbos on inland ridges, transitioning into Mesic Dune Thicket and Milkwood Forest within protected areas. All proposed infrastructure is located outside the steep southern slopes and within areas of previous disturbance and degraded vegetation, consistent with the mitigation hierarchy. Given the existing agricultural zoning, the small development footprint, and the Applicant's commitment to rehabilitation and long-term conservation management of the undeveloped portions of the property, the proposal represents a balanced and conservation-compatible land use.

The development aligns with the Western Cape Biodiversity Spatial Plan, the Knysna Spatial Development Framework (2020), and the principles of NEMA, which promote sustainable rural development and private stewardship of environmentally sensitive land. Subject to the implementation of appropriate fire-management measures, stormwater controls, and coastal forest protection measures, the proposed development is considered supportable from an environmental and planning perspective (refer to Section F: Fire Management).

#### Electricity

There is currently no electrical infrastructure present on the property or in the adjacent road reserve. It is advisable to consider the installation of a solar power facility in this location.

#### Solar plant Type and system

The solar plant will be developed as an off-grid installation, utilising solar energy to supply the load during daylight hours while recharging the batteries at night. Furthermore, grid-tied photovoltaic inverters may be integrated into this micro-grid configuration through AC coupling, should the energy demand surpass the generation capacity.

#### Plant location

It is advisable to consider the installation of a roof-mounted solar power system on the roofs of both the main residence and the three small self-catering tourist accommodation units, should there be a requirement for increased energy generation capacity.

#### Plant capacity

The proposed system is designed with a capacity of 15 kWh, while the anticipated peak consumption is estimated to reach 30 kWh per day. Energy Storage: A sealed Lithium Iron Phosphate battery system is proposed, which is expected to provide a lifespan exceeding 10 years at a depth of discharge of 70%. Additionally, this system offers an expedited charging time, enhancing its operational efficiency.

#### Area/Street lighting

The road lighting system will utilise low-intensity, low-level bollard luminaires. Each luminaire will be powered by an individual small solar cell and will activate solely upon detecting motion.

## **Description of the NEMA-listed activities associated with the project**

Before any of the below-listed activities can commence, authorisation must be obtained from the Department of Environmental Affairs (DEA). The following activities, as per NEMA Regulations, have been identified below:

Listed activity as described in GN R.983, 984, 985	Description of project activity
<p><b>GN R.985 (Listing Notice 3) Activity 12</b></p> <p>Listed activity as described in GN R.985 (Activity 12):  <i>The clearance of an area of 300 square metres or more of indigenous vegetation,</i></p> <p><i>where such clearance occurs—</i></p> <p><i>(a) within a Critical Biodiversity Area as identified in a biodiversity plan;</i>  <i>or</i>  <i>(b) within a buffer area identified in such a plan.</i></p>	<p>The construction of the proposed dwelling, accommodation units, access road, parking area and associated infrastructure will require the clearance of indigenous vegetation exceeding 300 m<sup>2</sup> within a mapped CBA2 (Restore) area. The vegetation to be cleared comprises degraded Goukamma Strandveld with a high proportion of invasive alien species, notably <i>Acacia cyclops</i>.</p>
<p><b>GN R.985 (Listing Notice 3) 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 <b>distance of 100 metres inland of the high-water mark</b> 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) <b>infrastructure or structures with a development footprint of 50 square metres or more —</b></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>(dd) where such development occurs within an urban area.</li> </ul>	<p>The proposed development comprises buildings and associated infrastructure exceeding 50 m<sup>2</sup> in footprint, portions of which are located within 100 metres inland of the High Water Mark (HWM) of the sea. No gazetted coastal development setback line exists for this portion of coastline; the statutory 100 m inland trigger distance therefore applies in terms of the National Environmental Management: Integrated Coastal Management Act, 2008.</p> <p>Activity 17 is triggered by the presence of infrastructure exceeding 50 m<sup>2</sup> within the 100 m inland HWM zone.</p>
<p><b>GN R.985 (Listing Notice 3) Activity 19A:</b></p> <p>The infilling or depositing of any material of more than 5 cubic metres into, or the <b>dredging, excavation, removal or moving of</b> soil, sand, shells, shell grit, pebbles or rock of more than <b>5 cubic metres</b> from—</p>	<p>Construction of the proposed buildings, access road, parking area, and boardwalk infrastructure will require excavation and movement of soil in excess of 5 cubic metres within 100 metres inland of the</p>

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

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

- (a) will occur behind a development setback.
- (b) is for maintenance purposes undertaken in accordance with a maintenance management plan.
- (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.
- (d) 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.

High Water Mark (HWM) of the sea. No gazetted coastal development setback line exists for this portion of coastline; the statutory 100 m inland trigger distance therefore applies.





**FIGURE 11: SANBI REMAINING ECOSYSTEM STATUS STILL INCLUDES GOUKAMMA DUNE THICKET**

The principles articulated in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, require that environmental management place people and their needs at the forefront of decision-making. These principles further require that development be socially, environmentally and economically sustainable, and that it address the physical, psychological, developmental, cultural and social interests of all people in an equitable and just manner, while ensuring that environmental impacts are avoided, minimised, or mitigated where avoidance is not reasonably practicable.

The Applicant proposes the establishment of a low-impact residential development comprising a primary residence, three additional self-contained accommodation units, a parking area, a garage/store structure and associated access infrastructure on Portion 79 of Farm Ruygte Valley No. 205. The site is located within Knysna Municipality Ward 1, east of Sedgfield, and is currently zoned Agriculture Zone I, which permits one dwelling house as a primary land-use right.

The proposed development comprises:

- a main dwelling
- three small self-contained accommodation units
- a garage/store structure
- associated access and parking infrastructure

The additional units are intended for private family and guest accommodation within a low-intensity residential setting. From a planning perspective, the proposed rezoning provides a tourism-compatible land-use framework required for multiple accommodation units on agriculturally zoned land and is aligned with long-term conservation and land-management objectives.

Vehicular access will be provided via a gravel access road approximately 220 metres in length and 3 metres wide, routed through existing disturbed vegetation along the eastern boundary of the site. The road terminates in a parking area accommodating four parking bays with a total area of approximately 765 m<sup>2</sup>.

Pedestrian movement between the parking area and all structures will occur via elevated timber boardwalks designed to reduce soil compaction, minimise vegetation disturbance, and maintain natural drainage patterns.

The total building footprint is approximately 525 m<sup>2</sup>, while the overall development footprint — including buildings, access road, parking and boardwalks — is approximately 1 375 m<sup>2</sup>, representing less than 2.7% of the total property area. Approximately 97.3% of the property will remain in a natural or rehabilitated state, ensuring that development intensity remains low and compatible with the surrounding conservation landscape.

Ancillary structures and infrastructure are intended to support land stewardship and long-term conservation management of the property. The proposal, therefore, balances legitimate residential use with ecological protection, rehabilitation commitments and sustainable land management in accordance with the principles of Section 2 of NEMA.

Development must be socially, environmentally and economically sustainable:

#### Social, Environmental and Economic Sustainability

In accordance with the principles articulated in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, development must be socially, environmentally and economically sustainable, and must place people and their needs at the forefront of decision-making. These principles require that development address the physical, psychological, developmental, cultural and social interests of people in an equitable manner, while ensuring that environmental impacts are avoided, minimised, or mitigated where avoidance is not reasonably practicable.

The proposed development has been assessed against these sustainability criteria as set out below.

#### Social Sustainability

Social sustainability entails fostering community well-being, maintaining equitable access to resources, and minimising adverse effects on local lifestyles and sense of place. From a public perspective, the proposed development is evaluated in terms of its influence on community cohesion, cultural identity, environmental quality, and access to coastal resources.

**Positive impacts:** The proposal comprises a low-intensity residential development incorporating three small self-contained units that are described as tourist accommodation for statutory planning purposes. The modest scale and clustered layout are consistent with Sedgefield's identity as a low-key coastal settlement characterised by nature-based and conservation-oriented development (Town Planning Report, Appendix D5).

Whether used for private occupation or lawful tourism accommodation in future, the scale of development does not introduce mass-tourism or high-density land uses. The anticipated low intensity reduces the likelihood of increased traffic, noise, or pressure on local services, and preserves the rural conservation character of the Groenvlei coastal area.

The development will also generate short-term construction employment, supporting local labour and skilled trades within the Sedgefield and Knysna area.

**Public concerns:** Public concerns may relate to perceived impacts on access to Groenvlei Beach and the coastal environment. Sensitivity around the 100 m High Water Mark (HWM) zone heightens community awareness regarding coastal access and privatisation.

**Mitigation:** Public access to Groenvlei Beach will remain unrestricted via Groenvlei Beach Road and the existing Public Servitude Road (Bushy Way), as confirmed in the Town Planning Report (Appendix D5). Continued public participation and transparent communication will reinforce that no coastal access is being restricted.

#### Environmental Sustainability

The proposed development is located within a mapped Critical Biodiversity Area and has been designed in accordance with the mitigation hierarchy, prioritising avoidance of high-sensitivity features.

The development footprint is confined to degraded CBA 2 vegetation, avoiding intact vegetation and Milkwood Forest associated with the CBA 1 zone. The Terrestrial Biodiversity Assessment (Appendix D4) confirms that the site supports Goukamma Strandveld (Vulnerable), with ecological functions linked to dune stabilisation and coastal processes.

The total development footprint is approximately 1 375 m<sup>2</sup>, representing less than 2.7% of the property. Approximately 97.3% of the site will remain in a natural or rehabilitated state, maintaining ecological connectivity and habitat integrity.

The Visual Compliance Statement (Appendix D1) confirms a high Visual Absorption Capacity (VAC). Dense vegetation and steep coastal cliffs screen the development from Groenvlei Beach, Cola Beach, the N2, and surrounding viewpoints, ensuring that the coastal landscape character is preserved.

**Public concerns:** Concerns may arise regarding temporary construction impacts such as dust, vegetation disturbance, and perceived erosion risk within the HWM zone. Historical dune movement underscores the need for cautious siting and construction.

## **Mitigation**

Mitigation measures include:

- dust suppression during construction
- restricted working hours
- erosion-control structures
- rehabilitation with locally indigenous vegetation
- placement of development outside high-risk erosion zones
- implementation of geotechnical recommendations

These measures reduce both short-term disturbance and long-term coastal risk.

## Economic Sustainability

Economic sustainability requires that development support local livelihoods, deliver long-term value, and remain financially viable without burdening municipal infrastructure.

The modest scale of the project contributes to the local economy through:

- short-term construction employment
- local procurement of materials and services
- small-business stimulation

This aligns with the Knysna IDP and SDF (2020), which support small-scale, environmentally responsible private investment outside the urban edge.

The Preliminary Geotechnical and Geomatic Report (Appendix D2) and Civil Engineering Confirmation (Appendix D5) confirm that the site is technically suitable for development, subject to professional certification. This ensures that economic investment is underpinned by sound engineering and avoids future structural or environmental liabilities.

## **Infrastructure impacts**

The development is fully off-grid, incorporating:

- solar power
- rainwater harvesting
- sealed conservancy systems

No municipal bulk infrastructure is required. Any access improvements will be privately funded.

### Job Creation and Local Economy

Construction of the dwelling and associated infrastructure will generate temporary employment for local labourers, artisans, and contractors. Local sourcing of materials and services will stimulate the regional economy in line with IDP objectives.

All engineering works will be designed and certified by an ECSA-registered professional engineer, ensuring responsible implementation within a sensitive coastal dune environment.

Public concerns regarding the short-term nature of employment are acknowledged. Mitigation includes prioritising local labour and encouraging skills transfer during construction.

### **Infrastructure and Public Resources**

The off-grid servicing approach ensures that no additional burden is placed on municipal infrastructure. Temporary construction disturbances will be managed through the EMPr, including dust control, traffic management, and debris removal.

The public servitude road will remain accessible and may benefit from privately funded improvements that enhance safe access without transferring costs to the municipality.

### Overall Sustainability Conclusion

From a public, planning, and regulatory perspective, the proposed development is socially, environmentally, and economically sustainable, provided that the approved layout and mitigation measures are implemented.

Although the additional units are described as tourism-compatible for rezoning purposes, the project remains a low-intensity residential development. The limited footprint ( $\pm 1\,375\text{ m}^2$ ), off-grid infrastructure, constraints-led siting, and conservation-focused design prevent urbanisation pressure and protect the Groenvlei coastal landscape.

Implementation of the Environmental Management Programme, ECO oversight, and post-construction rehabilitation will address construction disturbance, visual impact, and dune stability concerns.

The development is therefore compatible with planning and conservation frameworks and supports landscape-level biodiversity objectives while enabling responsible private land use consistent with sustainable development principles.

**(i) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner.**

Section 2(4)(a)(ii) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) requires that waste be avoided, or where avoidance is not reasonably practicable, minimised, reused or recycled where possible, and otherwise disposed of in a responsible and environmentally sound manner.

The proposed development will implement the waste hierarchy during both the construction and operational phases in accordance with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). This approach prioritises waste prevention, followed by minimisation, reuse, recycling and responsible disposal, thereby reducing environmental impacts and promoting sustainable resource use.

#### Waste Avoidance

The relatively small development footprint ( $\pm 1\,375\text{ m}^2$ ) and the adoption of an eco-sensitive building design incorporating lightweight steel framing, timber and glass will significantly reduce material requirements and limit site disturbance (Town Planning Report, Appendix D5). Careful planning of construction activities will further limit unnecessary material use and associated waste generation.

#### Waste Minimisation and Reuse

Vegetation clearance will be strictly limited to the approved development footprint. Alien invasive vegetation, primarily *Acacia cyclops*, removed during site preparation will be mulched and reused on site for erosion control and landscaping purposes, thereby reducing the volume of waste requiring off-site disposal. The incorporation of rainwater harvesting systems and off-grid infrastructure will further reduce resource consumption and associated waste generation during the operational phase (Terrestrial Biodiversity Assessment; Town Planning Report, Appendix D5).

#### Recycling and Responsible Disposal

All construction waste will be sorted at source, with recyclable materials (including metal, timber off-cuts, glass and packaging) separated and transported to licensed recycling facilities. Non-recyclable waste will be disposed of at the Knysna Municipal Waste Disposal Site, a licensed facility authorised to receive such waste (Visual Compliance Statement, Appendix D1).

Any hazardous waste, should it arise (for example, hydrocarbon-contaminated material), will be handled by an approved service provider and disposed of at a registered hazardous waste facility in accordance with applicable legislation.

#### Management and Monitoring

Detailed waste handling, storage and disposal procedures will be specified in the Environmental Management Programme (EMPr). Compliance will be monitored by the appointed Environmental Control Officer (ECO) to ensure that waste management measures are effectively implemented throughout both the construction and operational phases.

- (ii) that the use and exploitation of non-renewable natural resources is responsible and equitable and takes into account the consequences of the depletion of the resource.**

Section 2(4)(a)(iii) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) requires that the use and exploitation of non-renewable natural resources be responsible and equitable, taking into account the consequences of resource depletion.

The proposed development does not involve the extraction or direct exploitation of non-renewable natural resources during either the construction or operational phases. All construction materials will be sourced from lawfully operating suppliers, and preference will be given, where feasible, to sustainably produced, renewable and recycled materials, including certified timber and recycled aggregates.

The design and operation of the development incorporate principles of resource efficiency, including energy-efficient building design, water-saving measures, and minimisation of material waste. The off-grid servicing

approach, including solar energy generation and rainwater harvesting, further reduces reliance on non-renewable resources and aligns with the sustainability objectives of NEMA.

Through responsible material sourcing and efficient design, development limits the consumption of non-renewable resources and supports long-term environmental sustainability.

**(iii) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised.**

Section 2(4)(a)(iv) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) requires that the development, use and exploitation of renewable resources and the ecosystems of which they form part do not exceed the level beyond which their integrity is jeopardised.

The proposed development has been designed to minimise demands on natural resources and to operate within the ecological carrying capacity of the receiving environment. Off-grid systems will be implemented, including rainwater harvesting, solar energy generation, and sealed conservancy tanks for wastewater management.

Rainwater tanks will be installed at each building to collect and store water for domestic and limited irrigation use, thereby reducing reliance on external water sources. Solar power will provide a renewable, low-carbon energy supply to meet operational electricity needs. These measures collectively reduce pressure on natural resources and municipal infrastructure while supporting long-term environmental sustainability.

The compact development footprint ( $\pm 1\,375\text{ m}^2$ ), representing approximately 2.7% of the property, ensures that the vast majority of the site remains in a natural or rehabilitated state. This approach maintains ecosystem integrity, protects ecological connectivity, and prevents over-exploitation of renewable environmental resources.

**(iv) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions.**

Section 2(4)(a)(v) of NEMA requires that a risk-averse and cautious approach be applied, taking into account the limits of current knowledge regarding the consequences of decisions and actions.

This principle has guided the planning and design of the proposed development. A precautionary, evidence-based approach has been adopted to assess ecological sensitivity, geotechnical stability, coastal processes, and visual impacts. Specialist investigations and constraints mapping have informed the Site Development Plan (SDP), ensuring that development is confined to the least sensitive portion of the site and avoids high-risk areas.

The layout specifically avoids structurally weak zones, high-risk coastal hazard areas, steep slopes, and intact CBA1 vegetation. Adaptive management is built into the Environmental Management Programme (EMPr), allowing for responsive mitigation should unforeseen impacts arise. This ensures that decisions remain flexible and precautionary in the face of environmental uncertainty.

**(v) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.**

Section 2(4)(a)(vi) of NEMA requires that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where prevention is not reasonably practicable, minimised and remedied.

Potential environmental impacts and risks have been systematically identified and assessed through specialist studies and the environmental authorisation process. A hierarchy of avoidance, minimisation, and rehabilitation measures has been embedded in the project design and formalised through the Environmental Management Programme (EMPr).

The proposed low-impact residential development has been designed to uphold NEMA principles through sensitive siting, compact layout, and specialist-informed mitigation. The development footprint is confined to degraded CBA2 areas and avoids high-sensitivity ecological and coastal zones.

The development layout and mitigation strategy are informed by the Town Planning Report (2025), Terrestrial Biodiversity Assessment (2025), Visual Compliance Statement (2025), Preliminary Geotechnical and Geomatic Report (2024), and Civil and Structural Engineering Confirmation (2025). These studies confirm that the development can be accommodated without unacceptable impacts on ecological functioning, visual character, coastal stability, or surrounding land uses, provided that mitigation measures are implemented.

Key mitigation measures include:

- strict avoidance of CBA1 vegetation, natural forest, steep slopes, and high-risk erosion zones
- confinement of disturbance to a compact footprint ( $\pm 1\,375\text{ m}^2$ )
- lightweight construction techniques to minimise excavation
- rehabilitation of disturbed areas with indigenous vegetation
- long-term alien invasive species control
- engineered stormwater and erosion control systems certified by an ECSA-registered engineer
- appointment of an independent Environmental Control Officer (ECO) to monitor compliance

Through these measures, potential impacts are proactively managed, environmental rights are protected, and any residual effects are minimised and remedied. The proposal, therefore, supports a development outcome consistent with sustainable development and responsible environmental management.

## Section E

### Description of the policy and legislative context within which the development is proposed:

The applicant is required to comply with all the required legislation and policies for the proposed development on Portion 79 of Farm 205 Ruygte Valley Sedgefield. The following table indicates the legislation and guidelines of all spheres of government that are applicable to the application as contemplated in the EIA regulations.

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/ comment / relevant consideration (e.g. rezoning or consent use, building plan approval)	APPLICABILITY TO THE PROPOSED DEVELOPMENT

<p>NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) AND THE 2014 EIA REGULATIONS AS AMENDED IN 2017</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del></p>	<p>In the process of a BAR application.</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (ACT NO 10 OF 2004)</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del></p>	<p>Cape Nature to provide comments. A vegetation Sensitivity analysis specialist study was undertaken.</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT (ACT NO 24 OF 2008)</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del></p>	<p>This Act is applicable to the proposed development as it is within the Coastal Zone.</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (ACT 57 OF 2003)</p> <p>REGULATIONS FOR THE PROPER ADMINISTRATION OF THE KNYSNA PROTECTED ENVIRONMENT (R 1175 OF DEC 2009)</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del></p>	<p>The property does not fall within a formally declared protected area; however, it is located adjacent to privately conserved land and within the broader Knysna Protected Environment.</p>
	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del></p>	<p>The Waste Hierarchy will be adhered to during the construction and</p>

NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (ACT 59 OF 2008)	All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.		operational phases. The EMPr covers the waste disposal aspect in detail.
NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT (ACT NO 39 OF 2004)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.	<del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del>	No Atmospheric Emission Licence is required. Dust and emissions associated with construction activities will be managed in accordance with the Air Quality Act and are addressed in the EMPr.
NATIONAL FORESTS ACT (ACT 84 OF 1998)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.  <i>DFFE (Forestry Branch)</i>	<del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del>	Should a protected tree need to be cut/ destroyed, relevant authorisation will be obtained from the Department of DEFF
FORESTRY LAWS AMENDMENT ACT (ACT 35 OF 2005)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.  <i>DFFE (Forestry Branch)</i>	<del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del>	N/A
NATIONAL WATER ACT (ACT 36 OF 1998)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa.	<del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del>	Comment will be required from the DWS as part of the public

	<p>All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p> <p><i>Dept of Water Affairs Jurisdiction</i></p>		<p>participation process.</p>
<p>WATER SERVICES ACT (ACT 108 OF 1997)</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p> <p><i>Dept of Water Affairs Jurisdiction</i></p>	<p><del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b></p>	<p>No watercourses or wetlands occur on the site, and no water uses in terms of Section 21 of the National Water Act are triggered. The Department of Water and Sanitation will be afforded an opportunity to comment during public participation.</p>
<p>SEA SHORE ACT (ACT 21 OF 1935)</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b></p>	<p>N/A</p>
<p>WESTERN CAPE NATURE CONSERVATION LAWS AMENDMENT ACT (ACT 3 OF 2000)</p>	<p>Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.</p>	<p><del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b></p>	<p>Cape Nature to provide comment as part of the public participation process. A Terrestrial Biodiversity Specialist study was undertaken.</p>

	<i>CapeNature Jurisdiction</i>		
CONSERVATION OF AGRICULTURAL RESOURCES ACT (ACT 43 OF 1983)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.  <i>Dept. of Agriculture Jurisdiction</i>	<del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b>	The Department of Agriculture to provide comment as part of the public participation process. An agricultural Compliance Statement was prepared.
NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.	<del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b>	Heritage Western Cape confirmed that no further heritage assessment is required in terms of Section 38 of the National Heritage Resources Act.
NATIONAL HEALTH ACT (ACT 61 OF 2003)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.  <i>Dept. of Health Jurisdiction</i>	<del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b>	In terms of this Act, a Health and Safety Officer and protocol must be implemented during the construction phase, this is addressed in the EMPr. The Department of Health to provide comment.
THE SOUTH AFRICAN ROADS AGENCY LIMITED AND NATIONAL ROADS ACT (ACT 7 OF 1998)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that	<del>PERMIT / LICENSE / AUTHORIZATION /</del> <b>COMMENT / RELEVANT CONSIDERATION</b>	The Department to provide comment as part of the public participation process.

	have been identified as relevant Competent Authorities.  <i>SANRAL Jurisdiction</i>		
Outiniqua Sensitive Coastal Area Extension Report (OSCAER)	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa. All State and Provincial Departments, as well as Local Authorities, that have been identified as relevant Competent Authorities.	<del>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</del>	The Outeniqua Sensitive Coastal Area Extension Report is a relevant coastal planning guideline. Its principles have informed the site constraints analysis and layout design.

<b>POLICY / GUIDELINES</b>	<b>ADMINISTERING AUTHORITY</b>
EIA Guideline and Information Document Series: Guideline on Generic Terms of Reference for EAPs and Project Schedules	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa
	The Environmental Assessment Practitioner (EAP) is required to be independent and to submit all information as prescribed by the EIA Regulations and associated guidelines. This requirement is addressed throughout the BAR.
EIA Guideline and Information Document Series: Guideline on Public Participation	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa
	The public participation process must comply with the requirements of the EIA Regulations. This has been implemented and documented in the BAR.
EIA Guideline and Information Document Series: Guideline on Alternatives	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa
	Reasonable and feasible alternatives have been considered and assessed in the Alternatives section of the BAR.
EIA Guideline and Information Document Series: Guideline on Need and Desirability	Department of Forestry, Fisheries and the Environment (DFFE), Republic of South Africa
	The need for and desirability of the proposed development are assessed in accordance with this guideline in the relevant section of the BAR.
	Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)

Guideline on Public Participation (2010), EIA Guideline and Information Document Series	Provincial public participation requirements have been applied and integrated into the BAR in accordance with Western Cape practice.
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## Section F

### Need and Desirability for the proposed development

#### Need

The need for and desirability of the proposed development constitute a key consideration in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 (as amended). The proposal must be evaluated within the context of applicable spatial planning instruments, including the Knysna Municipal Spatial Development Framework (SDF, 2020), the Integrated Development Plan (IDP), and the Garden Route Environmental Management Framework (EMF).

The purpose of the proposed development on Portion 79 of Farm Ruygte Valley No. 205 is the establishment of a primary private residence, together with three low-intensity accommodation units and associated access and ancillary infrastructure, within a sensitive coastal and biodiversity-rich environment. For land-use planning and rezoning purposes, the additional units are described as tourist accommodation in accordance with the provisions of the Knysna Zoning Scheme. However, the landowners currently plan to utilise the additional units for private family and guest accommodation.

The development responds to a legitimate need for conservation-compatible residential use and low-intensity accommodation within a sensitive coastal landscape. The Knysna SDF (2020) recognises the role of small-scale, low-intensity development outside the urban edge where it reinforces conservation objectives, promotes responsible land stewardship, and contributes to the local economy without compromising environmental integrity.

Portions of the site fall within the 100-metre High-Water Mark (HWM) trigger area as defined for coastal management purposes under the National Environmental Management: Integrated Coastal Management Act, 2008. The HWM, as reflected on available mapping, is not a gazetted development setback line, but rather a regulatory trigger used to identify areas requiring additional environmental assessment and authorisation. Development within the HWM requires careful risk-based assessment and mitigation, provided that site-specific coastal risks are appropriately assessed and managed.

Specialist investigations confirm that the proposed development footprint is located on elevated terrain, with coastal cliffs exceeding approximately 80 metres above mean sea level along the southern boundary of the property. The Preliminary Geotechnical and Geomatic Report and associated constraints mapping demonstrate that, although the development falls within the 100 m HWM trigger area, it is positioned landward of all mapped high-risk coastal erosion and flood-prone zones and outside areas of unacceptable long-term coastal risk. The footprint, therefore, represents the lowest practicable risk location within a constrained coastal environment.

The proposal consolidates development within a single compact node, retaining approximately 97.3% of the property in a natural or rehabilitated state and avoiding sensitive ecological, visual, and physical receptors. Environmental constraints — including coastal processes — have been the primary determinants of layout, design, and management.

The development further addresses the need for responsible land management, including alien invasive species control, ecological rehabilitation, and long-term conservation stewardship, as identified in the Terrestrial Biodiversity Assessment (2025) and Agricultural Compliance Statement (2025). These studies confirm that the land is unsuitable for commercial agriculture but well-suited to conservation-oriented residential use supplemented by low-intensity accommodation.

The design incorporates off-grid infrastructure, including solar energy generation, rainwater harvesting, and on-site wastewater management, thereby reducing reliance on municipal services and supporting long-term environmental sustainability.

### Desirability

Desirability relates to the suitability of the site, its compatibility with surrounding land uses, and its alignment with spatial and environmental planning frameworks.

The site is physically suitable for limited residential and low-intensity accommodation development, provided that all mitigation measures identified in the Preliminary Geotechnical and Geomatic Report (Rock Hounds, 2024) and the Civil and Structural Engineering Confirmation (2025) are implemented. These include slope stabilisation, erosion control, stormwater management, and professional engineering oversight.

Although portions of the site fall within the 100 m HWM trigger area, specialist assessments confirm that the preferred development footprint is located outside mapped high-risk coastal erosion and flood zones and is positioned on stable, elevated terrain. The HWM has therefore been appropriately treated as a planning and assessment constraint rather than an exclusionary development line, with the layout informed by a constraints-led site selection process.

The development footprint has been deliberately positioned to avoid steep slopes, natural forest, and all mapped CBA1 (Maintain) areas, with development confined to degraded CBA2 (Restore) portions of the site. The proposal is compatible with surrounding land uses, which comprise private conservation properties, low-density residential holdings, and protected natural areas.

The scale, intensity, and anticipated private-use nature of the accommodation units ensure that the development does not introduce urban or resort-type land-use characteristics. The Visual Compliance Statement (Outline Landscape Architects, 2025) confirms that the development will not result in significant visual intrusion due to vegetation screening, topographic separation, and an architectural language that integrates with the coastal landscape.

From a planning perspective, the proposal aligns with the Knysna SDF (2020) and the Garden Route EMF, which support conservation-compatible development and small-scale, nature-based accommodation outside the urban edge where environmental constraints can be appropriately managed. The proposed rezoning to Open Space III (Nature Conservation) will formalise long-term conservation management over the majority of the property while allowing a limited development envelope with a total disturbed footprint of approximately 1 375 m<sup>2</sup>.

Accordingly, the development is desirable in environmental, spatial, and social terms, as it:

- Maintains the ecological and scenic integrity of the coastal dune and forest landscape
- Appropriately manages development within the 100 m HWM trigger area through specialist-informed siting and design
- Supports low-impact, conservation-aligned accommodation consistent with the Garden Route context
- Avoids unnecessary visual, ecological, and physical disturbance
- Promotes private stewardship and long-term conservation management
- Introduces no significant additional service or traffic burden on Bushy Way or the surrounding area

## Conclusion

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 is both needed and desirable within the context of sustainable rural development and conservation-based land use. The project comprises a private residence and three low-intensity accommodation units for private use by family members and guests, described as tourist accommodation for rezoning purposes but anticipated to function as private family and guest accommodation.

The development addresses the need for responsible land management and conservation stewardship on a site that is unsuitable for commercial agriculture but strategically located within a sensitive coastal landscape. While portions of the site fall within the 100 m High-Water Mark trigger area, the development has been appropriately assessed and positioned in accordance with specialist recommendations and coastal risk considerations, demonstrating that development within this area can be environmentally acceptable when informed by site-specific constraints.

With a limited development footprint ( $\pm 1\,375\text{ m}^2$ ), elevated siting, off-grid servicing, strict avoidance of high-sensitivity areas, and comprehensive rehabilitation and management commitments, the proposal protects the site's scenic and ecological integrity while enabling a low-intensity residential and accommodation use that is harmonious with the surrounding conservation landscape.

Unlike speculative coastal development that incrementally fragments the coastline, the proposal consolidates all built form into a single, tightly controlled node while securing the remaining  $\pm 97\%$  of the property under formal conservation zoning. In cumulative terms, the proposal functions as a net protective intervention within the coastal landscape, preventing future subdivision, densification or piecemeal expansion. The long-term effect is therefore stabilising rather than precedent-setting.

The table below identifies all plans, guidelines, spatial tools and municipal development frameworks applicable to the proposed activity.

### **Is the activity permitted in terms of the property's existing land use rights?**

Portion 79 of Farm Ruygte Valley No. 205, Sedgfield, is currently zoned Agriculture Zone I in terms of the Knysna Zoning Scheme Regulations (1992).

This zoning permits agricultural activities and one dwelling house as a primary land-use right. The construction of a single private dwelling on the property is therefore permitted in terms of the existing zoning.

However, the property's environmental sensitivity and limited agricultural potential, as confirmed by the Terrestrial Biodiversity Specialist Assessment (2025) and the Agricultural Compliance Statement (2025), render the site unsuitable for intensive agricultural use. These studies identify the land as more appropriately managed for conservation-oriented land use with limited, low-impact development.

Accordingly, it is proposed that the property be rezoned to Open Space III (Nature Conservation Area). This rezoning will formalise the long-term conservation intent of the property, ensure protection of its ecological and scenic attributes, and secure compliance with specialist recommendations. The proposed rezoning is consistent with the Knysna Spatial Development Framework (SDF, 2020), which identifies this coastal area as suitable for environmental conservation and low-intensity residential and nature-based accommodation uses outside the urban edge.

### Development parameters for Open Space III

In terms of the Knysna Zoning Scheme Regulations (1992), the following provisions apply to land zoned Open Space III (Nature Conservation Area):

- (a) The Municipality may require an Environmental Management Plan (EMP) as part of development approval;
- (b) The Municipality may determine land-use restrictions and development parameters based on conservation objectives and site-specific environmental constraints;

- (c) One dwelling house may be permitted where the full extent of the land unit is zoned Open Space III and where no dwelling exists on another portion of the parent property;
- (d) A consent use may be applied for to permit tourist facilities or tourist accommodation, subject to compliance with environmental and planning requirements; and
- (e) A Site Development Plan (SDP) must be submitted for approval, indicating the location of all structures, access roads, and services.

#### Current application

The current application seeks to exercise the primary land-use right under the existing Agriculture Zone I zoning through the construction of a single private dwelling, including access, services, and rehabilitation measures.

In addition, and in order to regularise the full development proposal, the Applicant intends to apply for:

- Rezoning of the property to Open Space III (Nature Conservation Area); and
- Consent use approval to allow for three low-intensity accommodation units, described as tourist accommodation for land-use planning purposes.

While the accommodation units are defined as tourist accommodation in planning terms (to enable the additional units under the proposed land-use framework), the Applicant anticipates that the units will predominantly be used by the landowners, family, and guests.

The Environmental Authorisation application assesses the environmental acceptability of the proposed development footprint, environmental sensitivities, and mitigation measures. It does not confer land-use rights nor pre-empt the outcome of the separate municipal rezoning and consent-use process, which remains subject to statutory approvals and conditions.

The proposed rezoning and consent will allow the Municipality to retain strict control over development intensity while securing the long-term conservation of approximately 97.3% of the property, with development confined to a compact footprint of approximately 1 375 m<sup>2</sup>.

#### The proposal, therefore, combines:

- a legitimate existing land-use right (one dwelling);
- a planning-controlled, low-intensity accommodation component; and
- a proactive conservation outcome,

in a manner consistent with the Knysna SDF (2020), provincial conservation policy, and the principles of sustainable development set out in NEMA.

#### **Will the activity be in line with the Provincial Spatial Development Framework (PSDF)**

The Western Cape Provincial Spatial Development Framework (PSDF), approved by the Provincial Cabinet, provides a strategic spatial framework for sustainable development across the province's urban and rural landscapes. The PSDF promotes responsible management of natural assets, containment of urban expansion, and protection of biodiversity-rich, scenic, and agriculturally important land.

Within the eastern part of the Province, the PSDF identifies George as a regional centre, with Knysna and Plettenberg Bay functioning as smaller service centres along the N2 Regional Connector Route. The Garden Route is recognised as a nationally significant scenic, conservation, and tourism corridor, where low-impact, conservation-compatible development and nature-based tourism are supported, provided ecological integrity and landscape character are maintained.

#### PSDF spatial themes

The PSDF is structured around three core spatial themes:

- Resources — protection and sustainable use of biodiversity, land and water resources;
- Space Economy — strengthening local economies through spatially efficient, resource-conscious development;
- Settlement — promotion of compact, environmentally sensitive settlement patterns that avoid urban sprawl.
- The overarching objective of the PSDF is to decouple economic growth from environmental degradation by supporting a green and resilient rural economy.

Alignment of the proposal with the PSDF

The proposed development aligns with the PSDF in the following ways:

- Resource protection: Approximately 97.3% of the property will remain natural or rehabilitated, with development confined to a degraded portion of the site;
- Compact development: A single clustered residential node avoids incremental urbanisation;
- Green economy: Low-impact, conservation-compatible accommodation supports nature-based tourism;
- Settlement pattern: Development occurs outside the urban edge and avoids sprawl;
- Resource efficiency: Off-grid systems reduce pressure on municipal infrastructure.

Conclusion on PSDF compliance

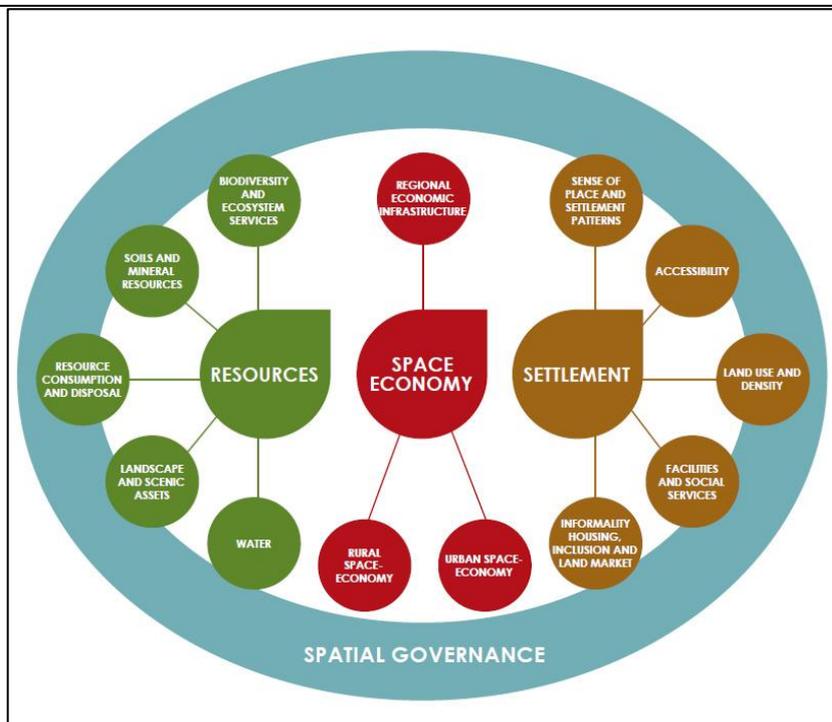
The proposed development is consistent with and supportive of the PSDF objectives to:

- (i) promote a resource-efficient and competitive spatial economy;
- (ii) support inclusive and sustainable rural development; and
- (iii) strengthen environmental resilience in sensitive landscapes.

Accordingly, the activity is considered to be in line with the Provincial Spatial Development Framework and contributes to a conservation-led, low-impact development model within the Garden Route.

PSDF THEME	FROM	TO
RESOURCES	Mainly curative interventions	More preventative interventions
	Resource consumptive living	Sustainable living technologies
	Reactive protection of natural, scenic and agricultural resources	Proactive management of resources as social, economic and environmental assets
SPACE-ECONOMY	Fragmented planning and management of economic infrastructure	Spatially aligned infrastructure planning, prioritisation and investment
	Limited economic opportunities	Variety of livelihood and income opportunities
	Unbalanced rural and urban space economies	Balanced urban and rural space economies built around green and information technologies
SETTLEMENT	Suburban approaches to settlement	Urban approaches to settlement
	Emphasis on 'greenfields' development and low density sprawl	Emphasis on 'brownfields' development
	Low density sprawl	Increased densities in appropriate locations aligned with resources and space-economy
	Segregated land use activities	Integration of complementary land uses
	Car dependent neighbourhoods and private mobility focus	Public transport orientation and walkable neighbourhoods
	Poor quality public spaces	High quality public spaces
	Fragmented, isolated and inefficient community facilities	Integrated, clustered and well located community facilities
	Focus on private property rights and developer led growth	Balancing private and public property rights and increased public direction on growth
	Exclusionary land markets and top-down delivery	Inclusionary land markets and partnerships with beneficiaries in delivery
	Limited tenure options and standardised housing types	Diverse tenure options and wider range of housing typologies
Delivering finished houses through large contracts and public finance and with standard levels of service	Progressive housing improvements and incremental development through public, private and community finance with differentiated levels of service	

**FIGURE 12: KEY SPATIAL TRANSITIONS PROMOTED BY THE WESTERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (PSDF). (SOURCE: WESTERN CAPE GOVERNMENT, PSDF)**



**FIGURE 13: CONCEPTUAL DIAGRAM ILLUSTRATING THE PSDF'S THREE SPATIAL THEMES: RESOURCES, SPACE ECONOMY, AND SETTLEMENT, WITHIN A SPATIAL GOVERNANCE FRAMEWORK.**  
**(SOURCE: WESTERN CAPE GOVERNMENT, PSDF)**

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 aligns with the PSDF's transition framework illustrated above by shifting from resource-consumptive land use toward proactive conservation management, compact development, and low-impact, nature-based accommodation. The proposal supports the PSDF's Resources theme by protecting biodiversity and landscape assets, contributes to the Space Economy through small-scale, conservation-compatible tourism and rural economic activity, and is consistent with the Settlement theme by avoiding urban sprawl and concentrating development within a defined and environmentally constrained footprint.

**The property is situated outside of the Urban Edge**

The subject property, Portion 79 of Farm Ruygte Valley No. 205, is situated outside the Sedgefield Urban Edge, within the Groenvlei rural area of the Knysna Municipal Area.

Properties within this rural landscape generally measure approximately 5 hectares and are predominantly zoned Agriculture Zone I or Open Space under the Knysna Zoning Scheme Regulations (1992), as illustrated in the Town Planning Report. The majority of these properties remain undeveloped and largely in a natural state, with limited or no active agricultural use. Several adjoining properties have been incorporated into the Lake Pleasant Private Nature Reserve, reinforcing the conservation character of the area.

The subject property is currently zoned Agriculture Zone I, which permits agricultural activities and one dwelling house as a primary land-use right.

Proposed rezoning to Open Space III

Given the environmental sensitivity of the site and its limited agricultural potential, as confirmed by the Terrestrial Biodiversity Assessment (2025) and the Agricultural Compliance Statement (2025), it is proposed that the entire property be rezoned to Open Space III (Nature Conservation Area).

This rezoning will formalise the long-term conservation intent of the property, ensure protection of its natural and scenic qualities, and give effect to the recommendations of the specialist studies, while allowing for limited, conservation-compatible development within a compact footprint.

Approximately 97.3% of the property will remain in a natural or rehabilitated state, with development confined to approximately 1 375 m<sup>2</sup>.

#### Development parameters for Open Space III

In terms of the Knysna Zoning Scheme Regulations (1992), the following provisions apply to land zoned Open Space III:

- (a) The Municipality may require the submission and approval of an Environmental Management Programme (EMPr).
- (b) The Municipality may determine land-use restrictions and development parameters in accordance with conservation objectives.
- (c) One dwelling house may be permitted where the land unit is fully zoned Open Space III.
- (d) Tourist accommodation or facilities may be permitted by consent use; and
- (e) A Site Development Plan (SDP) must be approved, indicating all structures and services.

#### Planning motivation

The landowner intends to exercise the existing primary land-use right through the construction of a single private dwelling, with additional accommodation units proposed subject to rezoning and consent-use approval.

To regularise the broader proposal, the Applicant intends to apply for:

- Rezoning of the property to Open Space III (Nature Conservation Area); and
- Consent use approval for three low-intensity accommodation units.

While defined as tourist accommodation in planning terms, the units are anticipated to function as private family and guest accommodation. The Environmental Impact Assessment assesses environmental acceptability only and does not confer land-use rights.

An EIA is required due to the site's location within mapped Critical Biodiversity Areas and to verify that development remains consistent with environmental constraints.

The proposed rezoning aligns with the Western Cape PSDF and the Knysna SDF (2020), both of which emphasise:

- protection of sensitive landscapes.
- avoidance of rural fragmentation and urban sprawl; and
- conservation-compatible development outside the urban edge.

The proposal therefore supports sustainable land use, biodiversity protection, and private conservation stewardship without detracting from the rural spatial character of the area.

#### **Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).**

The Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Knysna Local Municipality provide the strategic policy framework guiding land-use decision-making, service delivery, and long-term spatial planning within the municipal area. A key consideration is whether approval of the proposed application would compromise the integrity or objectives of these approved planning instruments.

### Spatial Development Framework (SDF)

The subject property, Portion 79 of Farm Ruygte Valley No. 205, is situated to the east of the Sedgefield Urban Edge, within an area identified by the Knysna Spatial Development Framework (SDF, 2020) as predominantly rural and conservation oriented. The SDF earmarks this coastal landscape for environmental protection, limited low-impact development, and conservation-compatible land uses.

The proposed rezoning of the property from Agriculture Zone I to Open Space III (Nature Conservation Area) is fully aligned with the spatial vision and policy intent of the Knysna SDF (2020). The proposal reinforces the conservation function of the area while allowing for a single residential node and a limited, low-intensity accommodation component, consistent with the rural and ecological character of the landscape.

The Knysna SDF recognises tourism as a key economic driver, particularly where it is nature-based, low-impact, and conservation-led. The framework promotes diversification of tourism offerings—including eco-tourism and conservation-based accommodation—while emphasising the protection of natural and scenic resources. In this context, the proposal to retain approximately 97.3

% of the property in a natural or rehabilitated state, with development confined to a compact footprint, aligns with the SDF's objectives of conservation-led land stewardship and sustainable rural development.

Importantly, the proposed development does not introduce high-intensity or resort-style land use. Any reference to "tourist accommodation" relates to the municipal land-use framework required to enable multiple accommodation units under the proposed rezoning and consent-use process. The Applicant's current intention is low-intensity, private use aligned with the conservation character of the area. In all cases, development intensity remains constrained by the approved footprint, the site's environmental sensitivities, off-grid servicing, and the conditions imposed through the EMPr and municipal land-use approvals.

### Integrated Development Plan (IDP)

The Knysna Local Municipality Integrated Development Plan (IDP) serves as the municipality's principal strategic planning instrument, guiding socio-economic development, infrastructure provision, and service delivery. The IDP is reviewed on a regular basis in accordance with municipal planning requirements, and its current strategic objectives remain relevant to the assessment of this application..

#### The IDP articulates the following key objectives relevant to the proposed development:

- Conservation and sustainable management of natural resources;
- Promotion of environmentally responsible development;
- Support for tourism, investment, and emerging industries;
- Creation of an enabling environment for sustainable economic activity; and
- Encouragement of community participation and responsible governance.

The proposed development aligns with these objectives by promoting private conservation stewardship, limiting development intensity, and avoiding demand on municipal bulk infrastructure through the use of off-grid systems, including solar energy, rainwater harvesting, and on-site wastewater treatment.

### Strategic Objectives and Planning Implications

The subject property is located within Ward 1 of the Knysna Municipality, an area characterised by low-density rural land uses, conservation properties, and limited municipal infrastructure investment.

#### The SDF's land-use management guidelines for rural areas emphasise:

- Maintenance of rural and agricultural character.

- Low building density and limited development footprints.
- Large property sizes (generally exceeding 3 ha).
- Avoidance of urban services and infrastructure expansion; and
- Consideration of conservation-compatible recreational and economic opportunities.

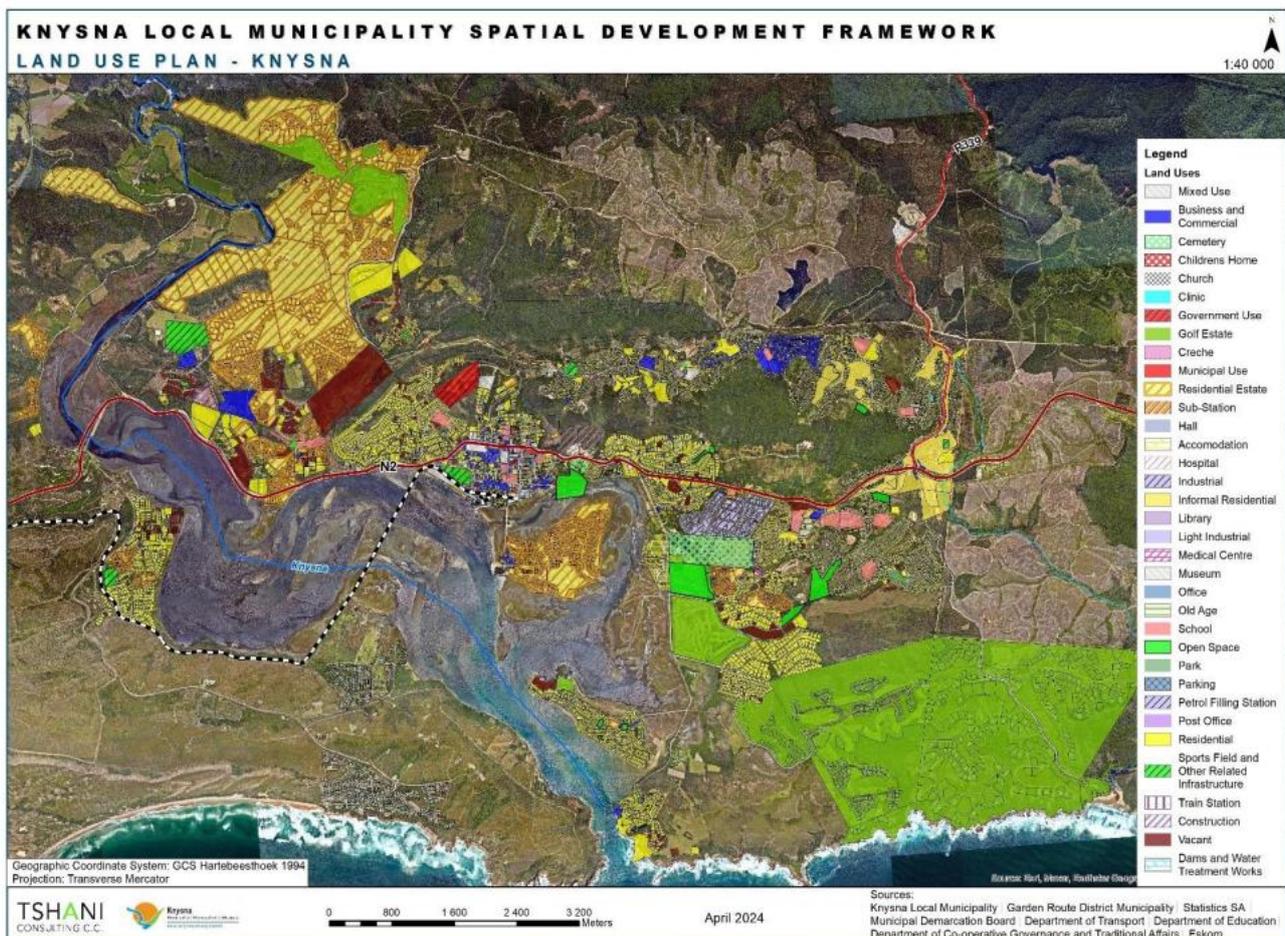
The proposed development complies with these guidelines by:

- Retaining the rural and conservation character of the area.
- Limiting development to a compact footprint of approximately 1 175 m<sup>2</sup>.
- Avoiding reliance on municipal infrastructure.
- Supporting limited, low-impact, nature-based accommodation; and
- Generating temporary local employment during the construction phase.

### Conclusion

Approval of the proposed development will not compromise the integrity of the Knysna Local Municipality’s approved IDP or SDF. On the contrary, the proposal supports the strategic intent of both instruments by promoting conservation-led land use, sustainable rural development, and low-impact tourism outside the urban edge.

The development is therefore considered consistent with municipal planning objectives, spatial policy directives, and long-term sustainability goals for the Knysna municipal area.



**FIGURE 14:KNYSNA LOCAL MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK (SDF) – LAND USE PLAN, ILLUSTRATING THE LOCATION OF PORTION 79 OF FARM RUYGTE VALLEY NO. 205 RELATIVE TO THE SEDGEFIELD URBAN EDGE AND SURROUNDING RURAL AND CONSERVATION AREAS. (SOURCE: KNYNSNA LOCAL MUNICIPALITY SDF, 2020)**

## Approved Structure Plan of the Municipality

The Knysna Local Municipality no longer relies on a standalone “Structure Plan” in the traditional sense. In terms of the Spatial Planning and Land Use Management Act (SPLUMA), 2013, the function historically fulfilled by municipal structure plans is now performed by the Spatial Development Framework (SDF) adopted by the Municipality.

The Knysna Spatial Development Framework (SDF, 2020) therefore constitutes the Municipality’s approved spatial structuring instrument, providing strategic guidance on land use, settlement patterns, environmental management, and economic development across the municipal area.

As reflected in the approved SDF, Portion 79 of Farm Ruygte Valley No. 205 is located outside the Sedgefield Urban Edge, within a predominantly rural and conservation-oriented landscape. The SDF directs that development in such areas should be limited in scale, environmentally sensitive, and compatible with conservation objectives, while avoiding urban sprawl and the extension of municipal services into rural environments.

Importantly, the Knysna SDF recognises tourism — particularly nature-based and low-impact tourism — as a key economic driver within rural and environmentally sensitive areas, provided that such development:

- is small in scale,
- is conservation-compatible,
- does not compromise ecological integrity or landscape character, and
- remains consistent with the rural spatial structure.

The proposed rezoning of the property from Agriculture Zone I to Open Space III (Nature Conservation Area), together with a consent use application for limited, low-intensity accommodation units, is aligned with this spatial intent. The proposed accommodation component is modest in scale, clustered within a single development node, and secondary to the overarching conservation function of the property.

The proposal further supports the SDF’s objectives by:

- retaining approximately 97.3% of the property in a natural or rehabilitated state.
- limiting development to a compact footprint of approximately 1 375 m<sup>2</sup>.
- relying on off-grid infrastructure, thereby avoiding municipal service demand; and
- reinforcing private conservation stewardship within a sensitive coastal landscape.

Accordingly, the proposed development is consistent with the Municipality’s approved spatial planning framework as embodied in the Knysna Spatial Development Framework. The proposal supports conservation-led land use and low-impact rural accommodation in a manner that does not compromise the integrity of the municipal spatial structure or the environmental character of the Groenvlei coastal area.

## **An Environmental Management Framework (EMF) adopted by the Department (e.g. would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)**

The Garden Route Environmental Management Framework (EMF) provides spatial and environmental guidance for development within the district and is intended to support informed decision-making in environmentally sensitive landscapes. The EMF identifies Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) as key spatial informants and provides policy direction for managing development outside the urban edge, with a strong emphasis on biodiversity protection, landscape integrity, and low-intensity land use.

The EMF states (p. 23):

*“Rural development, i.e. development outside the Urban Edge, shall not exceed densities of 1 dwelling unit per 10 hectares and may be considerably lower in landscapes with low visual carrying capacity.”*

Portion 79 of Farm Ruygte Valley No. 205 measures approximately 5.1576 ha and is located outside the urban edge within a sensitive coastal and biodiversity-rich landscape. While the EMF provides an indicative rural density guideline (1 dwelling unit per 10 ha), the present application is assessed on the basis of site-specific environmental constraints, clustered development footprint, off-grid servicing, and the long-term conservation outcome secured through rezoning to Open Space III, rather than density in isolation.

The proposal comprises:

- one primary dwelling; and
- three small, low-intensity accommodation units clustered within a single compact development node.

The accommodation units are ancillary to the primary residential use and do not constitute separate dwelling houses distributed across the property. No subdivision or dispersed settlement is proposed. The development functions as a single, conservation-compatible residential node within a predominantly natural landscape.

The total development footprint is approximately 1 375 m<sup>2</sup>, representing approximately 2.7% of the site, with approximately 97.3% of the property retained in a natural or rehabilitated state. This approach maintains the broader landscape character, ecological connectivity, and scenic quality of the area.

The Visual Compliance Statement confirms that the site exhibits a low visual carrying capacity, which has been carefully considered in the layout and architectural design. Buildings are visually screened, follow natural contours, and avoid skyline or ridgeline intrusion, ensuring minimal visual impact within the coastal landscape.

Importantly, the proposed rezoning to Open Space III (Nature Conservation Area) gives formal effect to the EMF's conservation objectives by:

- securing long-term environmental protection of the site;
- preventing future subdivision or densification inconsistent with the rural conservation character of the area; and
- enabling only limited, conservation-compatible development within a clearly defined and managed footprint.

Conclusion on EMF Alignment

Approval of the proposed development will not compromise the integrity of the Garden Route EMF or the environmental management priorities for the area. On the contrary, the proposal gives effect to the EMF's sustainability objectives by prioritising conservation, limiting development intensity, avoiding urban sprawl, and promoting low-impact land use outside the urban edge.

**WESTERN CAPE RURAL AREAS GUIDELINES (DEA&DP, 2019)**

The Western Cape Rural Areas Guidelines (DEA&DP, 2019) provide a strategic framework for land-use planning and management outside the urban edge, with the objective of balancing biodiversity conservation, rural livelihoods, and appropriate economic activity. The Guidelines form part of the implementation toolkit of the Western Cape Provincial Spatial Development Framework (PSDF) and guide sustainable development within environmentally sensitive rural landscapes.

The Guidelines promote low-impact, biodiversity-sensitive land uses that are compatible with natural systems, particularly within Critical Biodiversity Areas (CBAs) and degraded landscapes where ecological restoration and conservation stewardship are prioritised. Intensive or extractive land uses, such as mining or large-scale agricultural expansion, are explicitly discouraged within sensitive rural and coastal environments.

### Nature-based tourism and rural accommodation

The Rural Areas Guidelines recognise eco-tourism and nature-based accommodation as appropriate rural land uses where such activities:

- are small in scale and clustered
- are conservation-compatible
- enhance access to natural and recreational resources
- do not compromise ecological integrity, landscape character, or coastal processes

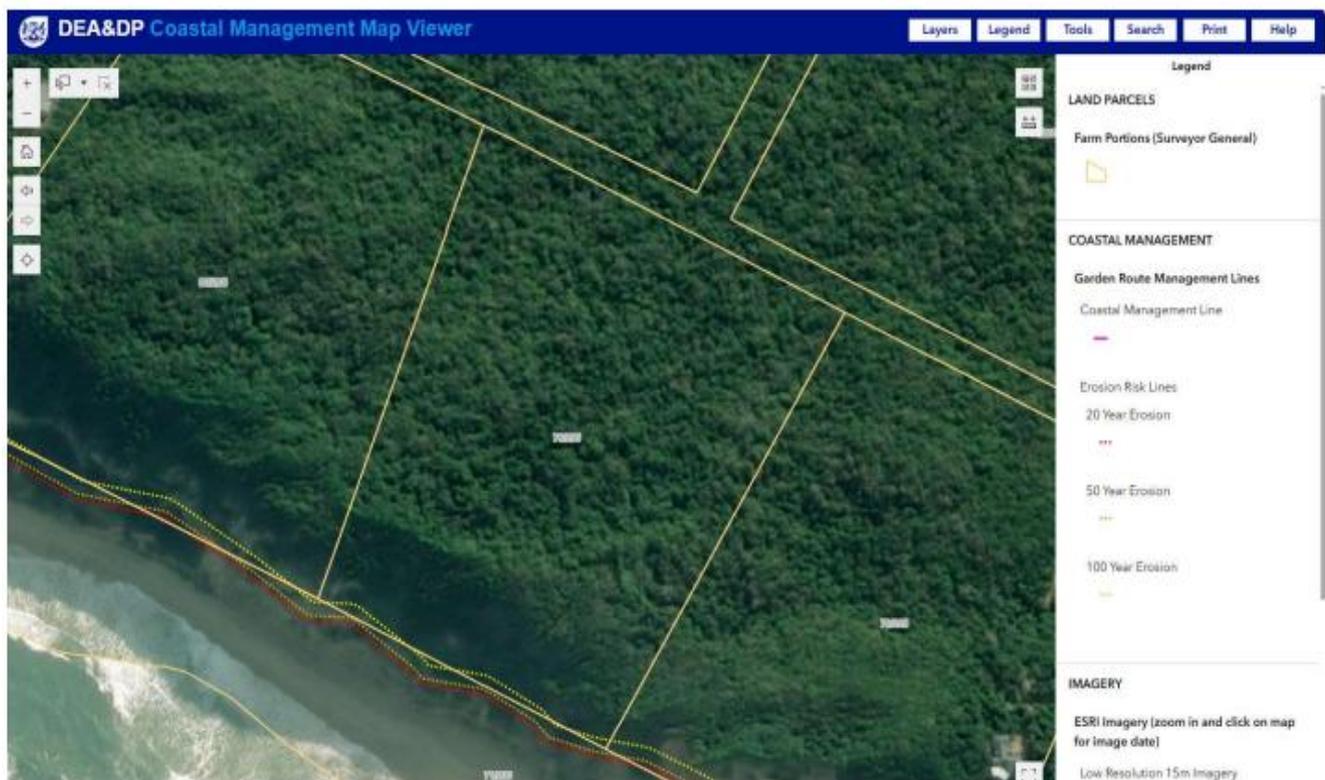
Recommended activities include non-consumptive land uses such as hiking, birdwatching, and limited low-intensity accommodation associated with conservation landscapes. These principles are directly applicable to Portion 79 of Farm Ruygte Valley No. 205, which forms part of a broader coastal conservation matrix adjoining the Lake Pleasant Private Nature Reserve and the Goukamma Protected Area.

### Visual and landscape integration

The Guidelines require that new rural development apply environmentally sensitive design principles that harmonise with the surrounding landscape and maintain scenic quality. The Visual Compliance Statements (Outline Landscape Architects, 2025) confirm that the proposed development:

- will not intrude on key coastal or ridgeline views
- is visually screened by existing vegetation and topography
- is compatible with the low visual carrying capacity of the area

The architectural approach, using lightweight materials such as timber, steel, and glass, supports visual integration while limiting excavation and landform alteration.



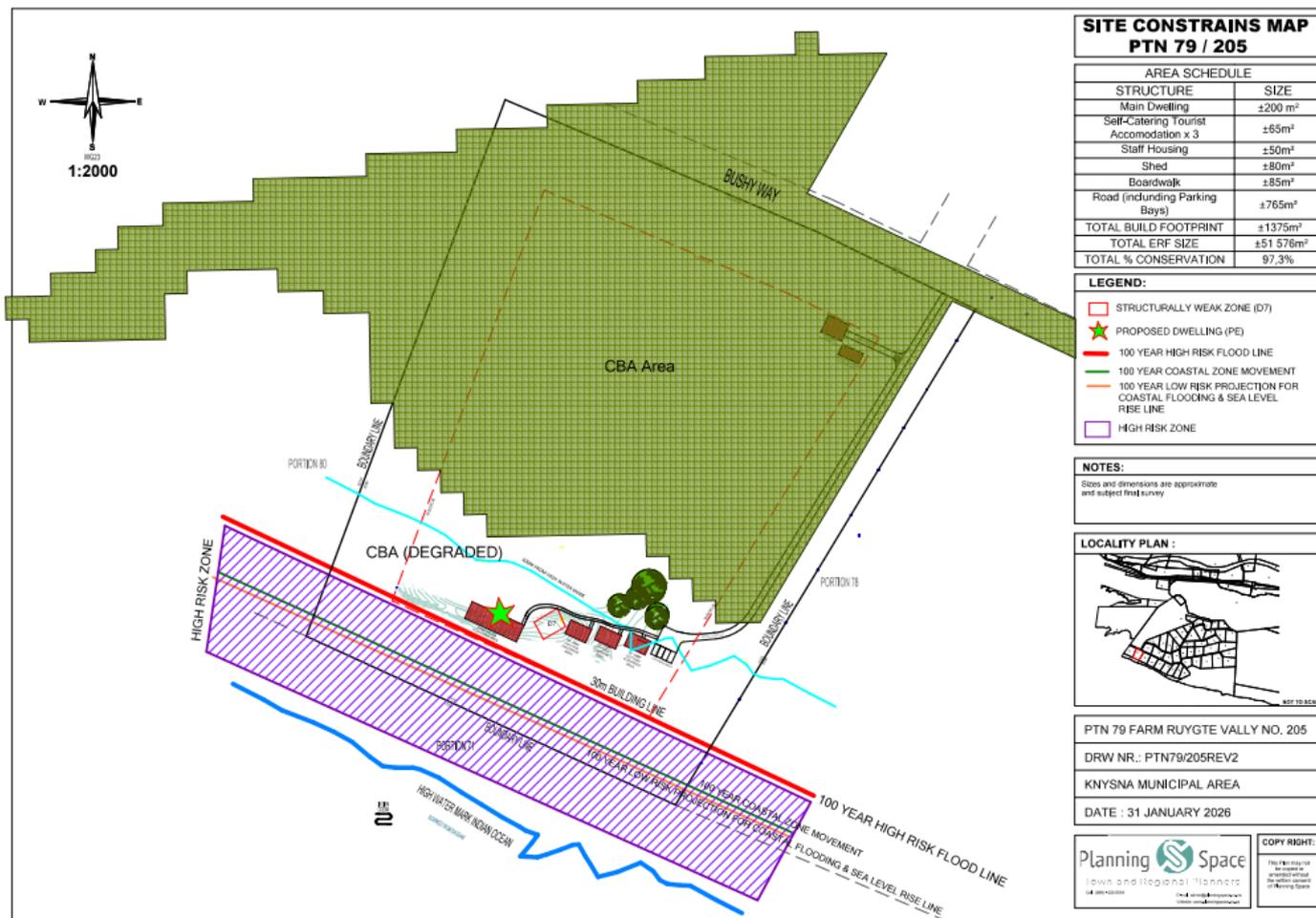
**FIGURE 15: THE DEA&DP COASTAL MANAGEMENT MAP VIEWER IDENTIFIES THE 20-, 50-, AND 100-YEAR COASTAL EROSION RISK LINES APPLICABLE TO THE SITE**

### Coastal management and erosion risk

The Western Cape Rural Areas Guidelines emphasise strict protection of coastal resources and compliance with coastal management zones established under the Integrated Coastal Management Act (ICMA). Portions of the property fall within the 100-metre High Water Mark (HWM) trigger area; however, coastal risk has been assessed using both provincial datasets and site-specific specialist investigations.

The DEA&DP Coastal Management Map Viewer identifies the 20-, 50-, and 100-year erosion risk lines applicable to the site (Figure 16). The Preliminary Geotechnical and Geomatic Report (Rock Hounds, 2024) confirms that the preferred development footprint is located outside the mapped 100-year high-risk erosion zone.

A site-specific geotechnical and geomatic investigation assessed dune stability, coastal morphology, and long-term erosion trends. Based on this assessment, a conservative coastal setback line approximately 30 metres inland of the southern property boundary was defined. All proposed structures are positioned landward of this setback, ensuring protection of coastal processes and reducing long-term risk to both the environment and built infrastructure.



**FIGURE 16: UPDATED SITE CONSTRAINTS MAP SHOWING VEGETATION TYPES (CBA1, CBA2), SLOPE CONTOURS, ACCESS ROUTES, AND PROPOSED DEVELOPMENT AREA ON PORTION 79 OF FARM RUYGTE VALLEY NO. 205, SEDGEFIELD. SOURCE: APPENDIX B1 – SITE CONSTRAINTS MAP (2026).**

Integration with site constraints

Provincial coastal management constraints have been translated into site-specific planning controls through the Site Constraints Map (Appendix B1), which integrates:

- the 100 m High Water Mark (HWM) trigger area
- coastal erosion risk lines
- slope and geotechnical constraints
- Critical Biodiversity Areas (CBA1 and CBA2)

- the amended preferred development footprint

This constraints-led planning approach demonstrates that the development has been actively guided by environmental limits rather than merely assessed against them after the fact.

Alignment with rural conservation objectives.

In accordance with the Western Cape Rural Areas Guidelines, the proposed development:

- retains approximately 97.3% of the property in a natural or rehabilitated state
- confines development to a single compact low-impact node
- rehabilitates degraded CBA2 areas dominated by invasive alien vegetation
- relies on off-grid infrastructure, avoiding demand on municipal services
- reinforces ecological connectivity within the greater Goukamma–Lake Pleasant conservation landscape

#### Conclusion

Approval of the proposed development will not compromise the integrity of the Western Cape Rural Areas Guidelines or coastal management priorities. On the contrary, the proposal gives effect to provincial rural policy by promoting conservation-led land use, safeguarding coastal and biodiversity resources, and enabling limited, nature-based accommodation that supports sustainable rural economies.

The development is therefore consistent with the Western Cape’s rural conservation agenda, the Garden Route Environmental Management Framework, and applicable coastal management instruments, and is justified in terms of long-term environmental sustainability.

### **KNYSNA MUNICIPALITY STANDARD BY-LAW ON MUNICIPAL LAND USE PLANNING, 2016**

The Knysna Municipal Land Use Planning By-law (2016), adopted on 12 February 2016, governs all land-use and development applications within the municipal area. In terms of the By-law, land-use applications must be evaluated against a range of planning, environmental, and governance considerations to ensure lawful, sustainable, and spatially appropriate development.

In assessing land-use applications, the Municipality must consider, inter alia:

- the desirability of the proposed utilisation of land
- the impact of the proposed development on municipal engineering services
- alignment with the Integrated Development Plan (IDP) and Municipal Spatial Development Framework (SDF)
- consistency with the Provincial Spatial Development Framework (PSDF)
- applicable national and provincial planning policies and principles
- matters referred to in Section 42 of the Spatial Planning and Land Use Management Act (SPLUMA)
- the principles set out in Chapter VI of the Western Cape Land Use Planning Act (LUPA)

The planning analysis presented below is informed by the Town Planning Report prepared by Planning Space Town and Regional Planners (March 2025).

Spatial Planning and Land Use Management Act (Act 16 of 2013) and Land Use Planning Act (Act 3 of 2014) Development Principles (Section 7 of SPLUMA)

Section 7 of SPLUMA establishes development principles that must guide all spatial planning, land-use management, and development decisions. The proposed development on Portion 79 of Farm Ruygte Valley No. 205 has been assessed against these principles as follows:

#### Spatial Justice

Spatial justice seeks to address historical spatial inequalities and ensure fair access to land, resources, and opportunities. While the subject property is privately owned, the proposed development does not introduce exclusive, intensive, or spatially disruptive land uses.

By rezoning the property to Open Space III (Nature Conservation Area) and restricting development to a compact node, the proposal safeguards the coastal conservation corridor, maintains landscape permeability, and prevents fragmentation of sensitive rural land. The limited accommodation component—defined as tourist accommodation for planning purposes—remains secondary to the conservation function of the property and does not undermine public environmental rights or access to coastal resources.

#### Spatial Sustainability

Spatial sustainability is promoted through the transition from Agriculture Zone I, identified as environmentally unsuitable for cultivation, to a Nature Conservation zoning that prioritises biodiversity protection, ecosystem services, and long-term landscape integrity.

The total development footprint is approximately 1 375 m<sup>2</sup>, representing less than 2.7% of the property area, with approximately 97.3% retained in a natural or rehabilitated state. Off-grid systems for energy, water, and sanitation further reduce environmental impact and support sustainable land-use practices consistent with NEMA and SPLUMA objectives.

#### Spatial Efficiency

Spatial efficiency is achieved through compact, clustered development and prudent use of land and resources. The proposal avoids dispersed settlement, minimises infrastructure duplication, and relies entirely on self-sufficient service systems, thereby placing no additional burden on municipal engineering services.

The siting of development has been informed by environmental, biodiversity, coastal, and geotechnical constraints to ensure efficient use of developable land while protecting sensitive areas.

#### Spatial Resilience

Spatial resilience is addressed by locating all structures outside identified high-risk coastal erosion and flood zones, while acknowledging that portions of the site fall within the 100 m High Water Mark trigger area. The development has been designed in accordance with the Preliminary Geotechnical and Geomatic Report (Rock Hounds, 2024) and the Civil & Structural Engineering Confirmation (2025).

These studies confirm that, subject to appropriate foundation design, slope stabilisation, and stormwater management, the development is technically feasible and resilient to long-term geomorphological and climate-related risks.

#### Good Administration

The application process reflects the principles of good administration, including transparency, informed decision-making, and intergovernmental coordination. The proposal has been informed by a comprehensive suite of specialist studies, and public participation has been undertaken in accordance with the EIA Regulations, 2014 (as amended) and municipal land-use procedures.

The integration of environmental authorisation and land-use planning processes ensures coherent governance and compliance with both SPLUMA and LUPA.

#### Conclusion

The proposed development complies with the Knysna Municipal Land Use Planning By-law (2016) and is consistent with the development principles set out in SPLUMA and LUPA. It represents a balanced, conservation-led land-use outcome that supports spatial sustainability, efficiency, and resilience, while remaining aligned with municipal, provincial, and national planning frameworks.

**Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)**

### Guideline Context

In terms of the Guideline on Need and Desirability (DEA&DP, 2017), *need* refers to whether it is the appropriate time for a proposed development, while *desirability* considers whether the proposed land use is suitable for the specific location. These aspects must be assessed within the context of national, provincial, and local planning instruments, including:

- the Knysna Spatial Development Framework (SDF, 2020)
- the Garden Route Environmental Management Framework (EMF)
- the Western Cape Provincial Spatial Development Framework (PSDF)
- the Knysna Integrated Development Plan (IDP)
- the principles of the National Environmental Management Act (Act 107 of 1998)
- the Spatial Planning and Land Use Management Act (Act 16 of 2013)

### Need

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 seeks environmental authorisation for a single private dwelling and associated infrastructure, together with additional low-intensity accommodation units proposed subject to municipal rezoning and consent-use approval, within a conservation-oriented rural context.

There is a legitimate need for the landowner to exercise the existing primary land-use right to construct a dwelling on the property, while simultaneously formalising long-term conservation management of the site. The proposal responds directly to provincial and municipal policy directives that promote conservation-compatible land uses outside the urban edge and discourage inappropriate agricultural intensification or rural fragmentation.

Specialist studies, including the Terrestrial Biodiversity Assessment (2025) and the Agricultural Compliance Statement (2025), confirm that the site is environmentally sensitive and unsuitable for commercial agriculture but well suited to ecological rehabilitation and conservation stewardship. The proposed rezoning to Open Space III (Nature Conservation Area) will secure long-term protection of the land and strengthen ecological connectivity between the Lake Pleasant Private Nature Reserve and the Goukamma Protected Area.

From a timing perspective, the development is appropriate within the broader context of increasing emphasis on biodiversity protection, climate resilience, and sustainable rural living, as promoted by the Western Cape PSDF, Rural Areas Guidelines (2019), and Garden Route EMF.

Importantly, although portions of the property fall within the 100 m High Water Mark trigger area, specialist investigations confirm that the preferred development footprint is positioned outside mapped high-risk coastal erosion and flood zones and on elevated, stable terrain. The development has therefore been planned using a precautionary, constraints-led approach consistent with risk-averse environmental decision-making.

### Desirability

Desirability relates to the suitability of the site for the proposed land use, its compatibility with surrounding land uses, and its alignment with applicable spatial and environmental planning frameworks.

The site is physically suitable for limited residential development, as confirmed by the Preliminary Geotechnical and Geomatic Report (Rock Hounds, 2024) and the Civil and Structural Engineering Confirmation (2025). These reports verify that the proposed development footprint avoids steep slopes, natural forest, and mapped Critical Biodiversity Area 1 (CBA1) and can be safely developed provided that recommended slope-stabilisation, erosion-control, and stormwater-management measures are implemented.

The proposed dwelling and associated structures are compatible with surrounding land uses, which comprise low-density rural properties, private conservation areas, and protected natural landscapes. The Visual Compliance Statement (Outline Landscape Architects, 2025) confirms that the development will not result in significant visual intrusion due to its small scale, sensitive siting, and architecture that responds to the natural coastal landscape.

From a spatial planning perspective, the proposal aligns with the Knysna SDF (2020), which designates the Groenvlei rural area east of Sedgefield for conservation-oriented, low-impact rural living outside the urban edge. Rezoning from Agriculture Zone I to Open Space III will formalise the conservation intent of the property, ensuring that approximately 97.3% of the land remains in a natural or rehabilitated state, with disturbance confined to a compact footprint of approximately 1 375 m<sup>2</sup>.

While the Knysna SDF recognises tourism as an important regional economic driver, the present proposal does not introduce commercial tourism or high-intensity visitor land uses. Any reference to tourism relates solely to planning terminology required for rezoning and does not imply mass-tourism or resort-style development.

### Conclusion

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 is both needed and desirable within the context of sustainable rural development and conservation-based land use.

The project comprises a single private dwelling, additional low-intensity accommodation units for private family and guest use, and associated infrastructure designed to operate entirely off-grid through solar power, rainwater harvesting, and on-site wastewater management.

### The proposal satisfies the Need and Desirability criteria by:

- enabling legitimate residential use in harmony with environmental constraints
- formalising long-term conservation management through rezoning to Open Space III
- facilitating rehabilitation of the degraded Critical Biodiversity Area
- protecting ecological connectivity within a regional conservation corridor
- aligning with the principles of NEMA and SPLUMA
- supporting the objectives of the Knysna SDF, PSDF, and Garden Route EMF

The development represents a low-impact, policy-aligned, and environmentally responsible form of rural settlement that protects the ecological and scenic integrity of the Sedgefield coastal landscape while enabling sustainable private occupation.

## **Guideline Context**

### Guideline Context

There is currently no electrical infrastructure serving Portion 79 of Farm Ruygte Valley No. 205 or the adjacent road reserve. Given the site's rural location, environmental sensitivity, and the absence of municipal services, the provision of grid-based electricity is neither feasible nor desirable. The development will therefore be serviced entirely through an off-grid renewable energy system.

## Solar Power System

### Type and System Configuration

The proposed electricity supply will comprise an off-grid solar photovoltaic (PV) system designed to meet the full energy demand of the development. Solar generation will supply electrical loads during daylight hours, with surplus energy used to recharge battery storage for nighttime use.

The system will operate as a self-contained micro-grid and may incorporate grid-tied photovoltaic inverters through AC coupling should future energy demand exceed initial generation capacity. This configuration allows for scalability while remaining independent of municipal infrastructure.

### Plant Location

Solar panels will be installed as roof-mounted systems on the main dwelling and the three additional residential units. Roof mounting avoids additional ground disturbance, limits visual intrusion, and utilises existing built surfaces for energy generation.

### Plant Capacity

The proposed solar installation will have an estimated generation capacity of approximately 15 kWh. Anticipated peak daily electricity consumption is estimated at up to 30 kWh per day, with demand managed through energy-efficient design and battery storage.

### Energy Storage

A sealed Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery system is proposed. This system offers a design life exceeding 10 years at a depth of discharge of approximately 70%, rapid charging capability, and high operational safety, making it suitable for off-grid residential use.

### Area and Access Lighting

Internal access and pathway lighting will consist of low-intensity, low-level bollard luminaires. Each luminaire will be powered by an independent solar cell and fitted with motion sensors to minimise light pollution, reduce energy consumption, and comply with dark-sky principles.

### Environmental Impact and Mitigation

The internal electrical distribution network will be designed to integrate harmoniously with the development and the surrounding natural environment. All electrical infrastructure, including cabling, switchgear, and ancillary equipment, will be low-profile and positioned to follow natural contours.

Colours, finishes, and structural forms will be selected to blend with the landscape and minimise visual intrusion. To avoid unnecessary vegetation disturbance, services will be routed primarily within existing disturbed areas and along access routes. All electrical installation activities will be governed by the Environmental Management Programme (EMPr), which will prescribe mitigation measures, rehabilitation requirements, and monitoring during construction.

### Energy Efficiency and Renewable Energy Measures

Energy efficiency principles will be incorporated throughout the design and operational phases of the development.

#### These include:

- Installation of LED lighting and energy-efficient appliances;
- Compliance with the energy efficiency requirements of the National Building Regulations;

- Demand-side management to reduce peak electricity consumption.

The use of energy-efficient systems will reduce overall power demand and may allow for optimisation of the size of the solar installation.

*Technical principles informing the renewable energy approach were informed by the BDE Consulting Engineers Report (May 2019) and have been updated to reflect current best practice for off-grid residential developments.*

#### Water Reticulation

The development will be fully off-grid in terms of water supply. All domestic water requirements will be met through rainwater harvesting systems installed at each building. Water will be collected from roof catchments and stored in on-site tanks for domestic use. This approach avoids reliance on municipal water services and supports water conservation objectives.

#### Fire Risk

The development is classified as a low-risk development and falls within Group 2: Residential Areas, in accordance with the *Guidelines for Human Settlement Planning and Design*. Fire safety measures will be incorporated into the site layout and building design, including adequate access for emergency services and appropriate fire-fighting provisions as required by the local authority.

#### Sewer Reticulation

Municipal bulk sewer services are not available in the area. Wastewater will therefore be managed through sealed conservancy tanks designed and installed in accordance with applicable standards and municipal requirements. Effluent will be removed by a licensed service provider and disposed of at an approved treatment facility.

**Is this development provided for in the infrastructure planning of the municipality, and if not, what will the implications be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?**

#### Municipal Infrastructure Planning

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 is located outside the Sedgefield urban edge within a rural conservation landscape where the extension of municipal bulk services is neither planned nor anticipated in the short to medium term. The site falls outside the municipality's serviced development envelope and is therefore not reliant on municipal infrastructure provision.

The development has been intentionally designed as a fully off-grid, self-sufficient system. Electricity will be supplied via a solar photovoltaic installation with battery storage, domestic water will be sourced through rainwater harvesting, and wastewater will be managed using sealed conservancy systems in accordance with environmental health requirements. No connection to municipal electricity, potable water, sewer, or stormwater networks is required.

#### Implications for Municipal Infrastructure Planning

Because the development does not depend on municipal infrastructure:

- No additional demand will be placed on existing or planned municipal bulk services.
- No reprioritisation of municipal infrastructure investment will be required.
- No opportunity cost will arise through diversion of resources from higher-priority service delivery areas; and
- No long-term operational or maintenance burden will be transferred to the municipality.

The proposal, therefore, has no effect on the timing, location, or sequencing of municipal infrastructure rollout and does not compromise the municipality's ability to provide services to existing settlements or planned growth nodes.

#### Access Infrastructure

Vehicular access will occur via existing gravel routes, including Groenvlei Beach Road and the Public Servitude Road (Bushy Way). Any limited access improvements or maintenance required to safely accommodate construction and operational access will be undertaken at the applicant's expense and will not impose financial or operational obligations on the municipality. Public access rights associated with the servitude road will be maintained.

#### Conclusion

The proposed development is fully compatible with the municipality's infrastructure planning framework. Its off-grid, low-density nature ensures long-term self-sufficiency and avoids the creation of municipal infrastructure liabilities. The development is therefore consistent with sustainable rural planning principles and does not undermine municipal

### **Is this project part of a national programme to address an issue of national concern or importance?**

#### National Programme Alignment

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 is a privately initiated, site-specific project for a single residential dwelling and associated low-impact infrastructure. It does not form part of any national government programme or strategic initiative and is not linked to the National Development Plan (NDP), Strategic Infrastructure Projects (SIPs), or any national intervention administered by the Departments of Human Settlements, Tourism, Forestry, Fisheries and the Environment.

While the project is not a national programme in itself, it is consistent with broader national policy objectives that promote environmental protection, sustainable land use, climate resilience, and responsible development outside the urban edge, as articulated in the National Environmental Management Act (Act 107 of 1998) and the Spatial Planning and Land Use Management Act (Act 16 of 2013).

The development remains a private land-use proposal that is aligned with local and provincial spatial planning frameworks, including the Knysna Spatial Development Framework (2020), the Western Cape Provincial Spatial Development Framework (2014), and the Western Cape Rural Areas Guidelines (2019), and does not raise issues of national concern or priority that would require intervention at a national programme level.

### **Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)**

The contextual characteristics of Portion 79 of Farm Ruygte Valley No. 205 favour a low-intensity, conservation-compatible residential land use. The suitability of the site is informed by its physical attributes, surrounding land uses, access arrangements, environmental constraints, and alignment with applicable spatial planning frameworks.

#### Private Ownership and Low-Intensity Use

The proposed development is limited in scale and clustered within a single compact node. It comprises a primary dwelling with additional small accommodation units for private family and guest use, defined as tourist accommodation for planning purposes. The intensity of use is inherently constrained by the environmental sensitivity of the site and by the conditions attached to both environmental authorisation and municipal land-use approvals. This development model is consistent with the rural conservation character of the Groenvlei landscape and does not introduce urban or resort-type land uses.

### Established Access and Road Infrastructure

The property benefits from lawful access via existing public road infrastructure, including Groenvlei Beach Road, the Groenvlei Divisional Road (DR 1594), and the public servitude road (Bushy Way). No new public road construction is required. Any limited improvements necessary for safe access will be privately funded and will not create municipal maintenance obligations. The availability of existing access infrastructure supports the appropriateness of the location for the proposed activity.

### Strategic Position within a Conservation Landscape

The site forms part of a broader coastal conservation matrix adjoining the Lake Pleasant Private Nature Reserve and the Goukamma Protected Area buffer. The proposed rezoning to Open Space III (Nature Conservation Area), together with long-term stewardship commitments, will strengthen ecological connectivity and reinforce the conservation function of the area. The location, therefore, supports a land use that contributes to regional biodiversity objectives rather than fragmenting the landscape.

### Environmental and Geotechnical Suitability

The development footprint has been determined through a constraints-led planning process informed by the Site Constraints Map (Appendix B1). All proposed structures are positioned within a degraded Critical Biodiversity Area (CBA2) and avoid CBA1 areas, natural forest, steep slopes, and mapped high-risk coastal hazard zones.

The Preliminary Geotechnical and Geomatic Report (Rock Hounds, 2024) confirms that the selected footprint avoids unstable terrain and highly erodible areas and is suitable for development subject to appropriate engineering controls. This confirms that the location can safely accommodate the proposed structures without introducing unacceptable long-term risk.

### Alignment with Spatial Planning Frameworks

The property is situated outside the Sedgefield urban edge within an area identified for conservation-compatible rural land use in the Knysna Spatial Development Framework (2020) and the Garden Route Environmental Management Framework. The proposed rezoning formalises this spatial intent and secures long-term protection of the site's ecological and scenic attributes. The land use is therefore contextually appropriate within the broader planning framework.

### Low Visual and Social Impact

The Visual Compliance Statement (Outline Landscape Architects, 2025) confirms a high Visual Absorption Capacity resulting from vegetation screening, topographic separation, and coastal cliff features. The development will not materially alter the visual character of the coastal landscape or surrounding properties. The scale and siting of the structures maintain the area's rural sense of place and minimise potential social conflict.

### Off-Grid and Sustainable Servicing

The development will operate independently of municipal bulk services through solar energy, rainwater harvesting, and sealed wastewater systems. This servicing approach is appropriate for a rural conservation setting and avoids pressure on public infrastructure.

### Conclusion

The physical characteristics of the site, its conservation context, lawful access, environmental suitability, and alignment with spatial planning policy collectively favour the proposed land use at this location. The development represents an appropriate contextual response to a sensitive rural landscape and supports a conservation-led land-use outcome consistent with sustainable planning principles.

### Is the development the best practicable environmental option for this land/site?

The proposed development is considered to represent the Best Practicable Environmental Option (BPEO) for Portion 79 of Farm Ruygte Valley No. 205, Sedgefield, having regard to the environmental sensitivity of the site, land capability, long-term sustainability, and the reasonable exercise of lawful land-use rights. This conclusion is supported by the collective findings of the specialist investigations undertaken for the project, including biodiversity, agricultural, visual, and geotechnical assessments.

The property currently makes no meaningful contribution to agricultural production. The Terrestrial Biodiversity Assessment (2025) and Agricultural Compliance Statement (2025) confirm that the site has low agricultural capability due to shallow sandy soils, steep gradients, and the presence of indigenous vegetation of conservation value. Development of the site will therefore not result in the loss of viable agricultural land. Instead, the proposal enables formal conservation management and ecological rehabilitation over the majority of the property.

The surrounding landscape is characterised by a transition from historical agricultural zoning toward conservation-oriented and low-density rural residential land uses. Active commercial agriculture has largely declined, and adjoining properties are increasingly managed for conservation. The proposed development is consistent with this established land-use pattern and does not introduce an incompatible or urbanising land use.

The Applicant seeks to exercise the primary land-use right applicable to Agriculture Zone I properties (one dwelling house), while proposing rezoning to Open Space III (Nature Conservation Area) to formalise long-term environmental protection. Approximately 99% of the 5.1576 ha property will remain in a natural or rehabilitated state, with development confined to a compact footprint of approximately 1 175 m<sup>2</sup>.

The development footprint has been determined through a constraints-led planning process that avoids high-sensitivity areas, including CBA1 zones, natural forest, steep coastal slopes, and mapped erosion risk areas. Lightweight construction methods and environmentally responsive architectural design minimise excavation, soil disturbance, and visual intrusion. The development will operate entirely off-grid through solar energy generation, rainwater harvesting, and sealed wastewater systems, placing no demand on municipal infrastructure.

Alternative land-use scenarios were considered implicitly through the site capability analysis. Intensive agriculture, subdivision, or higher-density development would result in substantially greater ecological disturbance, increased landscape fragmentation, and long-term environmental risk. Complete non-use of the property would not secure formal conservation management or guarantee ecological rehabilitation. The proposed conservation-oriented residential model, therefore, achieves the lowest practicable environmental impact while allowing lawful use of the land.

Accordingly, the proposal represents the most environmentally responsible and sustainable land-use option reasonably available for the site. It maintains ecological integrity, strengthens the regional conservation network, and enables legitimate private occupation in a manner consistent with applicable planning and environmental frameworks.

### Will the benefits of the proposed land use/development outweigh the negative impacts of it?

#### Balance of Benefits and Impacts

The benefits of the proposed low-impact residential development and long-term conservation management on Portion 79 of Farm Ruygte Valley No. 205 are considered to outweigh the potential negative environmental impacts associated with the activity.

The development footprint is limited to approximately 1 175 m<sup>2</sup>, representing less than 0.02% of the total property area of 5.1576 ha. Consequently, approximately 99% of the site will remain in a natural or rehabilitated state and will be formally protected through the proposed rezoning to Open Space III (Nature Conservation Area). This outcome secures a net conservation benefit and ensures long-term protection of indigenous vegetation and ecological processes.

#### Key Benefits

- Long-Term Conservation Security
- Rezoning to Open Space III will legally secure the property under a conservation-compatible land-use category, preventing future intensive development, subdivision, or agricultural transformation inconsistent with the site's ecological sensitivity.

#### Environmental Stewardship and Rehabilitation

The landowners have committed to ongoing alien invasive species control, rehabilitation of degraded areas, and soil stabilisation in accordance with the Terrestrial Biodiversity Assessment (2025) and Preliminary Geotechnical and Geomatic Report (2024). This will improve the ecological condition over time relative to the current unmanaged state.

#### Sustainable, Off-Grid Development

The development will operate entirely off-grid, utilising solar energy, rainwater harvesting, and sealed conservancy systems for wastewater. This eliminates demand on municipal services, reduces resource consumption, and aligns with sustainable rural development principles.

#### Minimal Visual and Landscape Impact

The Visual Compliance Statement (Outline Landscape Architects, 2025) confirms that the site has a high Visual Absorption Capacity due to vegetation screening and coastal topography. The proposed structures will not materially alter the scenic integrity of the coastal landscape.

#### Alignment with Planning Frameworks

The proposal is consistent with the Knysna Spatial Development Framework (2020), Western Cape Provincial Spatial Development Framework, Garden Route Environmental Management Framework, and Rural Areas Guidelines (2019), all of which promote conservation-compatible, low-impact development outside the urban edge.

#### Protection of Agricultural Resources

The Agricultural Compliance Statement (2025) confirms that the site has very low agricultural potential. The proposal, therefore, does not result in the loss of productive agricultural land and represents an appropriate use of the property.

#### Potential Impacts and Mitigation

Potential negative impacts are primarily short-term and construction-related, including dust generation, limited vegetation disturbance within degraded areas, and temporary noise. These impacts are localised and reversible and will be mitigated through:

- implementation of erosion-control and stormwater-management measures
- dust suppression and restricted construction hours
- rehabilitation of all disturbed areas using indigenous vegetation
- monitoring and compliance oversight by an appointed Environmental Control Officer (ECO)

No significant long-term or irreversible environmental impacts are anticipated, provided that mitigation measures are implemented.

#### Conclusion

The proposal delivers measurable environmental and planning benefits that outweigh the temporary and localised impacts associated with construction. It secures long-term ecological protection of the site, strengthens conservation outcomes within the broader coastal landscape, and enables responsible land use consistent with applicable environmental and spatial planning frameworks.

Accordingly, the overall balance of impacts is positive.

#### **Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?**

The proposed development will not set an undesirable planning or environmental precedent within the Knysna Municipal Area.

The proposal is site-specific and informed by the property's unique environmental constraints, conservation context, and the compact clustered footprint. The development does not involve subdivision, dispersed settlement, or incremental densification. Approval is contingent on strict compliance with environmental authorisation conditions, the Environmental Management Programme (EMPr), and separate municipal rezoning and consent-use controls. Each future application within the area will continue to be assessed on its own merits, taking into account zoning, environmental sensitivity, servicing capacity, and specialist verification.

While provincial and municipal spatial policies recognise conservation-compatible accommodation and nature-based land uses in rural areas, the present application does not introduce commercial tourism or resort-type development. Any reference to tourism relates solely to the planning framework that regulates additional accommodation units under municipal land-use controls. The intensity of use remains tightly constrained by the authorised development footprint and applicable environmental conditions.

Importantly, the proposed rezoning to Open Space III (Nature Conservation Area) restricts future development rights rather than expanding them. This zoning prioritises conservation management and permits only limited, low-impact development within an approved envelope. It prevents future subdivision or densification without additional applications and full regulatory assessment.

The surrounding area already comprises a pattern of private conservation properties and low-density rural dwellings. The proposal is consistent with this established land-use character and does not introduce a new or incompatible development typology.

Accordingly, the development is controlled, site-specific, and policy-aligned. It does not establish a precedent for higher-intensity development, commercial tourism expansion, or incremental urbanisation within the Groenvlei rural landscape.

#### **Will any person's rights be negatively affected by the proposed activity/ies?**

No.

The proposed development will not negatively affect the rights of any person. The activity does not alter or infringe upon neighbouring landowners' existing land-use rights, access arrangements, or lawful use of their properties. The

proposed low-impact residential use is compatible with the surrounding rural and conservation land uses and will not result in unacceptable noise, traffic, visual intrusion, or loss of amenity.

The development footprint is limited, carefully sited, and screened by existing vegetation and topography, ensuring that neighbouring properties and public spaces are not adversely affected. All development activities will be undertaken in accordance with the Environmental Management Programme (EMPr), which includes measures to prevent nuisance impacts during construction and operation.

The proposal is consistent with the constitutional environmental right contained in Section 24 of the Constitution of the Republic of South Africa (Act 108 of 1996), which provides that everyone has the right to an environment that is not harmful to their health or well-being. The development does not compromise this right and, through its conservation-based approach and off-grid servicing, supports a safe, healthy, and sustainable environment.

### **What will the benefits be to society in general and to the local communities?**

#### Benefits to Society and Local Communities

The proposed development will contribute positively to both society in general and the local community through a range of social, environmental, and economic benefits.

#### Employment Creation

During the construction phase, the project will generate temporary employment opportunities for local residents, including both skilled and unskilled labour. Local contractors and service providers will be prioritised for the procurement of materials and construction-related services, ensuring that short-term economic benefits accrue within the Sedgefield and Knysna communities.

#### Skills Development and Capacity Building

The project will indirectly support skills transfer and capacity building through exposure to environmentally sensitive construction methods, landscaping, rehabilitation, and site management practices. This contributes to longer-term local skills development aligned with sustainable rural development principles.

#### Strengthening Conservation Stewardship

The proposed rezoning of the property to Open Space III (Nature Conservation Area) will formally secure long-term conservation management of the site. This contributes to the protection of biodiversity, rehabilitation of degraded areas, and maintenance of ecological corridors linking the Lake Pleasant Private Nature Reserve and the Goukamma Protected Area. These outcomes support broader societal interests in environmental protection, ecosystem services, and climate resilience.

#### Compatibility with Rural Living and Community Well-being

The establishment of a low-impact, permanent residential presence on the property supports responsible land stewardship and oversight of the site, contributing to general rural stability without introducing nuisance impacts such as increased traffic, noise, or service demand. The development remains compatible with the existing low-density rural and conservation character of the area.

#### Broader Societal and Regional Benefits

At a broader scale, the project supports sustainable land-use management and helps preserve the scenic and ecological character of the Garden Route coastal corridor. By maintaining the natural landscape and biodiversity values that underpin the region's identity, the development indirectly supports eco-tourism, recreation, and quality of life for residents and visitors, consistent with provincial and municipal planning objectives.

## Any other need and desirability considerations related to the proposed activity?

In terms of the Guideline on Need and Desirability (DEA&DP, 2017), need relates to whether the proposed development is appropriate at this point in time, having regard to current spatial planning frameworks, land-use pressures, and environmental priorities at local, provincial, and national levels.

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 responds to a legitimate need to enable lawful residential occupation of privately owned land while formalising long-term conservation management of an environmentally sensitive property. Specialist studies confirm that the site has limited agricultural potential and high biodiversity and scenic value. As such, the land is unsuitable for intensive agricultural production but well suited to conservation-compatible residential use.

A further consideration informing the need is the regional planning context of the Garden Route, where nature-based and conservation-led land uses are recognised as important components of the rural economy. While the present proposal is for private residential and guest accommodation, the land-use framework accommodates conservation-compatible accommodation consistent with municipal zoning provisions. This is a planning mechanism that aligns the property with applicable spatial policy and does not imply or require immediate tourism development.

From a timing perspective, the proposal is appropriate in light of current policy directives contained in the Knysna Spatial Development Framework (2020), the Western Cape Provincial Spatial Development Framework, the Rural Areas Guidelines (2019), and the Garden Route Environmental Management Framework. These instruments collectively promote ecological stewardship, protection of biodiversity corridors, and low-intensity rural land use outside the urban edge.

### Desirability

Desirability considers whether the proposed land use is appropriate for the specific site and whether it represents a suitable long-term land-use outcome given environmental constraints and surrounding land uses.

The site is physically and environmentally suitable for limited residential development. Specialist investigations confirm that the proposed footprint avoids CBA1 areas, natural forest, steep slopes, and mapped coastal risk zones. Disturbance is confined to approximately 1 375 m<sup>2</sup>, representing a very small proportion of the total property area, with the balance of the site retained in a natural or rehabilitated state.

The proposed rezoning to Open Space III (Nature Conservation Area) is desirable because it secures the long-term conservation function of the property, restricts future subdivision or intensification, and ensures that any future land-use changes remain subject to strict environmental and planning controls.

The development is compatible with surrounding land uses, which consist primarily of private conservation properties and low-density rural residential holdings. It does not introduce an incompatible land-use pattern or alter the rural conservation character of the Groenvlei area. The small-scale, clustered layout and off-grid servicing approach ensure minimal visual, ecological, and infrastructural impact.

### Conclusion

The proposed development satisfies the criteria for both need and desirability.

It enables legitimate residential use of privately owned land, formalises long-term conservation stewardship, and aligns with applicable municipal and provincial spatial policy. The development protects ecological and scenic resources, maintains rural landscape character, and avoids intensification or reliance on municipal services.

Accordingly, the proposal represents a policy-aligned, environmentally responsible, and spatially appropriate land-use outcome within a sensitive coastal conservation landscape.

**Please describe how the general objectives of Integrated Environmental Management, as set out in section 23 of NEMA, have been taken into account.**

The general objective of integrated environmental management has been taken into account as follows:

- (a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment.
- (b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2.
- (c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them.
- (d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment.
- (e) ensure the consideration of environmental attributes in management and decision-making, which may have a significant effect on the environment; and
- (f) identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 has been planned, assessed, and motivated in accordance with the general objectives of Integrated Environmental Management (IEM) as set out in Section 23 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended. These objectives have been addressed as follows:

(a) Integration of Environmental Management Principles (Section 2 of NEMA)

The principles of environmental management contained in Section 2 of NEMA have been integrated into all decision-making associated with the proposed development. This is reflected in the adoption of a precautionary, risk-averse approach; the prioritisation of environmental protection and conservation; and the promotion of sustainable, low-impact land use. The proposed rezoning to Open Space III (Nature Conservation Area), combined with a limited residential footprint and off-grid service provision, ensures that environmental considerations are central to the planning and execution of the project.

(b) Identification, Prediction, and Evaluation of Impacts, Risks, and Alternatives

Actual and potential environmental, socio-economic, visual, and heritage impacts associated with the proposed development have been systematically identified, assessed, and evaluated through specialist studies, including the Terrestrial Biodiversity Assessment, Preliminary Geotechnical and Geomatic Report, Visual Compliance Statement, and Town Planning Report. These assessments considered site constraints, risks, and cumulative impacts, as well as feasible alternatives and mitigation measures, with the objective of minimising negative impacts, maximising environmental and social benefits, and ensuring compliance with the principles of NEMA.

(c) Consideration of Environmental Effects Prior to Decision-Making

Environmental effects have been fully considered prior to the implementation of any activities on site. The proposed Site Development Plan has been informed by environmental sensitivities, including Critical Biodiversity Areas, coastal processes, slope stability, and visual absorption capacity. Development has been deliberately confined to a small, disturbed portion of the site, with the remainder retained in a natural state, ensuring that informed decisions are made before any irreversible actions occur.

(d) Public Participation

Adequate and appropriate opportunities for public participation will be provided in accordance with the Environmental Impact Assessment Regulations, 2014 (as amended). Interested and Affected Parties (I&APs) will be informed of the application, afforded access to project information, and provided with the opportunity to comment on the proposed development. All comments received will be recorded, considered, and responded to in the Comments and Responses Report, ensuring transparent and inclusive decision-making.

(e) Consideration of Environmental Attributes in Management and Decision-Making

Environmental attributes such as biodiversity value, ecological connectivity, scenic quality, coastal dynamics, and geotechnical stability have been key determinants in shaping the development proposal. These attributes have informed the layout, design, scale, and servicing of the development, as well as the proposed long-term conservation management of the property. Decision-making has therefore been guided by the environmental capacity and sensitivity of the receiving environment.

(f) Application of Appropriate Environmental Management Tools

Appropriate environmental management tools have been identified and applied to ensure that the activity is undertaken in accordance with the principles of environmental management. These include the implementation of an Environmental Management Programme (EMPr), appointment of an Environmental Control Officer (ECO), adherence to specialist mitigation measures, and post-construction rehabilitation and monitoring. Collectively, these measures ensure ongoing environmental protection throughout the construction and operational phases of the development.

Conclusion

Through the integration of environmental principles, comprehensive impact assessment, informed planning, public participation, and appropriate environmental management mechanisms, the proposed development fully complies with the objectives of Integrated Environmental Management as set out in Section 23 of NEMA. The project represents a responsible, precautionary, and sustainable approach to development within a sensitive coastal and conservation landscape.

**Consideration of Section 63 of the National Environmental Management: Integrated Coastal Management Act (NEM: ICMA)**

In terms of Section 63 of the National Environmental Management: Integrated Coastal Management Act, the competent authority must consider the potential impact of development on coastal protection, coastal public property, coastal processes, and long-term environmental sustainability.

The proposed development does not restrict public access to coastal public property, does not introduce shoreline hardening or engineering structures, and is located outside mapped high-risk erosion and flood zones as confirmed by the Preliminary Geotechnical and Geomatic Report. The layout avoids active dune crests and sensitive coastal features and incorporates rehabilitation and vegetation stabilisation measures that strengthen dune integrity over

time. The development footprint is tightly confined and conservation-led, with more than 97% of the property secured under Open Space III (Nature Conservation) zoning.

The proposal is therefore consistent with the objectives of Section 63 and supports sustainable coastal management rather than compromising it.

## Section G

### Motivation for the preferred site, activity and technology alternative

In accordance with the principles and requirements set out in the National Environmental Management Act (NEMA) and the Environmental Impact Assessment (EIA) Regulations, all reasonable and feasible alternatives must be considered and assessed in the environmental authorisation process. This includes the consideration of site, activity, design, layout, and the No-Go alternative, to ensure the selection of an option that results in the least environmental harm while still achieving the project objectives.

“**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 –

Aspect	Preferred Alternative (Updated Constraints Layout)	Alternative 1 (Previous Constraints Layout)	No-Go Alternative
<b>Property / Location</b>	The activity is proposed on Portion 79 of Farm Ruygte Valley No. 205, Sedgefield. Only one property is feasible, as the application relates to the exercise of existing land-use rights and proposed rezoning applicable to this specific site. The preferred layout is informed by the updated Site Constraints Map and refined specialist input.	The activity would occur on the same property, but in accordance with the previous constraints, the layout. This alternative represents an earlier configuration that did not fully optimise the avoidance of identified geotechnical and sensitivity constraints.	No development would occur. The property would remain in its current undeveloped state.
<b>Type of Activity</b>	The proposed development comprises a main dwelling ( $\pm 200 \text{ m}^2$ ), three small self-contained units ( $\pm 65 \text{ m}^2$ each), staff accommodation ( $\pm 50 \text{ m}^2$ ), an equipment shed ( $\pm 80 \text{ m}^2$ ), and associated parking and access infrastructure. Total building footprint $\approx 525 \text{ m}^2$ . The access road is approximately 220 m long and 3 m wide, terminating in a parking area of approximately $765 \text{ m}^2$ . Total development footprint $\approx 1\,375 \text{ m}^2$ ,	Same activity type and land-use intent as the preferred alternative, but with a different spatial configuration and a less optimal response to constraints. The previous layout resulted in a footprint that intersected areas now avoided in the preferred design.	No construction or land development would take place.

	representing <2.7% of the site, with ≈97.3% remaining natural.		
<b>Design / Layout</b>	Compact, clustered layout informed by the updated Site Constraints Map, biodiversity sensitivity, visual absorption capacity, and geotechnical limitations. The revised layout avoids the D7 structurally weak zone and further refines the development envelope. Development remains confined to degraded CBA2 areas and avoids CBA1, coastal risk zones, steep slopes, and forested areas.	The previous layout represented an earlier constraint response and did not fully avoid the D7 structurally weak zone. While environmentally informed, it is considered less optimal than the preferred alternative in terms of risk avoidance and geotechnical suitability.	No layout or design intervention would occur. Existing site conditions remain unchanged.
<b>Technology to be Used</b>	Entirely off-grid development utilising solar photovoltaic micro-generation, Lithium Iron Phosphate battery storage, rainwater harvesting, and on-site wastewater management via conservancy tanks. Technology is appropriate for low-intensity, conservation-compatible development.	Same off-grid technological approach as the preferred alternative.	No infrastructure or technology would be installed.
<b>Operational Aspect</b>	Intended for private family and guest accommodation, with long-term conservation management including alien clearing and rehabilitation. Environmental authorisation focuses on footprint and mitigation; municipal land-use controls remain applicable.	Same operational intent as the preferred alternative.	No formal conservation management commitments. Alien invasive vegetation and degradation likely persist.
<b>Option of Not Implementing the Activity</b>	Not applicable to this column.	Not applicable to this column.	Avoids construction impacts but provides no conservation stewardship, no rehabilitation of degraded areas, and no formal protection of the land through rezoning.
<b>Overall Assessment</b>	Preferred. Represents the best practicable environmental option by refining the footprint, avoiding geotechnical risk zones, strengthening conservation	Not preferred. While feasible, it is environmentally and geotechnically inferior to the updated layout.	Not preferred. Does not secure rehabilitation,

	outcomes, and maintaining a compact, low-impact node.		conservation zoning, or long-term stewardship.
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(l) Details of the Alternatives Considered:

## Details of the Alternatives Considered

In accordance with the Environmental Impact Assessment Regulations, 2014 (as amended), reasonable and feasible alternatives to the proposed activity have been considered. Given that the proposal relates to the lawful use of a privately owned property and the exercise of existing land-use rights, the range of practicable alternatives is inherently limited. The alternatives considered are set out below.

### Site Alternative

No alternative sites were considered.

The proposed development is site-specific and relates to Portion 79 of Farm Ruygte Valley No. 205, which is owned by the Applicant. The application seeks to lawfully exercise existing land-use rights associated with this specific property while aligning the land use with its ecological characteristics and conservation value.

The site was selected based on:

- private ownership by the Applicant, making relocation impractical and unreasonable;
- legal access via an existing public servitude road (Bushy Way);
- its location outside the urban edge within a conservation-oriented rural landscape;
- limited agricultural potential, as confirmed by the Terrestrial Biodiversity Assessment (2025) and Agricultural Compliance Statement (2025); and
- the presence of degraded Critical Biodiversity Area 2 (CBA2) suitable for low-impact development.

Due to the site's ecological sensitivity, fragmentation by Critical Biodiversity Areas, coastal constraints, and surrounding conservation land uses, the property is not suitable for intensive or high-impact development. No alternative sites are available or feasible for achieving the objectives of the proposed development.

### Activity Alternative

The preferred activity involves the development of a single low-impact residential dwelling with associated ancillary structures, together with the long-term conservation of the majority of the site.

The proposed development comprises:

- a main dwelling ( $\pm 200 \text{ m}^2$ );
- three small self-contained units ( $\pm 65 \text{ m}^2$  each);
- staff accommodation ( $\pm 50 \text{ m}^2$ );
- an equipment shed ( $\pm 80 \text{ m}^2$ ); and
- associated access, parking, and boardwalk infrastructure.

The total building footprint is approximately  $525 \text{ m}^2$ . The access road is approximately 220 m long and 3 m wide, terminating in a parking area of approximately  $765 \text{ m}^2$ . The total development footprint, including buildings, access road, parking, and boardwalks, is approximately  $1\,375 \text{ m}^2$ , representing less than 2.7% of the site area, with approximately 97.3% of the property remaining in a natural state.

The Applicant's stated intention is private residential occupation and the use of the additional units for private family and guest accommodation. From a land-use planning perspective, the proposed rezoning provides a tourism-compatible framework required to permit multiple accommodation units on land currently zoned Agriculture Zone I. This planning mechanism does not form part of the operational intent assessed in this environmental application but enables municipal control over potential future land uses consistent with conservation objectives.

No alternative high-impact activities (such as commercial tourism resorts, intensive agriculture, subdivision, or industrial uses) were considered due to:

- the high ecological sensitivity of the site;
- its location within a coastal conservation corridor; and
- policy restrictions applicable to land situated outside the urban edge.

The proposed activity represents the most appropriate and sustainable land use compatible with the conservation objectives of the property and the principles of sustainable development set out in the National Environmental Management Act (Act 107 of 1998).

### Layout and Design Alternatives

Two layout alternatives were assessed:

- Alternative 1: the original constraints layout
- Preferred Alternative: the updated constraints layout

Alternative 1 represented an earlier development configuration informed by preliminary constraints mapping. Following additional specialist review, the layout was refined to avoid the identified D7 structurally weak zone and to further optimise environmental avoidance.

The preferred layout was selected based on improved avoidance of environmentally and geotechnically sensitive areas, including:

- Critical Biodiversity Area 1 (CBA1);
- indigenous forest and Milkwood stands;
- steep slopes and erosion-prone terrain;
- structurally weak zones; and
- coastal risk and setback areas.

The preferred layout confines all development to the least sensitive, degraded CBA2 portion of the property, as informed by the updated Site Constraints Map, Terrestrial Biodiversity Assessment (2025), Visual Compliance Statement (2025), and Preliminary Geotechnical and Geomatic Report (2024).

### The selected layout:

- limits disturbance to approximately 1 375 m<sup>2</sup>;
- avoids high-sensitivity ecological and geotechnical areas;
- enables clustered development to minimise landscape fragmentation; and
- incorporates lightweight, environmentally sensitive construction materials to reduce visual intrusion and soil disturbance.

The revised configuration represents a measurable environmental improvement over Alternative 1 and is therefore considered the best practicable environmental option.

### No-Go Alternative

The No-Go Alternative would result in no development taking place.

While this option would avoid short-term construction impacts, it would also result in:

- no formal conservation zoning or long-term land protection;
- continued alien invasive vegetation dominance in degraded areas;
- no rehabilitation or active stewardship of the property; and
- loss of an opportunity to secure conservation-compatible land management.

The No-Go Alternative does not deliver the long-term environmental benefits associated with the preferred alternative and is therefore not considered the most sustainable outcome.

### **Preferred Alternative**

The Applicant intends to reside permanently on Portion 79 of Farm Ruygte Valley No. 205 and proposes the construction of a single primary dwelling house of approximately 200 m<sup>2</sup>, which constitutes a primary land-use right in terms of the Knysna Zoning Scheme Regulations (1992) under Agriculture Zone I.

In addition to the main residence, the proposal includes three small self-contained units of approximately 65 m<sup>2</sup> each. For land-use planning and rezoning purposes only, these units are described as tourist accommodation units, as required under the Knysna Zoning Scheme and Open Space III (Nature Conservation Area) zoning provisions. The Applicant's stated intention is private residential occupation and the use of the additional units for private family and guest accommodation. The development further includes staff accommodation ( $\pm 50$  m<sup>2</sup>) and a storage shed ( $\pm 80$  m<sup>2</sup>) to support on-site land management, conservation activities, and property maintenance.

Access to the development area will be provided via a gravel access road approximately 220 m in length and not exceeding 3 m in width, located along the eastern boundary of the property. The access road will terminate in a parking area comprising four parking bays with a total area of approximately 765 m<sup>2</sup>. Pedestrian access from the parking area to the dwelling and associated units will be provided via an elevated timber boardwalk, thereby minimising soil compaction and disturbance to indigenous vegetation.

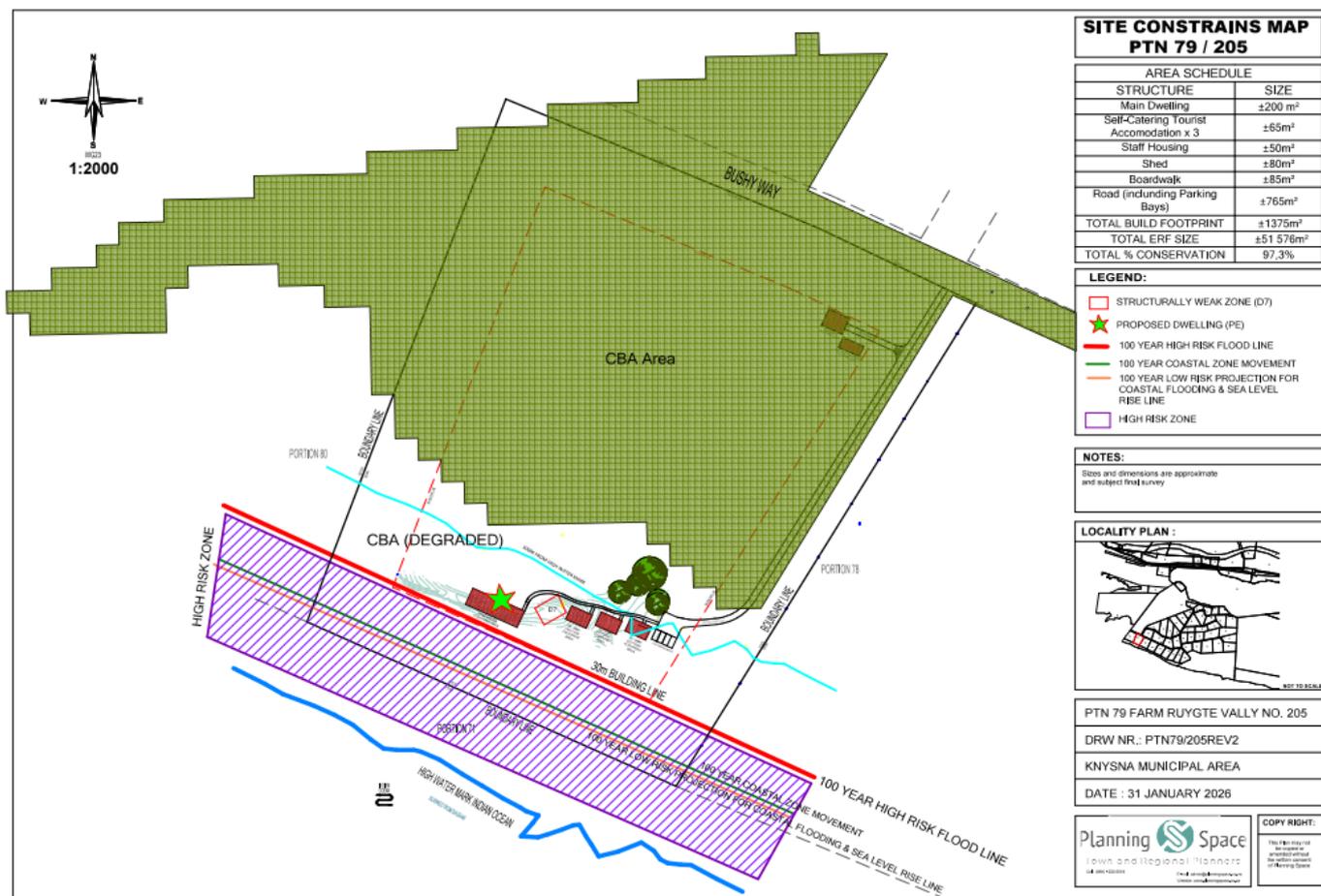
All structures are clustered within the southern portion of the property in accordance with the updated preferred layout shown on the revised Site Constraints Map. The preferred alternative was specifically refined to avoid the identified D7 structurally weak zone and to improve the avoidance of environmentally sensitive areas. The development footprint is positioned to avoid CBA1 areas, indigenous forest, steep slopes, erosion-prone terrain, and mapped coastal risk zones, as confirmed by the specialist studies.

Specialist assessments confirm that the site has limited agricultural potential and that its primary value lies in its ecological, scenic, and conservation attributes. The remainder of the property will be conserved and rehabilitated in accordance with the Terrestrial Biodiversity Assessment, Geotechnical Report, and Environmental Management Programme.

The total building footprint will be approximately 525 m<sup>2</sup>. The total development footprint, including buildings, access road, parking area, and boardwalks, will be approximately 1 375 m<sup>2</sup>. This represents less than 2.7% of the total 5.1576 ha property, ensuring that approximately 97.3% of the site remains in a natural or rehabilitated state. The amended preferred layout increases the footprint from  $\pm 1$  175 m<sup>2</sup> (previous layout) to  $\pm 1$  375 m<sup>2</sup> in order to avoid the D7 geotechnical constraint while remaining within a compact clustered development envelope.

The preferred alternative, therefore, represents a low-impact, conservation-compatible residential development informed by a constraints-led design process and supported by updated specialist input. The layout achieves improved environmental avoidance relative to the previous alternative while securing long-term conservation outcomes for the

property. The proposal is consistent with the Knysna Spatial Development Framework (2020), Western Cape Provincial Spatial Development Framework, Garden Route Environmental Management Framework, and Rural Areas Guidelines.



**FIGURE 17: UPDATED SITE CONSTRAINTS MAP SHOWING VEGETATION TYPES (CBA1, CBA2), SLOPE CONTOURS, ACCESS ROUTES, AND PROPOSED DEVELOPMENT AREA ON PORTION 79 OF FARM RUYGTE VALLEY NO. 205, SEDGEFIELD. SOURCE: APPENDIX B1 – SITE CONSTRAINTS MAP (2026).**



**FIGURE 18: EXAMPLE OF BUILDING MATERIAL AND STRUCTURE**

## **Electricity**

There is currently no electrical infrastructure present on the property or within the adjacent road reserve. The proposed development will therefore operate entirely off-grid, utilising a stand-alone solar power system to meet all on-site electrical requirements. This approach is consistent with the rural, conservation-oriented character of the area and ensures that no demand is placed on municipal electrical infrastructure.

## **Solar Plant – Type and System**

The electricity supply will comprise a fully off-grid solar photovoltaic (PV) system designed to meet the anticipated energy requirements of the proposed private residential development and the additional units for private family and guest use. Electricity will be generated during daylight hours, with surplus energy stored in an on-site battery system for use during nighttime and low-generation periods.

The system will operate as a self-contained microgrid. Should future energy requirements increase marginally, the system may be optimised through inverter configuration or battery capacity adjustments without altering the off-grid nature, footprint, or environmental impact of the development.

## **Plant Location**

Solar panels will be roof-mounted on the main residence and the three additional residential units. Roof-mounted installation maximises available surface area, avoids additional ground disturbance, and optimises solar exposure. This approach ensures visual integration of the solar infrastructure into the architectural design and maintains the environmentally sensitive character of the site.

## **Plant Capacity**

The proposed solar system will have an estimated generation capacity of approximately 15 kWh. Anticipated peak daily electricity consumption is estimated at up to 30 kWh per day, based on residential use, energy-efficient appliances, and low-intensity lighting. The system capacity is sufficient to support household requirements while maintaining a low environmental footprint.

## **Energy Storage**

A sealed Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery storage system is proposed. This technology offers a long operational lifespan (exceeding 10 years at approximately 70% depth of discharge), high efficiency, rapid charging capability, and low maintenance requirements. The battery system ensures reliable and continuous power availability while supporting sustainable and low-impact energy use.

## **Area and Access Lighting**

The access road and parking area will be illuminated using low-intensity, motion-activated bollard luminaires, each powered by an independent solar cell. Lighting will activate only upon movement detection, thereby minimising light pollution, reducing energy consumption, and avoiding disturbance to nocturnal fauna in accordance with dark-sky principles.

## **Alternative 1 – Previous Layout (Not Preferred)**

Alternative 1 represents the original development layout as reflected on the previous Site Constraints Map. This alternative was considered feasible from a basic engineering and access perspective but was subsequently refined following updated specialist input and constraints verification. It is therefore presented as a reasonable alternative that has been assessed but is not preferred.

The Applicant intends to reside permanently on Portion 79 of Farm Ruygte Valley No. 205 and proposes the construction of a single primary dwelling house of approximately 200 m<sup>2</sup>, which constitutes a primary land-use right in terms of the Knysna Zoning Scheme Regulations (1992) under Agriculture Zone I.

In addition to the main residence, Alternative 1 includes three small self-contained units of approximately 65 m<sup>2</sup> each. For land-use planning and rezoning purposes only, these units are described as tourist accommodation units, as required under the Knysna Zoning Scheme and Open Space III (Nature Conservation Area) zoning provisions. The Applicant's stated intention remains private residential occupation and the use of the additional units for private family and guest accommodation. The development further includes staff accommodation ( $\pm 50$  m<sup>2</sup>) and a storage shed ( $\pm 80$  m<sup>2</sup>) to support land management, conservation activities, and property maintenance.

Access under Alternative 1 would be provided via a gravel access road approximately 200 m in length and not exceeding 3 m in width, located along the eastern boundary of the property. The access road would terminate at a parking area of approximately 660 m<sup>2</sup>, from which a timber boardwalk would provide pedestrian access to the dwelling and associated units. This design minimises soil compaction relative to conventional access but results in a slightly less efficient circulation arrangement compared to the preferred alternative.

All structures under Alternative 1 are clustered within the southern portion of the property and positioned to avoid CBA1 areas, indigenous forest, steep slopes, and coastal risk zones, as identified in the original Site Constraints Map and supporting specialist studies. However, subsequent refinement of the constraints mapping identified the presence of a D7 structurally weak zone partially intersecting the original layout envelope. While development within this zone could potentially be engineered, it introduces a higher degree of geotechnical risk and a greater reliance on structural intervention.

Specialist assessments confirm that the site has limited agricultural potential and that its primary value lies in its ecological, scenic, and conservation attributes. As with the preferred alternative, the remainder of the property would be conserved and rehabilitated in accordance with the Terrestrial Biodiversity Assessment, Geotechnical Report, and Environmental Management Programme.

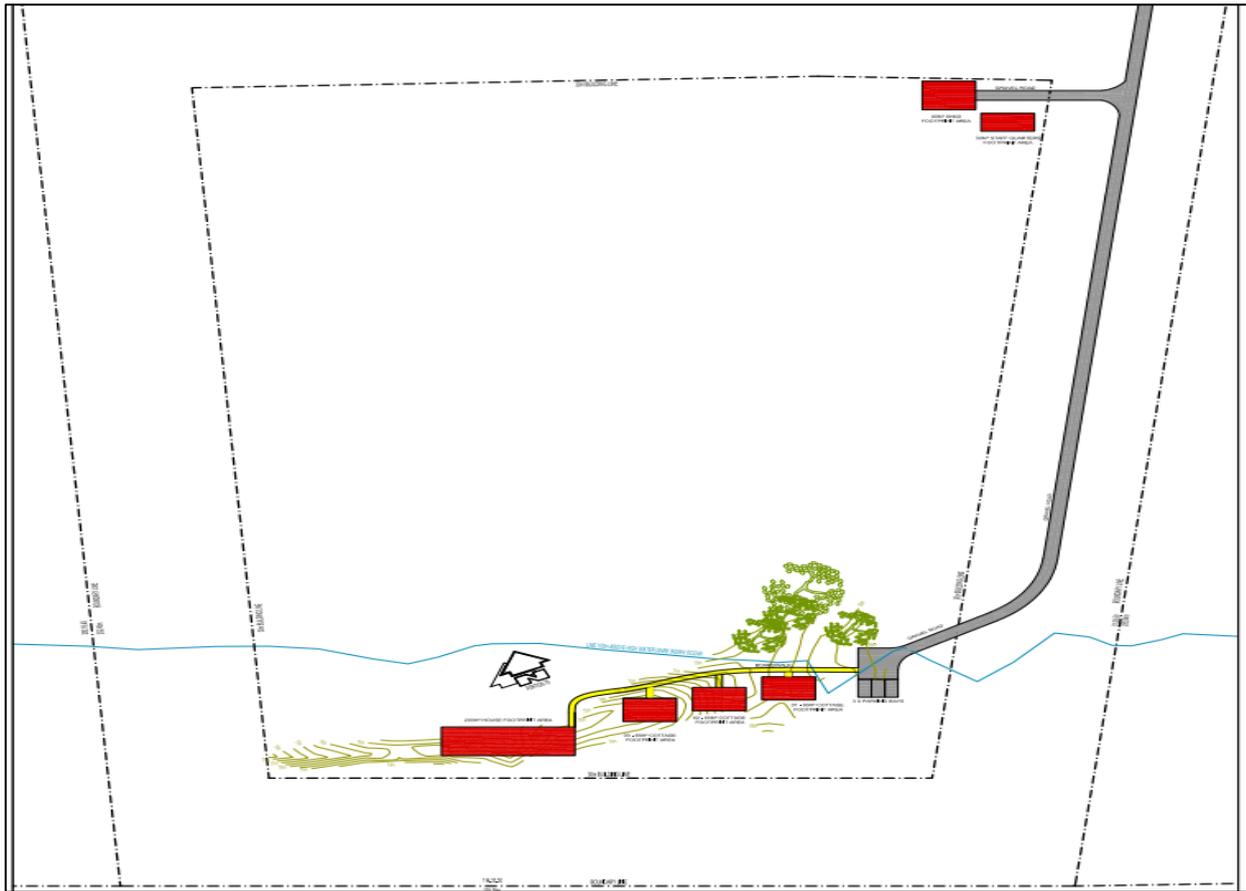
The total development footprint under Alternative 1 is approximately 1 175 m<sup>2</sup>, comprising approximately 525 m<sup>2</sup> of building coverage and approximately 660 m<sup>2</sup> for access and parking infrastructure. This represents a very small proportion of the 5.1576 ha property, ensuring that the vast majority of the site remains in a natural or rehabilitated state.

### Reasons Alternative 1 is Not Preferred

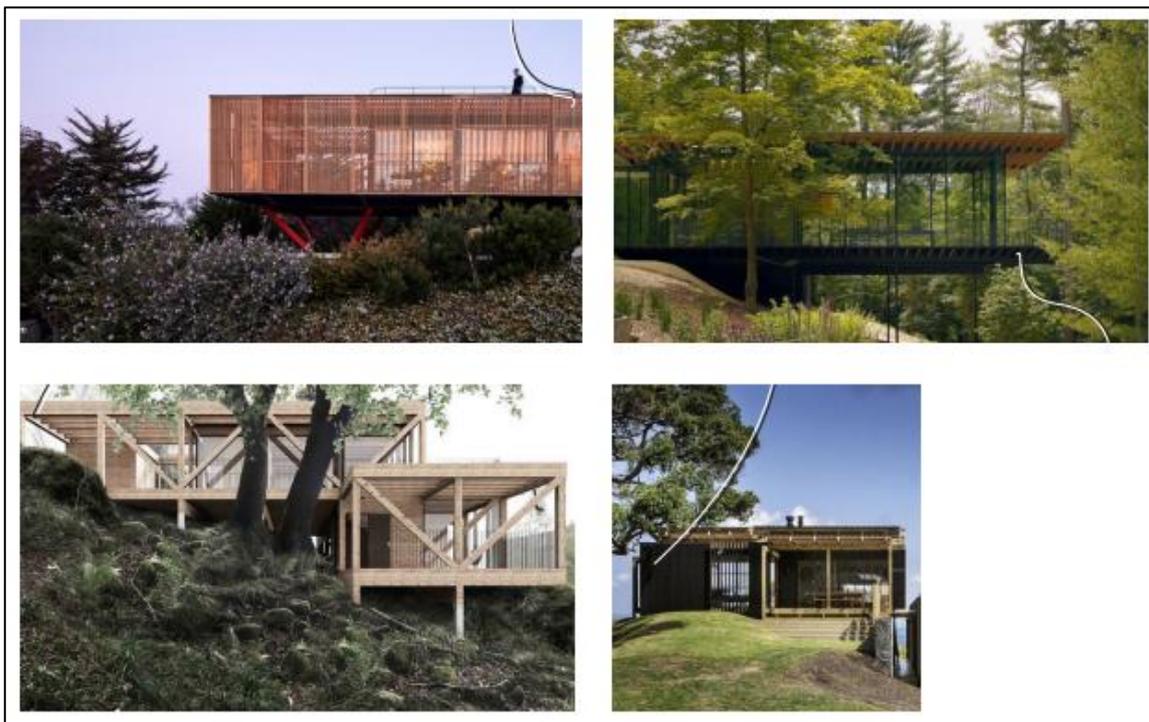
Alternative 1 is not preferred for the following reasons:

- It partially overlaps with a structurally weak D7 zone identified through updated geotechnical verification.
- It relies more heavily on engineering mitigation to achieve stability.
- It provides a less optimal spatial relationship between access, parking, and the building cluster.
- It offers a lower margin of environmental and geotechnical avoidance than the refined preferred alternative.

While Alternative 1 remains technically feasible, the updated preferred alternative achieves improved avoidance of geotechnical constraints, reduces long-term risk, and represents a more precautionary, risk-averse outcome consistent with NEMA principles.



**FIGURE 19: PREFERRED ALTERNATIVE SDP**



**FIGURE 20: EXAMPLE OF BUILDING MATERIAL AND STRUCTURE**

### Electricity (Applicable to Alternative 1)

There is currently no electrical infrastructure present on the property or within the adjacent road reserve. Under Alternative 1, the development would similarly operate entirely off-grid, utilising a stand-alone solar power system to meet on-site electrical requirements. No demand would be placed on municipal electrical infrastructure.

The electricity system configuration, plant capacity, battery storage, and lighting approach would be identical to the preferred alternative, comprising:

- roof-mounted solar photovoltaic panels
- Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery storage
- off-grid microgrid operation
- motion-activated low-intensity solar lighting

Accordingly, Alternative 1 does not differ materially from the preferred alternative in terms of energy infrastructure or operational sustainability.

### **Comparative Assessment of Alternatives and Identification of the Preferred Alternative**

Both the preferred alternative and Alternative 1 represent low-impact, clustered residential development options within the same degraded portion of Portion 79 of Farm Ruygte Valley No. 205. In both cases, the development footprint is extremely limited relative to the total site area, and the majority of the property remains conserved. The alternatives are therefore similar in intent, scale, and conservation outcome. The key distinction lies in their relative avoidance of geotechnical constraints and long-term environmental risk. The amended preferred layout increases the footprint from  $\pm 1\,175\text{ m}^2$  (previous layout) to  $\pm 1\,375\text{ m}^2$  in order to avoid the D7 geotechnical constraint while remaining within a compact clustered development envelope.

Alternative 1 reflects the original layout configuration informed by the initial constraints mapping. While this option avoided Critical Biodiversity Area 1 (CBA1), the indigenous forest, and steep coastal slopes, updated specialist verification identified that a portion of the Alternative 1 footprint overlapped with a structurally weak geotechnical zone (D7). Although development within this zone may technically be engineered, it would introduce avoidable long-term stability risks and increase the need for structural intervention, slope reinforcement, and maintenance over the life of the development.

The preferred alternative represents a refinement of the original layout following updated constraints mapping and specialist input. The revised footprint has been repositioned to fully avoid the D7 structurally weak zone while maintaining the same clustered, low-impact development philosophy. This adjustment improves geotechnical stability, reduces long-term erosion and maintenance risk, and strengthens alignment with the risk-averse and precautionary principles of the National Environmental Management Act (NEMA).

Importantly, the preferred alternative does not increase the intensity of development. Although the updated disturbance calculations result in a slightly larger total footprint (approximately  $1\,375\text{ m}^2$ ), this remains less than 3% of the total 5.1576 ha property. Approximately 97% of the site will remain in a natural or rehabilitated state. The development remains fully confined to degraded CBA2 areas and continues to avoid CBA1, forest, and coastal hazard zones.

From an environmental perspective, the preferred alternative achieves:

- improved avoidance of geotechnical risk areas;
- reduced long-term erosion and structural vulnerability;
- better alignment with specialist recommendations;
- strengthened application of the mitigation hierarchy (avoid → minimise → rehabilitate); and

- enhanced precaution in a sensitive coastal dune system.

From a planning perspective, both alternatives are policy-compliant; however, the preferred alternative represents a more responsible and defensible environmental outcome because it proactively removes a known risk rather than attempting to engineer around it.

Accordingly, the preferred alternative is identified as the Best Practicable Environmental Option (BPEO). It delivers the same conservation-led development outcome as Alternative 1 while achieving superior geotechnical safety, long-term resilience, and environmental precaution. The preferred alternative, therefore, represents the most sustainable balance between lawful land use, conservation stewardship, and risk-averse planning.

### **The No-Go Alternative**

The No-Go Alternative entails maintaining Portion 79 of Farm Ruygte Valley No. 205 in its current undeveloped state, with no construction or formal land-use change taking place. Under this option, no residential dwelling or associated infrastructure would be established, and the property would remain vacant and unmanaged in its present condition. While the No-Go Alternative would avoid short-term construction-related impacts, it does not align with the landowner's existing lawful development rights under the Agriculture Zone I zoning, which permits the construction of a single dwelling house as a primary land-use right. The property is privately owned, and the applicant seeks to exercise these rights in a manner that is consistent with applicable spatial planning frameworks, environmental legislation, and the prevailing conservation-oriented land-use pattern in the area.

From a socio-economic perspective, the No-Go Alternative would result in the loss of modest but meaningful local benefits, including short-term employment during construction and the use of local contractors and service providers. Although the additional accommodation units are intended primarily for private family and guest use, their construction and ongoing maintenance will still contribute to small-scale local economic activity without placing pressure on municipal infrastructure.

From an agricultural perspective, the No-Go Alternative offers no tangible benefit. The Agricultural Compliance Statement (2025) confirms that the property has limited to negligible agricultural potential due to its small size ( $\pm 5.16$  ha), steep coastal slopes, sandy and erodible soils, and significant ecological constraints. Retaining the land in its current zoning without rezoning or appropriate land-use adjustment would not contribute to agricultural productivity, food security, or viable rural livelihoods.

The No-Go alternative would maintain the legal obligation to clear alien vegetation but would not provide a funding or management mechanism to ensure sustained long-term rehabilitation. The proposed development creates a permanent stewardship framework and conservation zoning that institutionalises environmental management beyond the minimum legal requirement. Portions of the property are degraded and dominated by invasive alien vegetation, particularly *Acacia cyclops*. Without a structured management framework, these conditions are likely to persist or worsen over time. In contrast, the proposed development is coupled with formal conservation measures, including alien invasive vegetation clearing, rehabilitation of degraded areas, and long-term stewardship secured through rezoning to Open Space III (Nature Conservation Area). This framework protects approximately 97% of the property in a natural or rehabilitated state and strengthens ecological connectivity within the surrounding conservation landscape.

In summary, although the No-Go Alternative avoids development, it fails to promote active ecological restoration, long-term conservation security, or responsible exercise of lawful land-use rights. It maintains the status quo but does not deliver measurable environmental or socio-economic improvement.

The preferred development alternative—characterised by a tightly confined footprint, avoidance of sensitive areas, off-grid servicing, and binding conservation commitments—represents the Best Practicable Environmental Option (BPEO) for the site. It achieves an appropriate balance between ecological protection, sustainable rural land use, and lawful occupation within a sensitive coastal conservation corridor.

## Section H

### 1. Details of the public participation process undertaken in terms of Regulation 41 of the regulations, including copies, supporting documents and inputs.

Section 41 in Chapter 6 of Regulation 982 details the public participation process that needs to be adhered to as part of an environmental process. Compliance of the Public Participation Process as per the Legislated Requirements is indicated in the table below:

Regulation with regard to conducting a Public Participation Process	Description of adherence to the Legislated Requirements
1) If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for environmental authorisation in respect of such an activity, obtain written consent of the landowner or person in control of the land to undertake such activity on that land	The proponent (applicant) is the landowner and therefore consent is not required.
<b>2) The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties on an application or proposed application which is subject to public participation by -</b>	
(a) Fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of – <ul style="list-style-type: none"> <li>(i) The site where the activity to which the application or proposed application relates or is to be undertaken.</li> <li>(ii) Any alternative site.</li> </ul>	<ul style="list-style-type: none"> <li>(i) A site notice was placed on the site.</li> <li>(ii) There is no alternative site.</li> </ul> <p><b>See Appendix E</b></p>
(b) Giving written notice, in any of the manners provided for in section 47D of the Act, to – <ul style="list-style-type: none"> <li>(i) The occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken.</li> <li>(ii) Owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and</li> </ul>	<ul style="list-style-type: none"> <li>(i) The applicant is the owner of the site and is in control of the site. The site is vacant, and there is only one site.</li> <li>(ii) The owners of the land adjacent to the site will be notified via email. There is only one site.</li> </ul>

<p>any alternative site where the activity is to be undertaken.</p> <p>(iii) The municipal councillors of the ward in which the site and alternative site are situated and any organisation of ratepayers that represents the community.</p> <p>(iv) The Municipality which has jurisdiction in the area.</p> <p>(v) Any organ of state having jurisdiction in respect of any activity; and</p> <p>(vi) Any other party as required by the competent authority.</p>	<p>(iii) The ward Councillor (Knysna Municipality) will be notified. The ratepayer's association has been notified</p> <p>(iv) Knysna Municipality will be notified</p> <p>(v) Please refer to Appendix E showing a list of organs of state notified.</p> <p>(vi) Please refer to Appendix E showing a list of all organisations, NGO's and the public that have been notified.</p>
<p>(c) Placing an advertisement in –</p> <p>(i) One Local Newspaper; or</p> <p>(ii) Any official Gazette that is published specifically for the purpose of providing public notices of applications or other submissions made in terms of these Regulations;</p>	<p>(i) CX Newspaper, a local free newspaper, will be used to advertise.</p> <p>Please refer to a copy of the advert in <b>Appendix E</b>.</p>
<p>(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 its boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not to be complied with if an advertisement has been placed in an official gazette referred to in paragraph (c)(ii); and</p>	<p>This is not applicable to the proposed development activity as there is no impact (i.e. air emissions) that extends beyond the boundaries of the district municipality.</p>
<p>(e) Using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to –</p> <p>(i) Illiteracy</p> <p>(ii) Disability; or</p> <p>(iii) Any other disadvantages</p>	<p>Should the need arise, <i>Eco Route Environmental Consultancy</i> will identify the correct manner with the assistance of the competent authority to engage with such an individual.</p>
<p>3) A notice, notice board or advertisement referred to in sub-regulation (2) must –</p> <p>(a) Give details of the application or proposed application which is subject to public participation; and</p>	<p>Refer to <b>Appendix E</b>.</p>

<p>(b) State –</p> <ul style="list-style-type: none"> <li>(i) Whether basic assessment or S&amp;EIR procedures are being applied to the application;</li> <li>(ii) The nature and location of the activity to which the application relates;</li> <li>(iii) Where further information on the application or proposed application can be obtained; and</li> <li>(iv) The manner in which and the person to whom representations in respect of the application or proposed application may be made.</li> </ul>	
<p>4) A notice board referred to in sub-regulation (2) must –</p> <ul style="list-style-type: none"> <li>(a) Be of a size of at least 60cm by 42cm; and</li> <li>(b) Display the required information in lettering and in a format as may be determined by the competent authority</li> </ul>	<p>Refer to <b>Appendix E.</b></p>
<p>5) Where public participation is conducted in terms of this regulation for an application or proposed application, sub-regulation (2)(a), (b), (c) and (d) need not be complied with again during the additional public participation process contemplated in regulations 19(1)(b) or 23(1)(b) or the public participation process contemplated in regulations 21(2)(d), on condition that –</p> <ul style="list-style-type: none"> <li>(a) Such a process has been preceded by a public participation process which included compliance with sub-regulation (2)(a), (b), (c) and (d); and</li> <li>(b) Written notices are given to registered I&amp;AP's regarding where the – <ul style="list-style-type: none"> <li>(i) Revised basic assessment report or, EMPr or closure plan, as contemplated in regulation 19(1)(b);</li> <li>(ii) Revised environmental impact assessment report or EMPr as contemplated in regulation 23(1)(b); or</li> <li>(iii) Environmental impact assessment report and EMPr as contemplated in regulation 21(2)(d);</li> </ul> </li> </ul> <p>May be obtained, the manner in which and the person to whom representations on these reports or plans may be made and the date on which such representations are due.</p>	<p>Refer to <b>Appendix E.</b></p>

<p>6) When complying with this regulation, the person conducting the public participation process must ensure that –</p> <p>(a) Information containing all relevant facts in respect of the application or proposed application is made available to potential interested and affected parties; and</p> <p>(b) Participation by potential or registered interested and affected parties is facilitated in such a manner that all registered interested and affected parties are provided with a reasonable opportunity to comment on the application or proposed application.</p>	<p>Refer to <b>Appendix E</b>.</p> <p>The Draft BAR will be made available on the website of Eco Rout Environmental Consultants for the relevant organs of state. Kindly refer to Appendix E for verification of the delivery method. A hard copy will be placed in the Knysna Library for the review of interested and affected parties (I&amp;APs), and an electronic version is accessible at <a href="http://www.ecoroute.co.za">www.ecoroute.co.za</a>.</p>
<p>7) Where an environmental authorisation is required in terms of these Regulations and an authorisation, permit or licence is required in terms of a specific environmental management Act, the public participation processes contemplated in this Chapter may be combined with any public participation processes prescribed in terms of a specific environmental management Act, on condition that all relevant authorities agree to such a combination of processes.</p>	<p>N/A</p>

## Registration of Key Stakeholders

The key stakeholders identified will be given an opportunity to comment on the Consultation, Draft and Amended Draft Basic Assessment Report. A list of key stakeholders for this process is included in the table below. This will be updated in the Amended Draft Basic Assessment Report, if required:

<b>STATE DEPARTMENTS</b>			
<b>Name</b>	<b>Contact / Directorate</b>	<b>Postal Address</b>	<b>Website</b>
Western Cape Department of Agriculture	Directorate: Land Use & Soil Management	Private Bag X1, Elsenburg, 7607	Website
Department of Agriculture, Land Reform and Rural Development (DALRRD)	National	Private Bag X120, Pretoria, 0001	Website
Western Cape Department of Economic Development and Tourism (DEDAT)	Directorate: Tourism	P.O. Box 979, Cape Town, 8000	Website
Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)	EIA Directorate	Private Bag X6509, George, 6530	Website
Western Cape Department of Health	District Office	Private Bag X6592, George, 6530	Website

Department of Water and Sanitation (DWS)	Gouritz Water Management Area	Private Bag X16, Sanlamhof, 7532	Website
Department of Transport and Public Works (Western Cape)	Roads & Infrastructure	Private Bag X617, Oudtshoorn, 6620	Website
South African National Roads Agency SOC Ltd (SANRAL)	Land & Environment	Private Bag X19, Bellville, 7535	Website

<b>ORGANS OF STATE</b>			
<b>Name</b>	<b>Contact / Directorate</b>	<b>Postal Address</b>	<b>Website</b>
CapeNature	Conservation Stewardship	Private Bag X6546, George, 6530	Website
Heritage Western Cape	Heritage Management	Private Bag X9067, Cape Town, 8000	Website
South African National Parks (SANParks)	Garden Route Region	P.O. Box 3542, Knysna, 6570	Website
Eskom – Land and Rights	Western Cape	P.O. Box 222, Brackenfell, 7561	Website

<b>NON-GOVERNMENTAL ORGANISATIONS (NGOs)</b>			
<b>Name</b>	<b>Contact</b>	<b>Postal Address</b>	<b>Website</b>
Knysna Ratepayers Association	Chairperson	P.O. Box 2475, Knysna, 6570	Website
Knysna Catchment Management Forum	Chairperson	P.O. Box ..., Knysna, 6570	Website

<b>MUNICIPALITY</b>			
<b>Name</b>	<b>Contact / Directorate</b>	<b>Postal Address</b>	<b>Website</b>
Knysna Municipality – Environmental Management	Environmental Management Unit	P.O. Box 21, Knysna, 6570	Website
Knysna Municipality – Town Planning	Planning Department	P.O. Box 21, Knysna, 6570	Website
Ward 1 Councillor – Knysna Municipality	Councillor	P.O. Box 21, Knysna, 6570	Website

<b>PUBLIC / INTERESTED AND AFFECTED PARTIES</b>		
<b>Erf / Property</b>	<b>Contact Person</b>	<b>Postal Address</b>
Adjacent and surrounding landowners	Various	As per the I&AP Register

## Availability of the Draft Basic Assessment Report

In accordance with Regulation 41 of the Environmental Impact Assessment Regulations, 2014 (as amended), the Amended Draft Basic Assessment Report (DBAR) will be made available for an additional public participation process of not less than thirty (30) days, following material amendments to the project description, layout, and supporting specialist inputs.

The original Draft Basic Assessment Report was previously made available to registered Interested and Affected Parties (I&APs), and public notices advertising its availability were placed in the local newspaper. Following the receipt of comments and a detailed review of the Draft BAR, it was determined that substantive revisions were required. These revisions necessitate the re-issuance of the report for further public participation in terms of Regulation 41.

All registered and identified I&APs will be notified of the availability of the Amended Draft Basic Assessment Report for review and comment. The Amended DBAR will be made available electronically on the Eco Route Environmental Consultancy website ([www.ecoroute.co.za](http://www.ecoroute.co.za)) for the full 30-day comment period.

Notification of the availability of the Amended DBAR will be undertaken through:

- Direct written notification to all registered I&APs; and
- Reference to the previously placed newspaper notices, which indicated that project documentation would be made available electronically.

Extension Request and Acknowledgement by the Competent Authority

A notification in terms of Regulation 19(1)(b) of the EIA Regulations, 2014 (as amended), was submitted to the Department of Forestry, Fisheries and the Environment (DFFE) to allow for the re-issuance of the amended report and the implementation of an additional public participation process.

The Department confirmed receipt of the Regulation 19(1)(b) notification on 21 January 2026 and further confirmed that the revised report must be subjected to an additional public participation process of at least 30 days, in accordance with Regulation 41.

The Amended Draft Basic Assessment Report will therefore be made available in compliance with the Department's confirmation and the applicable regulatory requirements.

Proof of all notifications, correspondence with the competent authority, and the availability of the Amended DBAR will be included in the Final Basic Assessment Report submitted to the Department for decision-making.



## Comments and Response Report on the Consultation BAR

A Summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them, is described below:

Authority / I&AP (Theme)	Summary of Objection / Concern Raised	Response / Outcome	BAR Section(s) Amended / Addressed
<b>CapeNature (Biodiversity / Conservation)</b>	Confirmed the site falls within mapped CBA1, CBA2 and ESA areas and requested confirmation that development avoids sensitive habitats, with rehabilitation and conservation commitments clearly secured.	The revised preferred layout avoids all CBA1 and indigenous forest areas. Development is confined entirely to degraded CBA2 portions identified through the updated Constraints Map. The application includes rezoning of the entire property to Open Space III (Nature Conservation), securing long-term conservation and rehabilitation. Approximately 97.3% of the site remains in a natural or rehabilitated state. No biodiversity offsets are required due to the very small footprint and net conservation gain.	Receiving Environment – Biodiversity; Updated Constraints Map; Preferred Alternative; Need & Desirability; EMPr
<b>SANParks (Coastal / CPZ / Visual / Tourism Context)</b>	Raised concern regarding proximity to Coastal Public Property and the Garden Route National Park buffer; requested clarity on total disturbance footprint, coastal risk, and alignment with ICMA and tourism sensitivities.	The revised disturbance footprint is now clearly quantified as approximately <b>1 375 m<sup>2</sup></b> , including buildings, access, parking and boardwalks. While portions of the development fall within the 100 m HWM trigger area, specialist assessments confirm the preferred layout is positioned outside mapped 100-year coastal erosion and flood-risk zones and avoids geotechnically unstable areas. The preferred alternative represents the lowest practicable coastal risk option. The proposal remains private residential use, with the additional units intended for family and guest accommodation under a tourism-compatible zoning framework.	Coastal Processes; Preferred Alternative; Constraints Map; Alternatives Assessment; Need & Desirability; Visual Impact
<b>Brede-Olifants CMA (Water Resources)</b>	Requested confirmation of watercourses on site and whether any water uses would trigger section 21 water uses under the NWA.	No watercourses or wetlands occur on the site. The development relies exclusively on rainwater harvesting and sealed conservancy tanks. No abstraction or discharge to natural water resources is	Water Resources; Infrastructure & Services; EMPr

		proposed. Any future borehole would require separate authorisation.	
<b>Department of Agriculture (Agricultural Potential)</b>	Requested confirmation of agricultural viability and implications of rezoning away from Agriculture Zone I.	The Agricultural Compliance Statement confirms very low agricultural potential due to sandy soils, steep slopes and ecological constraints. Rezoning to Open Space III results in no loss of productive agricultural land and aligns with provincial rural conservation policy.	Agricultural Potential; Land-Use Planning; Need & Desirability
<b>Knysna Municipality (Planning / Infrastructure / SDF)</b>	Queried consistency with the Knysna SDF and whether the development would burden municipal infrastructure or set a precedent.	The development is fully off-grid and places no demand on municipal services. The preferred alternative supports the SDF's conservation intent outside the urban edge. The application is site-specific, footprint-limited, and non-precedent-forming due to its reliance on unique site constraints and conservation zoning.	Planning Context; Infrastructure & Services; Precedent Assessment
<b>Local Residents / Neighbours (Visual / Precedent / Tourism)</b>	Raised concerns regarding visual impact, future intensification, tourism creep, and loss of rural character.	Visual assessments confirm the preferred layout is visually screened and will not intrude on public coastal viewpoints or neighbouring properties. Development is clustered within a compact node and occupies less than 3% of the site. Rezoning to Open Space III restricts development intensity and prevents subdivision or uncontrolled expansion. Any future land uses remain subject to separate statutory approvals.	Visual Impact Assessment; Land-Use Rights; Need & Desirability; Preferred Alternative
<b>Latest Public Comment Received (Tourism / Zoning Clarity)</b>	Requested explicit clarity on whether the development constitutes tourism accommodation and whether rezoning enables future commercial use.	The BAR clarifies that the accommodation units are currently intended for private family and guest use. The Open Space III zoning provides a tourism-compatible framework aligned with policy but does not authorise commercial tourism without separate approval. The environmental authorisation is assessed on footprint and impacts, not future speculative land use.	Project Description; Land-Use Rights; Need & Desirability; Alternatives



## 2. Site Description and Environmental Attributes

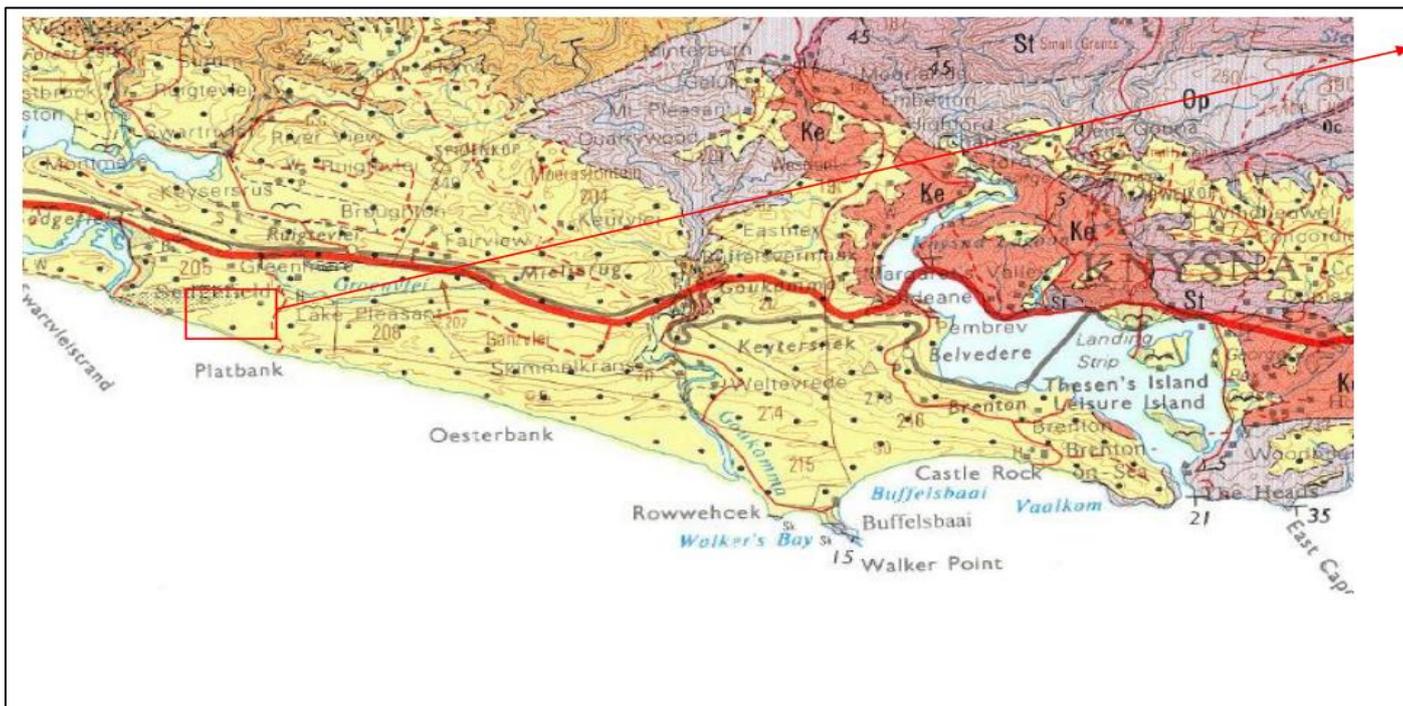
### Geographical and Physical Aspects

#### Preliminary Geomatic and Geotechnical Investigation

Rock Hounds (Pty) Ltd was appointed to undertake the Preliminary Geomatic Geotechnical investigation, which was undertaken in May 2024. The purpose of the study was to determine dune stability and morphology over time. Parcel 79 of Farm 205 Ruygte Valley is situated within the Knysna Municipal Area and constitutes one of the farm portions of Groenvlei, located to the east of Sedgefield. This property encompasses approximately 5.21 hectares and shares its southern boundary with coastal public land. It directly adjoins Portion 78 of Farm Ruygte Valley No. 205, which has been designated as a private nature reserve.

#### Topographical Features

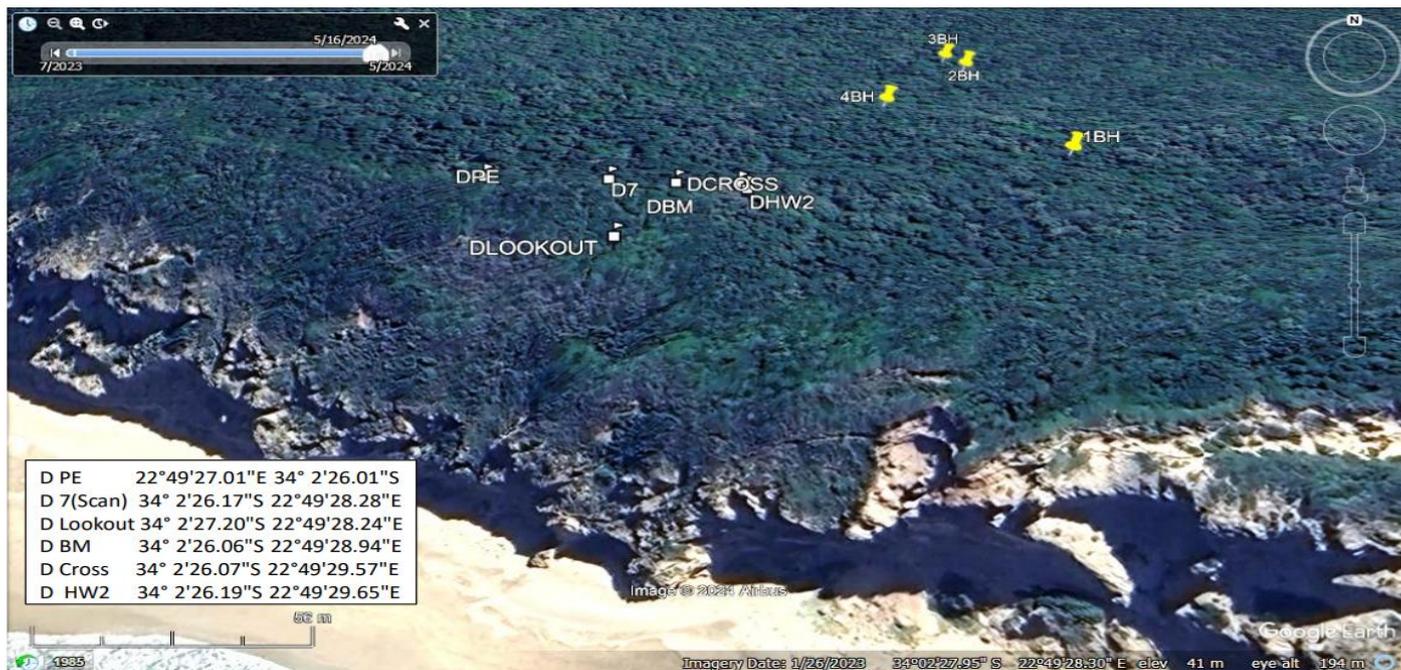
The property (approximately in red block) is located within the Cape Supergroup rocks, on thick sand (light yellow Bredasdorp formation). Kirkwood formation conglomerates (Ke dark orange) might be present in thin layers under the sand. Peninsula sandstones (Light pink Op) underly the sand and conglomerates at depths of typically approximately 70-90m. Steep topographical features are present due to the formation of high wind-blown recent sand dunes and semi consolidated fossil sand dune.



**REGIONAL GEOLOGICAL MAP 1:250 000 MAP (COUNCIL FOR GEOSCIENCE)**

The designated area is categorized as low-sloped, characterized by the presence of tall trees from the 65-meter contour, with slope angles ranging from 0 to 21 degrees. Conversely, there are significant slope gradients originating

from the BM area and extending towards the lookout point and the coastline, where the terrain is predominantly covered in coastal shrubs. This segment spans from the 75-meter contour down to sea level, exhibiting slope angles between 26 and 70 degrees over a distance of 50 meters. The stretch from the lookout to the coastal zone is identified as a high-risk area due to the pronounced steepness of the slopes.

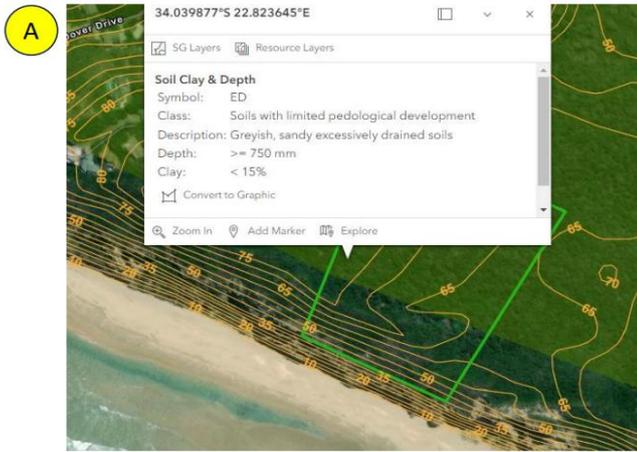


**POSITIONS OF MEASUREMENTS (GOOGLE EARTH PRO, 3D TERRAIN VIEW): POSITIONS OF INTEREST PE- WESTERN POINT ON PATH & SURVEY POINT (75M ABOVE SEA LEVEL); LOOKOUT – PATH OVERLOOKING SEA (76M ABOVE SEA LEVEL); D7 – POSITION OF DEEP FRACTURE ON SCAN (79M ABOVE SEA LEVEL); CROSS – SPLIT IN PATH (77M ABOVE SEA LEVEL); BM – SURVEY POINT (72M ABOVE SEA LEVEL); HW2 – SURVEY POINT & TALL TREES (70M ABOVE SEA LEVEL)**

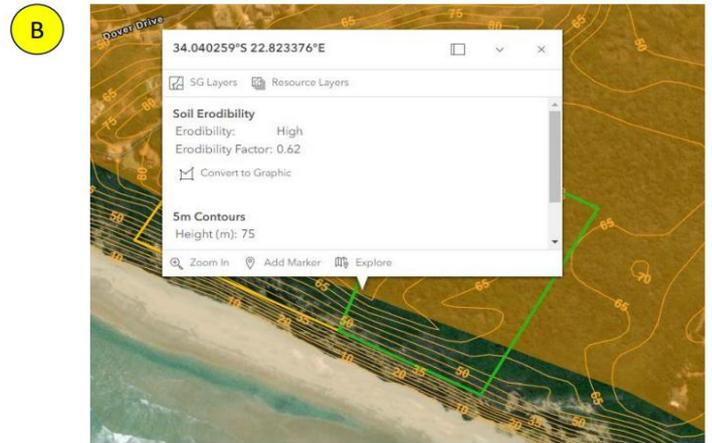
The region is characterised by coastal sand dunes, which are underlain by fossilized dunes. The area features a layer of soft and semi-consolidated materials that overspans a peninsula sandstone formation, which exhibits an east-west orientation and dips at an angle of 45 degrees to the south, at depths between 60 and 80 meters. Observations from the geophysical survey indicate a notable transition in the sandy overburden, shifting from a depth of 15 meters to 25 meters. Furthermore, a structurally weak point has been identified at a depth of 120 meters.

### Soil

The soil profile at the Lookout Point test pit is primarily composed of silty loam, sandy loam, and sand at varying depths. One of the test pits exhibits both silty loam and sandy loam. Both sites feature organic-rich top layers; however, the organic layer is notably deeper at one location, indicating a more developed and older soil profile with in-situ development. The topsoil in this region is characterized by a loose texture, rendering it highly susceptible to erosion. The combination of a steep slope and high erodibility values serves as a significant indicator of potential soil movement. The moisture content is within expected parameters and is typical for coastal regions characterised by high organic layers.



A Field observations: Sandy soil with high organic matter was present to 150 cm depth on both test pit sites. Minor Clays are present.



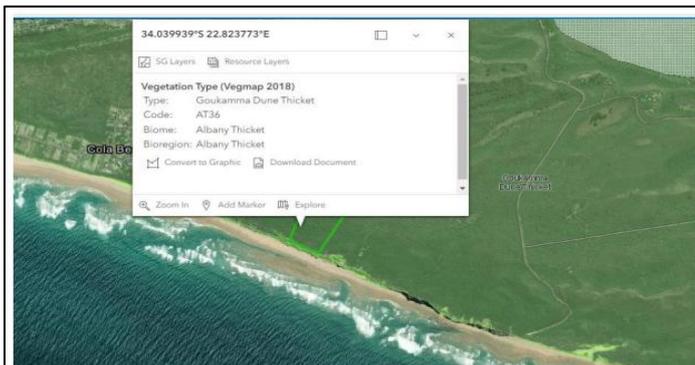
B Field observations: Soil is highly erodible in this area and loosely packed.

**A) SOIL CLAY AND DEPTH (CFM) 1: 1 000 000: SOIL THICKNESS IS AVERAGE, MORE THAN 750MM DEEP, WITH LITTLE ACCUMULATION OF CLAY MATERIALS AND IS SANDY AND EXCESSIVELY DRAINED. B) SOIL ERODIBILITY (CFM) 1: 1 000 000: THE SOIL IN THIS AREA IS HIGHLY ERODIBLE. THE 0.62 FACTOR INDICATOR POINTS TO A HIGH PROBABILITY OF A MOVEABLE SOIL HORIZON IN THIS AREA, ESPECIALLY IN CONJUNCTION WITH THE STEEP SLOPES FROM THE LOOKOUT POINT TOWARDS THE COASTAL ZONE.**

Soils at the site had no pebbles and were coarse to medium-grained, predominantly organic-rich to sandy from the top to the bottom layers. Grainsize changed gradually from coarse organic material to medium-grained sand layers down to 1,5m depth. Soil colour ranged from dark brown to grey, brown. Soil type is predominantly Organic material to 90cm, to Silty loam with 20-40% silt in the top layers, to Sandy Loam at 60-150cm depth. Clay is not predominant. Moisture ranges from 25% in the top layers, gradually changing to 5% from 15 to 135cm, with a slight moisture increase at 150cm.

### Vegetation

A well-established coastal forest is present, extending from the 65-meter contour and gradually tapering towards the 30-meter coastal zone, where it transitions to shrubbery. This observation is corroborated by historical satellite imagery. Soil samples have revealed the presence of roots at depths of 60 centimetres and greater, indicative of robust vegetation that contributes to the stabilisation of the dune. Furthermore, from 2005 to 2024, there has been consistent vegetation growth from the 25-meter contour inland, which demonstrates the long-term stability of the dune system.



Well established coastal forest (Albany thicket),



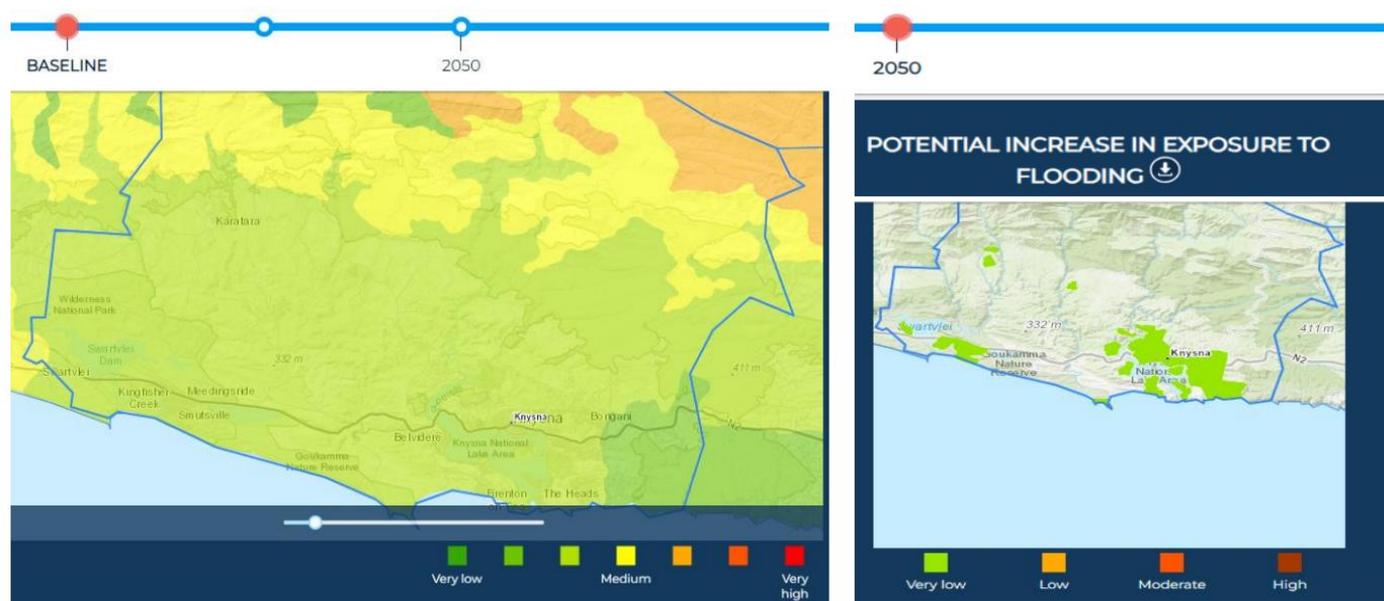
2024 satellite image: Well established coastal forest (Albany thicket), gradually tapering from the 65m contour towards the 30m coastal zone to shrubs

### **VEGETATION TYPE (CFM)**

The designated area has been classified as a Critical Biodiversity Area (CBA:1 for maintenance and CBA:2 for restoration), which includes essential features related to terrestrial biodiversity and forest ecosystems. This ecosystem encompasses the Goukamma Dune Thicket, which retains its classification as being of Least Concern (LC). The property is situated on low-sloping terrain behind the front dune edge, exhibiting a gentle incline that ranges from 0 to 21 degrees toward the east. Notably, the slope experiences a significant transformation as it approaches the coast, attaining gradients between 26 and 70 degrees over a horizontal distance of 70 meters.

### Coastal Flooding

A modest increase in seasonal rainfall is anticipated, rising from 196 mm to 202 mm over the next century, while a decline in average rainfall is projected. By the year 2050, the region is expected to experience four fewer days of extreme rainfall events. Currently, the risk of coastal flooding at the property is low, and this is expected to remain very low by 2050. Additionally, average wind speeds in the area are recorded at 5.75 m/s.

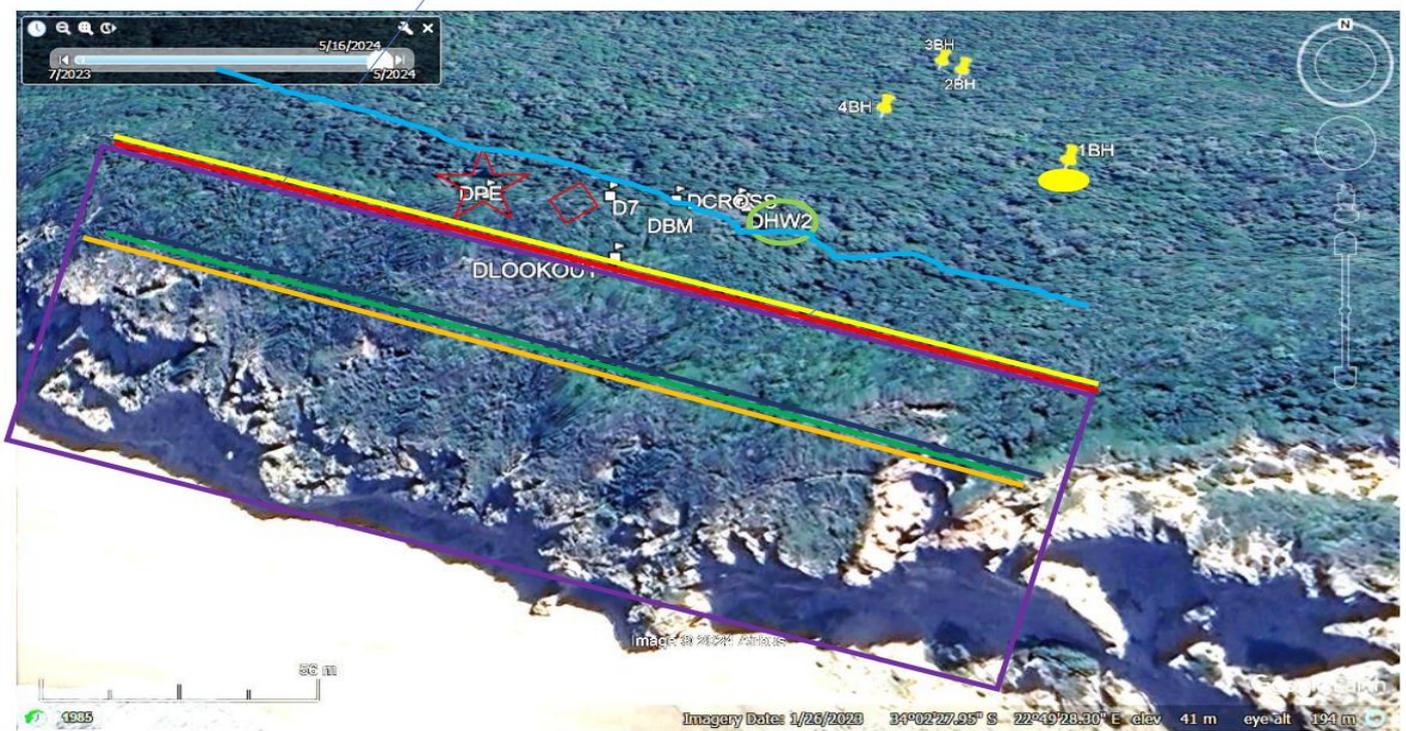


**COASTAL FLOODING (CSIR): BASELINE (CURRENT) AND PROJECTED (2050) EXPOSURE TO FLOODING INDICATE THAT THE PROPERTY IS CURRENTLY LOCATED IN A LOW-RISK AREA AND IN 2050 IN A VERY LOW-RISK AREA FOR COASTAL FLOODING.**

The 100-year low-risk projection indicates that the coastal zone will coincide with the 40-meter contour, which serves as the property boundary. In contrast, the high-risk projection suggests that the coastal zone will reach Lookout Point, located 50 meters from the current coastal line.

### Exclusion Zones for the Proposed Erecting of Structures Terrain View

1. Yellow line: High-risk 100-year flood line, as per high-risk projection to the year 2100
2. Red block: Current structurally weak zone, as per geophysical survey data.
3. Purple block: Current high-risk zone due to steep slope values
4. Orange line – low risk projection for coastal flooding and sea level rise for the next 100 years, corresponding to the current property border.
5. Green line indicates the calculated 100-year coastal zone movement inland, as per measurements of the historical satellite images.
6. Note: The border (dark blue line), low-risk projection 100-year coastal flooding (orange line), and the measured 100-year coastal zone movement (green) overlap. The building line (red) and the high-risk projection of 100-year coastal flooding (yellow line) overlap.



**SUMMARY IMAGE OF EXCLUSION ZONES FOR THE PROPOSED ERECTION OF STRUCTURES. TERRAIN VIEW: 3D FEATURES ENABLED**

### Observation Summary

**Geologically:** A structurally weak area is located in position D7. Do not place weight-bearing structures in this position, or design structures around it. Position PE is far enough, but be aware not to place excessive weight-bearing pillars in this position when designing foundations for the dwelling

**Foundations:** Lookout, BM path split, and PE sites have soft, but consistent, highly erodible soil profiles. Sites HW2 in the tall trees have weak areas at 160 and 360mm depth due to high organic matter content. All sites consist of soft material that needs special foundation and compaction designs to carry the weight of the proposed dwellings. The area is low risk for soil movement due to the low slope from BM to HW2. However, the zone south of the lookout is high risk due to high slope changes.

Climatic conditions are projected to be low risk for rainfall, temperature, wind and vegetation cover is well established, indicating dune stability.

2100 flooding high-risk projections indicate that the 100-year coastal flood line may be level with the lookout point coordinates. Satellite image measurements from 2005 to 2024 indicate that the coastal zone might move inland 30m over 100 years (based on 6m inland movement every 20 years). This is in line with the low-risk coastal flooding projections, in line with the 40m contour line, or on the current property border.

**Conclusions:** The dune morphology is stable north of the property’s coastal border, as indicated by well-established vegetation and thick organic layers in the soil. Thick vegetation protects the dune from wind erosion. Cyclic wave erosion is present at the high tide mark in the coastal zone, and it is projected to move 30m inland over 100 years.

Foundation design has to allow for soft, uncompressed, highly erodible sandy material at all sites, allow for a compacted zone of 1,5m around the foundations of any outside walls, and has to be designed and signed off by an ECSA registered structural engineer.

The proposed dwellings at location PE are not in the current erosion zone, nor in the projected low or high risk 100-year coastal flooding zones, nor in the measured projected 100-year zone and are not located on position D7. It is located 15m north (inland) of the 100-year high-risk projection zone.

The borderline, low-risk projection 100-year coastal flooding zone, and the measured 100-year coastal zone movement overlap. The 30m building line and the high-risk projection of 100-year coastal flooding overlap.

The 100m line above the high-water mark is located north of location PE. Locations BM and HW2 are north of the 100m line above the high-water mark.

Existing dwellings in the adjacent developed areas of Sedgefield have been built between the 100-year low and high-risk projection lines, and south of the 100m high water mark.

Should the local authority change building regulations and move the 30m building line to the 100m line above the high water mark, the municipal authority has to first give permission for the proposed dwelling at the PE location, irrespective of the above findings and observations, Then the BM location is the next best option for a dwelling as it is located on the 100m line above the high water mark and above all the other risk projection lines.

### Conclusion

The geological assessment of the site highlights a structurally weak area at position D7, which should be avoided for weight-bearing structures, while position PE is suitable with caution regarding excessive foundation loads. The soil profile at Lookout, BM path split, and PE sites consists of soft, highly erodible material, necessitating specialized foundation and compaction designs to ensure structural integrity. The HW2 site within the tall trees presents weak zones at 160mm and 360mm depths due to high organic content, requiring further reinforcement. Although most of the area is classified as low risk for soil movement, the zone south of the Lookout Point is high risk due to significant slope changes.

Climatic projections indicate a low risk for rainfall, temperature, and wind impacts, with well-established vegetation contributing to dune stability. Long-term coastal flood risk projections suggest that by 2100, the high-risk flood line may reach the Lookout Point coordinates, with a 30m inland movement of the coastal zone expected over a century. However, the site north of the coastal border remains stable, as indicated by dense vegetation and thick organic soil layers, which protect the dune from wind erosion.

Given these conditions, foundation designs must accommodate soft, highly erodible sandy material and include a compacted zone of at least 1.5m around any external walls. All structural plans must be designed and approved by an ECSA-registered structural engineer to ensure compliance with safety and stability requirements. The proposed dwellings at location PE are positioned outside the current and projected erosion and flood risk zones, maintaining a 15m buffer inland from the 100-year high-risk projection zone.

The borderline, low-risk 100-year coastal flood zone and measured 100-year coastal movement projections align, reinforcing the need for careful planning. While the 30m building line overlaps with the high-risk projection zone, the 100m setback above the high-water mark remains a crucial reference point, with locations BM and HW2 positioned beyond it. Existing dwellings in the adjacent developed areas of Sedgefield have been constructed between the low and high-risk 100-year projection lines, south of the 100m high-water mark, setting a precedent for controlled and responsible development within the region.

Overall, while the site presents some geological and coastal constraints, careful planning, strategic foundation design, and adherence to engineering best practices can ensure a sustainable and structurally sound development.

## Agricultural Compliance Statement and Site Sensitivity Verification

The Agricultural Compliance Statement and Sensitivity Verification was compiled by Soil ZA in January 2025 as part of the environmental and land-use assessment for the proposed development. This report serves to verify the current cropping status and agricultural land use across the site, ensuring compliance with national and regional agricultural policies and environmental regulations. Additionally, it provides a comprehensive assessment of agricultural conditions, including soil composition, land capability, and long-term agricultural potential.

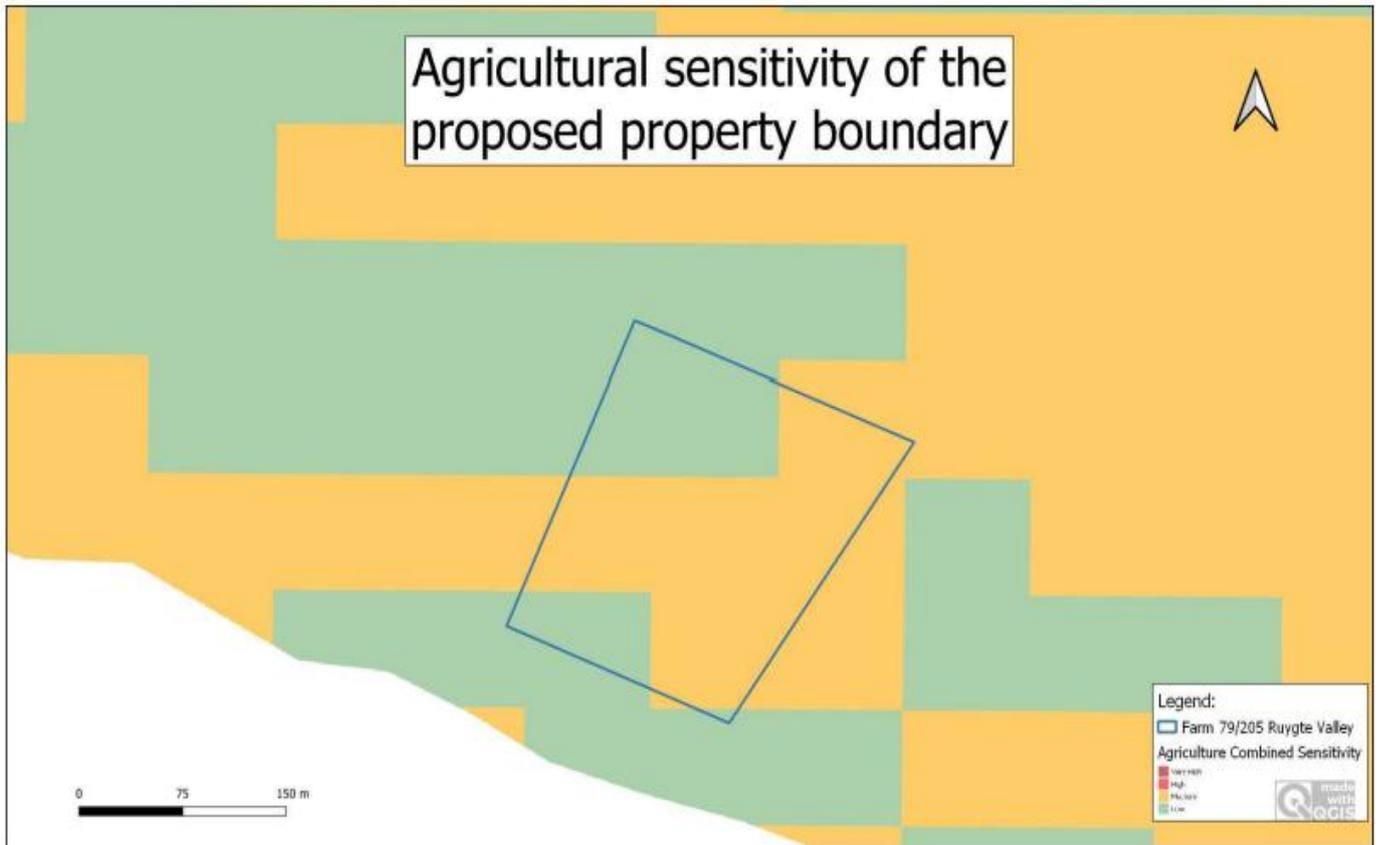
The proposed project is for accommodation on portion 79 of farm 205 Ruygte Valley. The project will consist of one house with a footprint of 400m<sup>2</sup>, three cottages at 80m<sup>2</sup> each, a boardwalk connecting the four units, 6 parking bays for the four units, an 80m<sup>2</sup> shed, and a 50m<sup>2</sup> cottage as staff quarters. The proposed project is located west of the town of Knysna.

The project is likely to require agricultural approval (or at least comment from the Department of Agriculture) as part of the required approval in terms of applicable municipal land use legislation, as well as in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970 - SALA), because it is on land currently zoned for agriculture.

A specialist agricultural assessment is required to include a verification of the agricultural sensitivity of the development site as per the sensitivity categories used by the web-based environmental screening tool of the Department of Forestry, Fisheries and the Environment (DFFE). The screening tool's classification of sensitivity is merely an initial indication of what the sensitivity of a piece of land might be. What the screening tool attempts to indicate is whether the land is suitable for crop production (high and very high sensitivity) or unsuitable for crop production (low and medium sensitivity). To do this, the screening tool uses two independent criteria, from two independent data sets, which are indicators of suitability for crop production but are limited in that the first is outdated and the second is fairly coarse, modelled data, which is not accurate at the site scale. The two criteria are:

1. Whether the land is classified as cropland or not on the field crop boundary data set (Crop Estimates Consortium, 2019). All classified cropland is, by definition, either high or very high sensitivity.
2. Its land capability rating as per the Department of Agriculture's updated and refined, country-wide land capability mapping (DAFF, 2017). Land capability is defined as the combination of soil, climate, and terrain suitability factors for supporting rain-fed agricultural production. The direct relationship between land capability rating, agricultural sensitivity, and rain-fed cropping suitability.

It is important to note that agricultural sensitivity is not necessarily correlated with the significance of an agricultural impact and is therefore often of very limited value for assessing agricultural impact. What is of importance to an agricultural assessment, rather than the site sensitivity verification, is its assessment of the impact significance.



**THE ASSESSED PROPERTY (BLUE OUTLINE) OVERLAID ON AGRICULTURAL SENSITIVITY, AS GIVEN BY THE SCREENING TOOL (GREEN = LOW; YELLOW = MEDIUM; RED = HIGH; DARK RED = VERY HIGH). DUE TO A SCREENING TOOL ERROR, A LAND CAPABILITY OF 8 IS NOT SHOWN AS HIGH SENSITIVITY. THE SCREENING TOOL'S HIGH SENSITIVITY IS DISPUTED BY THIS ASSESSMENT.**

The assessment verifies that the site is not within crop boundaries and therefore confirms the less-than-high sensitivity rating by the screening tool that is based on the cropping status component of sensitivity. Crop production in the area is confined to land types that have higher water and nutrient holding capacity. This assessment, therefore, rates the assessed area as having a maximum land capability of 6 and, therefore, as being of medium agricultural sensitivity in terms of the land capability component of sensitivity.

In conclusion, this assessment confirms the low, medium sensitivity rating of the site by the screening tool because of the site's assessed agricultural production potential and current agricultural land use. It, however, disputes the classified land capability of >6 and rates the entire assessed area as having a maximum land capability of 6.

### Baseline Description of the Agro-Ecosystem

The site is not within a Protected Agricultural Area (PAA) (DALRRD, 2020). A PAA is a demarcated area in which the climate, terrain, and soil are generally conducive to agricultural production and which, historically, or in a regional context, has made important contributions to the production of the various crops that are grown across South Africa. Within PAAs, the protection of viable, arable land is considered a priority for the protection of food security in South Africa.

The entire development footprint is considered to be below the threshold for needing to be conserved as agricultural production land because of the limitations that make it unsuitable as viable cropland. The proposed development on this land will result in negligible loss of future agricultural production potential in terms of national food security. The overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of low significance and as acceptable.

	Parameter	Value
Climate	Köppen-Geiger climate description (Beck <i>et al</i> , 2018)	Temperate, no dry season, hot summer
	Mean Annual Rainfall (mm) (Schulze, 2009)	632
	Reference Crop Evaporation Annual Total (mm) (Schulze, 2009)	764
	Climate capability classification (out of 9) (DAFF, 2017)	6 (moderate-high)
Terrain	Terrain type	Coastal dunes
	Terrain morphological unit	Varied
	Slope gradients (%)	0 to 12
	Altitude (m)	75
	Terrain capability classification (out of 9) (DAFF, 2017)	3 (low) to 5 (moderate)
Soil	Geology (DAFF, 2002)	Fixed dunes and dune rock.
	Land type (DAFF, 2002)	Hb12
	Description of the soils	Deep, light textured soils, grey soils.
	Dominant soil forms	Fernwood, Mispah
	Soil capability classification (out of 9) (DAFF, 2017)	6 (moderate-high)
	Soil limitations	Unlimited depth, Low water & nutrient holding capacity.
Land use	Agricultural land use in the surrounding area	None
	Agricultural land use on the site	None
General	Long-term grazing capacity (ha/LSU) (DAFF, 2018)	25
	Land capability classification (out of 15) (DAFF, 2017)	4 (low-very low) to 8 (moderate)
	Within Protected Agricultural Area (DALRRD, 2020)	No

***PARAMETERS THAT CONTROL AND/OR DESCRIBE THE AGRICULTURAL PRODUCTION POTENTIAL OF THE SITE.***

The cropping potential of the site is limited by its soil constraints, predominantly that the soils are deep, very sandy, with low water and nutrient holding capacity. Because of these constraints, the site is completely unsuitable for viable rainfed crop production. It is in an area that is not utilised for agricultural production at all.

**ASSESSMENT OF THE AGRICULTURAL IMPACT**

**Impact identification and assessment**

It should be noted that an Agricultural Compliance Statement is not required to formally rate agricultural impacts by way of impact assessment tables.

An agricultural impact is a change to the future agricultural production potential of land. In most developments, including the one being assessed here, this is primarily caused by the exclusion of agriculture from the footprint of the development. The significance of an agricultural impact is a direct function of the following three factors:

1. The size of the footprint of land from which agriculture will be excluded (or the footprint that will have its potential decreased)

2. The baseline production potential (particularly cropping potential) of that land
3. The length of time for which agriculture will be excluded (or for which potential will be decreased).

The most significant loss of agricultural land possible, for any development anywhere in the country, is of high-yielding cropland, and the least significant possible is of low carrying capacity grazing land.

Cropping potential is highlighted in factor 2, above, because the threshold, above which it is a priority to conserve land for agricultural production, is determined by the scarcity of arable crop production land in South Africa (approximately only 13% of the country's surface area) and the relative abundance of the rest of agricultural land across the country that is only good enough to be used for grazing. If land can support viable and sustainable crop production, then it is considered to be above the threshold and is a priority for being conserved as agricultural production land. If land is unable to support viable and sustainable crop production, then it is considered to be below the threshold and of much lower priority for being conserved.

In this case, the entire development footprint is considered to be below the threshold for needing to be conserved as agricultural production land because of the limitations that make it unsuitable as viable cropland. The proposed development on this land will result in negligible loss of future agricultural production potential in terms of national food security. The overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of low significance and as acceptable.

#### Cumulative impact assessment

Specialist assessments for environmental authorisation must consider cumulative impacts, which include the combined effects of past, present, and foreseeable future activities on the environment. The key agricultural concern is the regional loss of future production potential. However, due to its negligible agricultural impact, the proposed development will not significantly contribute to this loss. The cumulative agricultural impact is assessed as low and acceptable, with no unacceptable negative effects on the area's agricultural capability. From this perspective, the development is recommended for approval.

#### Assessment of alternatives

Specialist assessments for environmental authorisation are required to include a comparative assessment of alternatives, including the no-go alternative. Because there is no viable cropland within the assessed site, the exact positions of all proposed infrastructure within it will make absolutely no difference to agricultural impacts. Any alternative layouts within the same assessed site will have an equal agricultural impact and are assessed as equally acceptable.

The no-go alternative considers impacts that will occur to the agricultural environment in the absence of the proposed development. There are no agricultural impacts of the no-go alternative, but this is not significantly different from the negligible impact of the development, and so from an agricultural impact perspective, there is no preferred alternative between the no-go and the development.

#### MITIGATION

The most important and effective mitigation of agricultural impacts for any development is avoidance of viable croplands. This development has already applied this mitigation by selecting a site on which there are not viable croplands. No mitigation measures are required for the protection of agricultural production potential on the site because the development poses negligible degradation risk to agricultural resources.

The cumulative impact of a development is the impact that development will have when its impact is added to the incremental impacts of other past, present, or reasonably foreseeable future activities that will affect the same

environment. The potential cumulative agricultural impact of importance is a regional loss of future agricultural production potential.

Due to its negligible agricultural impact, the assessed development will not contribute to the cumulative impact. The cumulative agricultural impact of the proposed development is therefore assessed here as being of low significance and therefore as acceptable. The development will not have an unacceptable negative impact on the agricultural production capability of the area, and it is therefore recommended, from a cumulative agricultural impact perspective, that the development be approved.

#### ADDITIONAL ASPECTS REQUIRED IN AN AGRICULTURAL ASSESSMENT

##### Micro-siting

The agricultural protocol requires confirmation that all reasonable measures have been taken through micro-siting to minimise fragmentation and disturbance of agricultural activities. Because of the uniformly low agricultural potential of the environment, with no cropping, micro-siting will make no material difference to agricultural impacts and disturbance.

##### Confirmation of linear activity exclusion

If linear infrastructure has been given exclusion from complying with certain requirements of the 15 agricultural protocols because of its linear nature, the protocol requires confirmation that the land impacted by that linear infrastructure can be returned to the current state within two years of completion of the construction phase. No such exclusion applies to this project.

The overall conclusion of this assessment is that the proposed development is acceptable because it leads to negligible loss of future agricultural production potential. This assessment confirms the low, medium sensitivity rating of the site by the screening tool because of the site's assessed agricultural production potential and current agricultural land use.

It, however, disputes the classified land capability of >6 and rates the entire assessed area as having a maximum land capability of 6.

The cropping potential of the site is limited by its soil constraints, predominantly that the soils are very sandy with low water and nutrient holding capacity. Because of these constraints, the site is completely unsuitable for viable rainfed crop production.

It is in an area that is not utilised for agricultural production at all. An agricultural impact is a change to the future agricultural production potential of land. This is primarily caused by the exclusion of agriculture from the footprint of the development. In this case, the entire development footprint is considered to be below the threshold for needing to be conserved as agricultural production land because of the limitations that make it unsuitable as viable cropland.

The proposed development on this land will result in negligible loss of future agricultural production potential in terms of national food security. The overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of low significance and as acceptable. From an agricultural impact point of view, it is recommended that the proposed development be approved.

The conclusion of this assessment on the acceptability of the proposed development and the recommendation for its approval is not subject to any conditions.

# Biological Components

## VEGETATION

### Terrestrial Biodiversity Specialist Assessment

BioCensus (Pty) Ltd was appointed to undertake the Terrestrial Biodiversity Specialist Assessment in March 2025.

The site is located above the coastal cliffs to the east of Cola Beach, Sedgefield, in the Garden Route (Figure 1). It is accessed from the Groenvlei Beach road, which is a gravel road that runs past the western side of Groenvlei to the beach on the western edge of Goukamma Nature Reserve.

The site is in an area of untransformed coastal thicket between Goukamma Nature Reserve and Cola Beach in Sedgefield. The strip of land is privately owned and has been divided into several small holdings, some of which overlook the sea. One of these sea-facing sites has already been partially developed, and there is strong pressure to develop the area.

Most of the areas to the north and north-east of the site are in a natural state. This natural area between Sedgefield and Goukamma Nature Reserve provides an important natural buffer to the vegetation in Goukamma Nature Reserve.

The scope of this report is the entire property, part of which is being considered for development, which is 5.21 ha.



**Figure 1: Location of the site near Sedgefield.**

#### **LOCATION OF THE SITE NEAR SEDGEFIELD.**

#### Terrestrial Biodiversity Theme Sensitivities



cliffs where the proposed development is situated. Any natural vegetation on site would therefore fall within Goukamma Strandveld.

## Goukamma Strandveld

### **Distribution**

This vegetation type occurs in the Western Cape Province in Sedgefield Bay, wedged between the Knysna Heads to the east and Wilderness to the west, covering 39 km<sup>2</sup>.

### **Vegetation & Landscape Features**

Parabolic dunes occur along the coastal margin, with inland ridges supporting Knysna Sand Fynbos. Mesic Dune Thicket patches are common in the Goukamma Strandveld, and in fire-protected and locally wet areas, they grow into forests. Altitude ranging between 1 – 196 metres (median 49 m).

### **Geology & Soils**



**FIGURE 2: REGIONAL VEGETATION TYPES OF THE SITE AND SURROUNDING AREAS.**

### Geology & Soils

The vegetation is overlaying the Klein Brak Formation rocks, cemented beach deposits, and Waenhuiskrans aeolianite sand on oxidised, neutral sands. The Klein Brak Formation rocks, which are primarily quartz-rich, shelly sandstones, border the dune cordon between Arniston and De Hoop Nature Reserve.

## Climate

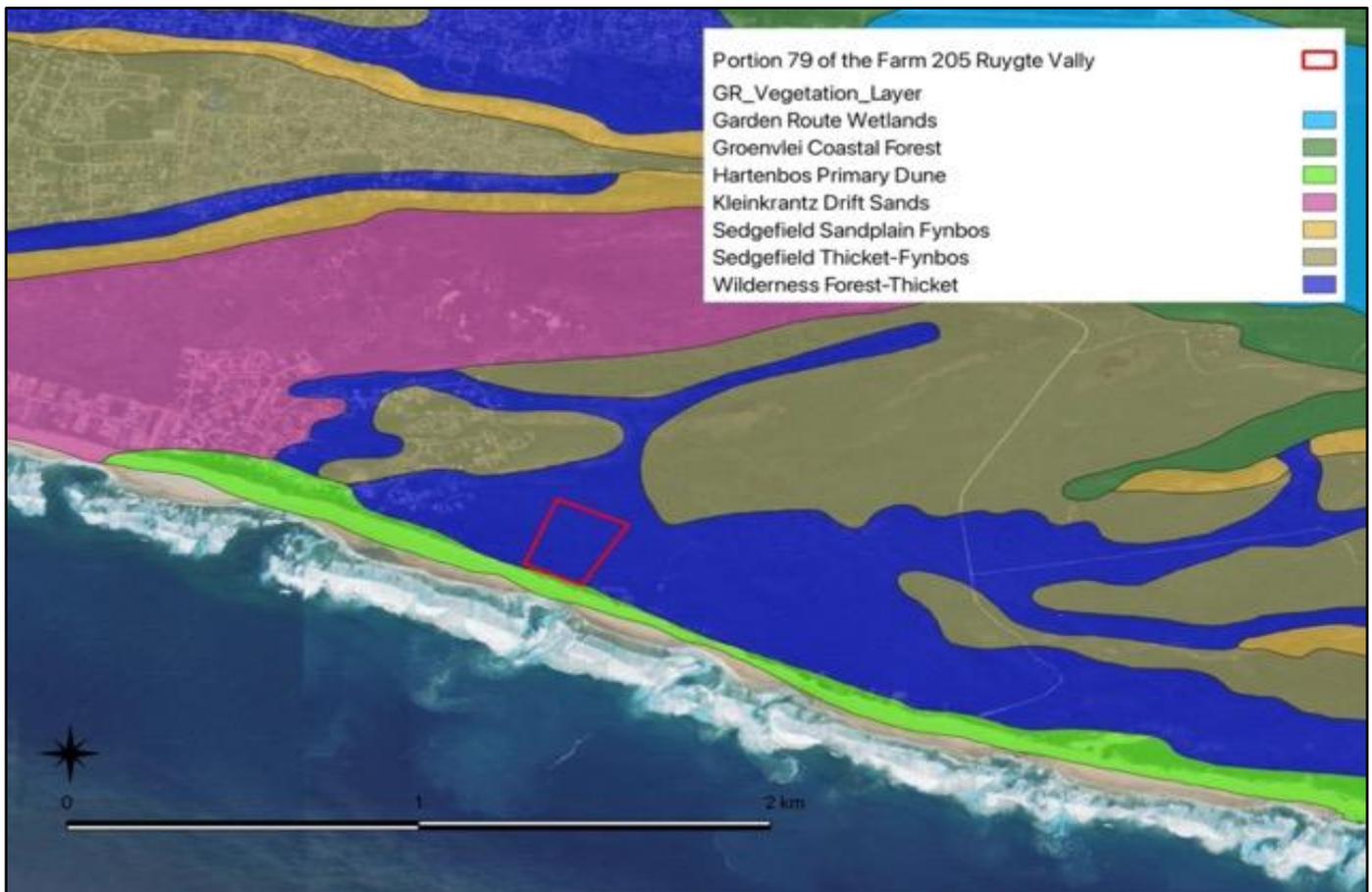
Like that of the St Francis Strandveld but with a lower annual rainfall of 500–700 mm yr<sup>-1</sup>. Warm temperate, subhumid to semi-arid and sub-Mediterranean. The temperature regime is equable: mean midsummer temperatures are 20–22 °C, and midwinter temperatures 16–18 °C.

## Other descriptions of vegetation patterns in the area

The vegetation of the Wilderness Lakes area has been complexed to map and describe. The vegetation of the coastal dunes was initially included in the national vegetation map as being within a single broad unit called Southern Cape Dune Fynbos, which occurred from Wilderness to Oyster Bay in the Eastern Cape. The national vegetation map initially mapped this area as falling within Goukamma Dune Thicket, but this unit was recently split into Goukamma Dune Thicket and Goukamma Strandveld. There are now primarily three regional terrestrial vegetation units currently described for the Wilderness Lakes area, namely Goukamma Dune Thicket, Goukamma Strandveld and Knysna Sand Fynbos. Some valleys with Southern Afrotemperate Forest also intrude into the area from the north and there is also a small patch of vegetation near Sedgefield named Southern Cape Dune Fynbos.

Goukamma Strandveld is mapped as a unit that stretches along the coastline and slightly inland from Wilderness to Knysna. This area encompasses high variation in topography, moisture regime and substrate conditions. For example, the vegetation of this area was described in a project done for the Garden Route Initiative (Vlok et al. 2008) and, within the Wilderness Lakes area, the following habitat types are mapped (with equivalent VegMap units shown):

Habitat	Variant	Equivalent VegMap vegetation type
Dune Sandplain Fynbos	Hoogekraal Sandplain Fynbos	Knysna Sand Fynbos
Dune Sandplain Fynbos	Sedgefield Sandplain Fynbos	Goukamma Strandveld
Dune Sandplain Mosaic Thicket	Sedgefield Thicket Fynbos	Goukamma Strandveld
Dune Thicket Mosaic Forest	Sedgefield Thicket Fynbos	Goukamma Dune Thicket / Goukamma Strandveld
Dune Thicket Mosaic Forest	Wilderness Forest Thicket	Goukamma Strandveld
Dune Thicket Mosaic Littoral Vegetation	Kleinkrantz Littoral-Thicket	Goukamma Strandveld
Drift Sands	Kleinkrantz Drift Sands	Goukamma Strandveld
Coastal Dune Milkwood & Ekebergia	Groenvlei Coastal Forest	Goukamma Dune Thicket / Goukamma Strandveld
Primary Dune	Hartenbos Primary Dune	Cape Seashore Vegetation
Coastal Solid	Sedgefield Coastal Grassland	Southern Cape Dune Fynbos



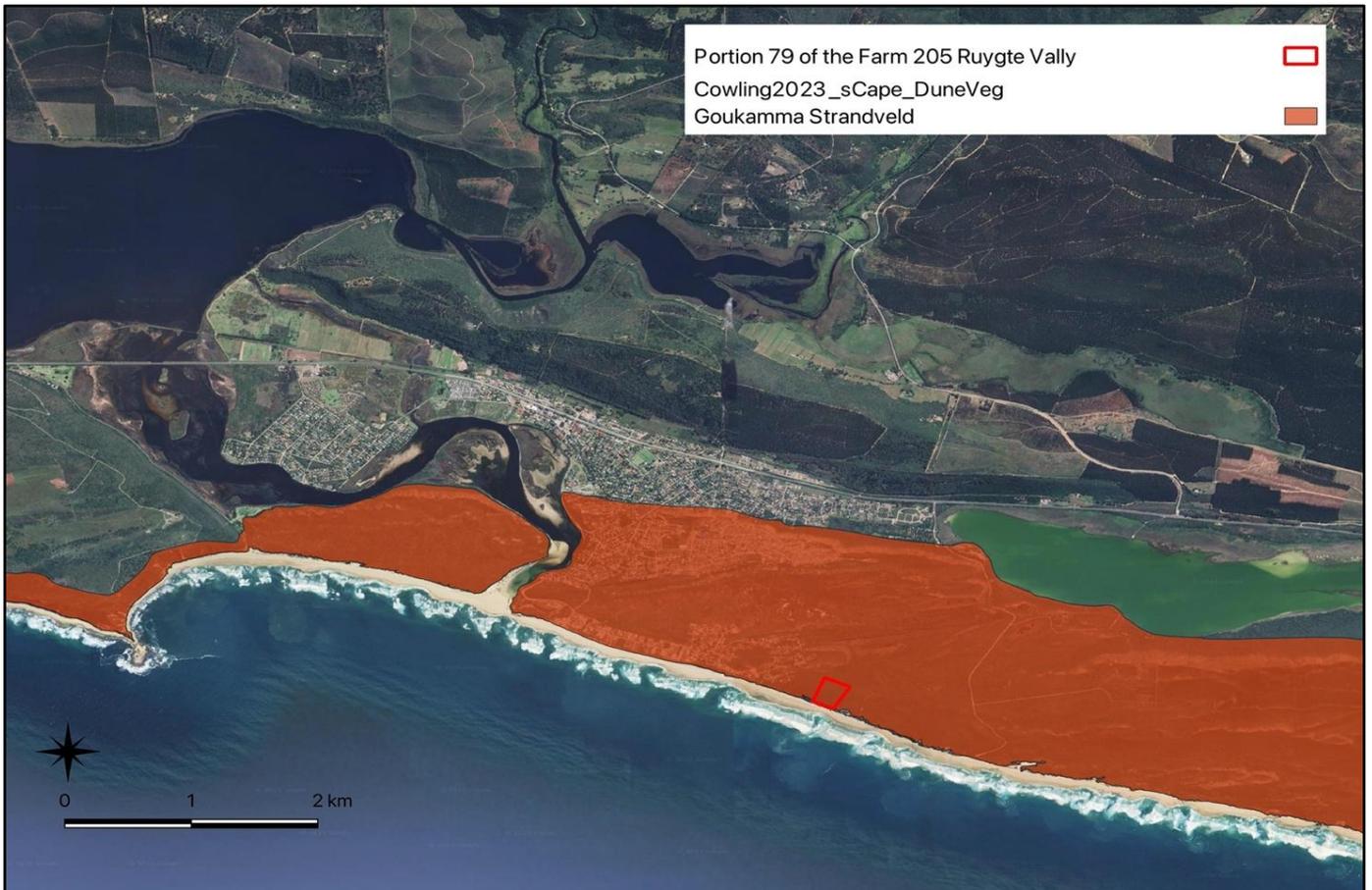
**FIGURE 3: VEGETATION TYPES ACCORDING TO THE GARDEN ROUTE INITIATIVE VEGETATION MAP.**

It is clear from the Garden Route Initiative description that what is currently mapped as Goukamma Strandveld encompasses variation that includes fynbos, thicket, littoral vegetation, forest and grassland.

Studies at Goukamma Nature Reserve (van der Merwe 1976, Hoare 1994) identified several vegetation communities within areas mapped as Goukamma Dune Thicket. On sea-facing cliffs and headlands that are included within the mapped region called Goukamma Dune Thicket are additional communities that have been described (Hoare 1993, Hoare *et al.* 2000).

According to the vegetation map of the Garden Route Initiative (Vlok *et al.* 2008), the vegetation on site is mapped as Wilderness Forest Thicket and Hartenbos Primary Dune. There is also some Sedgfield Thicket-Fynbos nearby, but not on site. Vlok *et al.* indicate proportional areas for different units, which shows that Wilderness Forest Thicket consists of only 28.5 hectares in total.

Cowling *et al.* (2023) described the vegetation of the Holocene coastal dunes of the Cape south coast and distinguished the unit now called Goukamma Strandveld (Figure 8). This has been separated from Goukamma Dune Thicket in VegMap2024. Goukamma Strandveld comprises 41% of the original extent of Goukamma Dune Thicket and excludes all areas inland that occur on older Pleistocene sediments. Cowling *et al.* (2023) emphasise that Holocene sands are physically and chemically different from Pleistocene sands. The vegetation of the southern Cape coast is highly responsive to these differences, with alkaline Holocene sand supporting a floristically distinct vegetation with a different structure to, and sharing few species with the Sand Fynbos of the older sediments (Cowling, 1990).



**FIGURE 4: GOUKAMMA STRANDVELD (COWLING ET AL. 2023).**

The vegetation unit described by Cowling et al. (2023), Goukamma Strandveld, includes numerous patches of Goukamma Mesic Dune Thicket that occurs in sites with high levels of soil moisture. (Cowling et al. 2023) describe Mesic Dune Thicket vegetation as dominated by species with multi-stemmed, laterally spreading architecture (e.g., *Sideroxylon inerme* and *Pterocelastrus tricuspidatus*), but single-stemmed, vertically-growing species are indicative, for example *Zanthoxylum capense*, *Apodytes dimidiata*, *Celtis africana*, *Clausena anisata*, *Afrocanthium mundianum* and *Acokanthera oppositifolia*. Canopy height is approximately 4–6 m. Mesic Dune Thicket usually has a well-developed herbaceous understorey comprising of species such as *Brachiaria chusqueoides*, *Hypoestes aristata*, *Amaranthus thunbergii*, *Droguetia iners* and *Stipa dregeana*. The liana and vine floras are rich with the most common and widespread species being *Asparagus scandens*, *Capparis sepiaria*, *Dioscorea mundii*, *Secamone alpini*, *Behnia reticulata* and *Kedrostis nana*. This description is typical of the vegetation found on the site.

#### Conservation status of broad vegetation types

Rouget et al. (2006) classified South African vegetation types according to their ecosystem status, a measure based on the extent of remaining untransformed area of a vegetation type in relation to its biodiversity target (% area). An updated status assessment, based on the latest classification of South Africa's vegetation (Dayaram et al., 2019) and implementing the IUCN Red List of Ecosystems V. 1.1 protocol (Keith et al., 2013), classified most Cape south coast dune vegetation as "Least Concern". However, the delimitation of vegetation units on coastal dunes of the Cape south coast is not accurate, and therefore, there are inherent errors in the threat status assessments of these ecosystems. Given the continuing threat of coastal development and encroachment by invasive plants, Cowling et al. (2023) propose that all remnant South Coast Strandveld vegetation be protected.

The conservation status for Goukamma Dune Thicket in accordance with the Revised National List of Ecosystems (Government Notice No 2747 of 18 November 2022) published under the National Environmental Management: Biodiversity Act (Act No. 10, 2004), is given below. Note that there is no assessment for Goukamma Strandveld; therefore, the status of the vegetation unit from which Goukamma Strandveld was separated is provided here.

Vegetation Type	Conservation status
	Revised National Ecosystem List (NEM:BA) (2022)
Goukamma Dune Thicket	Not listed - Least concern

It is therefore verified that the site **DOES NOT** occur within a Listed Ecosystem, as listed in the Revised National List of Ecosystems that are Threatened and in need of protection (GN2747 of 2022) and therefore has LOW sensitivity with respect to this attribute.

#### Biodiversity conservation plans

The Western Cape Biodiversity Spatial Plan (WCBSP) classifies the habitats of the province according to conservation value in decreasing value, as follows:

1. Protected Areas (PA);
2. Critical Biodiversity Areas 1 (CBA1);
3. Critical Biodiversity Areas 2 (CBA2);
4. Ecological Support Area 1 (ESA1);
5. Ecological Support Area 2 (ESA2);

The WCBSP map for Knysna (Figure 9) shows that most of the site is within a CBA1 area, with a band of CBA2 along the southern part of the site. There are also two ESA2 areas on site. There are several protected areas in nearby areas, including the neighbouring property to the east (which is already partly developed!). The more inland areas that are protected are Lake Pleasant Nature Reserve.

The WCBSP map includes a layer that provides reasons for including areas within specific conservation categories. For the area within the site, the following reasons are given:

1. Ecological processes.
2. Indigenous forest type.
3. Threatened SA Vegetation type - Southern Cape Dune Fynbos (VU) - note that the vegetation map has been updated and this unit no longer exists.
4. Water resource protection - Swartvlei.
5. Coastal resource protection.

**This verifies the output from the Online Screening Tool in concept and spatial placement and confirms that the majority of the site has VERY HIGH sensitivity from a Terrestrial Biodiversity perspective. A specialist assessment is therefore required.**



**FIGURE 5: WESTERN CAPE BIODIVERSITY SPATIAL PLAN OF THE SITE AND SURROUNDING AREAS.**

#### Natural Forest on site

According to the National Forests Act 84 of 1998, various natural forest types have been declared as national forests under section 7(3)(a) of the Act. A list of forest types declared as National Forest Types was published in GN 1388 dated 30 October 1998, amended in Notice 167 of 2017. Included in this list of National Forest Types is Western Cape Milkwood Forests (VEGMAP CODE FOz VI3).

The description for this forest type (Western Cape Milkwood Forest) states that it occurs in the Western Cape Province, near the coast from the Groenvlei forest (Goukamma Nature Reserve), the Stanford-Hermanus area, to parts of the eastern and western side of the Cape Peninsula (von Maltitz et al. 2003). The site falls within this geographical range.

The official forest type is described as being generally a low forest with trees with large stems and widely spreading crowns. The stands are often dominated by *Sideroxylon inerme*, and/or *Celtis africana* and/or *Apodytes dimidiata*. The understorey is either open or a shrub layer with diverse species, including soft shrubs of the Acanthaceae (von Maltitz et al. 2003). It occurs mainly on aeolian sand, as well as on limestone.

At the time of publishing this description (von Maltitz et al. 2003), there was insufficient distribution data to calculate area or conservation status. However, an unpublished map from The Garden Route Biodiversity Sector Plan for the George, Knysna and Bitou Municipalities (Vromans et al. 2010) shows that the site is within an area mapped as "Dune Thicket Mosaic Forest: Wilderness Forest-Thicket variant". The short description for this unit (Vlok et al. 2008, pp. 43) provides a species list that is typical of that found on the current site (see next section of this report). This same unpublished document also describes the thicket at Goukamma Nature Reserve (see description above for Groenvlei forest) as being Groenvlei Coastal Forest, although Wilderness Forest-Thicket also occurs at Goukamma Nature Reserve.

Although it is therefore not clear whether or not the thicket on site falls under Western Cape Milkwood Forest (protected under the National Forests Act), it is dominated by the Milkwood, *Sideroxylon inerme*, which is protected under the same Act.

### Results of field surveys

The vegetation on site is an almost closed canopy of milkwood-dominated mesic thicket or low forest. It matches the description by Cowling et al. (2023) for Goukamma Mesic Dune Thicket. Closer to the edge of the sea-facing cliff, this changes to a low, wind-cropped vegetation, dominated by the alien, *Acacia cyclops*, along with milkwoods (*Sideroxylon inerme*). This wind-cropped thicket has been found all along the coastal cliffs to Glentana (Hoare et al. 2000) and is characteristically short (less than 1 m tall but dominated by typical thicket species).

A list of plant species found on the site is provided in Appendix 1.

There are existing pathways through the forest/thicket. The original pathway/roadway is visible on the 1973 aerial photograph, but the footpaths onto the site may be more recent.

The entire site is in a natural state. Due to the fact that it occurs within either CBA1 or CBA2 areas, this means that the entire site has Very High sensitivity with respect to the Terrestrial Biodiversity Theme. According to PROTOCOL FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL BIODIVERSITY, the following is stated:

"1.5. If any part of the proposed development footprint falls within an area of “very high” sensitivity, the assessment and reporting requirements prescribed for the “very high” sensitivity apply to the entire footprint, excluding linear activities for which impacts on terrestrial biodiversity are temporary and the land in the opinion of the terrestrial biodiversity specialist, based on the mitigation and remedial measures, can be returned to the current state within two years of the completion of the construction phase, in which case a compliance statement applies.

## IMPACT ASSESSMENT

### Proposed development

The proposal is to build a series of units along the top of the cliff, with an access road running back towards the existing access road. The proposed layout is shown in Figure 12, which also shows the existing development on the neighbouring property. This is useful because it gives an indication of the likely level of impact.

The units are mostly within the steeper slope area overlooking the coast. This is preferable in the sense that it is heavily invaded by rooikrans (*Acacia cyclops*) and is therefore somewhat degraded from a biodiversity perspective, but it introduces a strong erosion and general pollution risk to downslope areas from the proposed development. It is also preferable in the sense that it has a smaller footprint area within the forest, which is the most sensitive vegetation on the site. Finally, it is preferable because it is mostly within CBA2 areas, which is better than being within CBA1 areas.

Forest is vulnerable to development because the vegetation health is dependent on the integrity of the canopy - any break in the canopy introduces edge effects, including modification of micro-environmental conditions and an environment suitable for invasive species.



**Figure 6: Proposed layout superimposed on broad habitat map.**

### Potential impacts

In terms of the Terrestrial Biodiversity Theme, any sensitivities (from a terrestrial perspective) would be linked primarily to the existence of indigenous forests, and CBA1 and CBA2 areas on site. The site is also within the buffer of the Wilderness National Lake Area and the Lake Pleasant Private Nature Reserve and also includes areas highlighted for future protection in the National Protected Area Expansion Strategy (NPAES). The habitat on site is supportive of all of these sensitivities and is in an ecologically functional state. The site therefore has VERY HIGH sensitivity with respect to the Terrestrial Biodiversity Theme.

Impacts assessed here are as follows:

1. IMPACTS ON FOREST.
2. IMPACTS ON PROTECTED TREES.
3. IMPACTS ON EXISTING AND FUTURE CONSERVATION PLANNING OPTIONS.
4. IMPACTS ON DOWNSLOPE CLIFF THICKET.

### Impacts on forests

The forest on site is part of relatively narrow bands of coastal forest that match the description of Western Cape Milkwood Forest, protected under the National Forests Act 84 of 1998. The forests are part of a natural vegetated area to the east of Cola Beach that is currently almost fully intact, with strong linkages to forests within Goukamma Nature Reserve. Development on site will have localised impacts that will introduce edge effects in a line from the coast inland, as well as along the top of the coastal cliff. It would be the beginning of what is likely to be a series of small developments that will extend Coal Beach eastwards. Each development on its own has relatively minor impacts,

but the cumulative effect will be fragmentation of the forest in this row of properties. Although protected in Goukamma Nature Reserve, the affected area of forest here is the largest intact patch of coastal forest within the Holocene Dune system of the Wilderness Lakes area.

BIODIVERSITY VALUE / SENSITIVITY CRITERIA	DESCRIPTION	SCORE
Irreplaceability (I)	The affected areas are within an CBA1 & 2.	4
Threshold (T)	Potential impacts would be related to construction damage on vegetation, as well as edge effects (trampling, erosion, runoff, pollution, spread of alien invasive species). The impact affects a small proportion of the overall biodiversity resource - the proposed footprint is relatively small relative to the overall remaining area of the vegetation.	3
Condition (C)	The potentially affected vegetation the site is in good condition.	4
Reversibility (R)	Impacts are IRREVERSIBLE..	5
<b>IMPACT MAGNITUDE CRITERIA</b>		
Extent (E)	The impact will occur in within the site boundary (CBA).	1
Duration (D)	Loss of vegetation on site, if it occurs, is assessed as being permanent (for the structures proposed), although localised.	5
Magnitude (M)	Although localised, impacts on vegetation will result in processes continuing but in a modified way. The potential impact is therefore scored as being of MEDIUM intensity.	3
Probability of Occurrence (P)	PROBABLE	5
Significance (S) $S = [(R + I + T + C)/4 \times (E + D + M)/3] / 5$	$[(4+3+4+5)/4 \times (1+5+3)/3] / 5 = [4.00 \times 3.00] / 5 = 12.00 / 5 = 2.40$ MODERATE negative significance	

#### Possible mitigation measures

Possible mitigation measures that can be applied are as follows:

1. Obtain a permit from the relevant Department for impacts on a protected forest area.
2. Areas outside of the development footprint must be protected under some form of formal conservation agreement. It has been proposed that the entire property be rezoned "Open Space III" (Nature conservation area). This proposal is supported and will mitigate against future vegetation loss.
3. Strictly adhere to footprint areas.
4. No entry beyond the construction footprint by construction personnel.
5. No pathways to the beach to be constructed - only public access routes to be used.
6. An approved Alien Invasive Management Plan must be implemented.
7. Use existing access roads for construction and operation.

It is noted that the current footprint area has undergone several iterations and is currently as small as possible and located in the most appropriate position to minimise loss of habitat. These measures are commended and assist in reducing the potential significance of impacts. It is also noted that there is an existing right to construct a primary dwelling on the site and that there are also concession rights that may apply to the site. In this regard, the efforts to minimise the proposed footprint are commended and supported.

### Impacts on protected trees

The forest on site is dominated by milkwoods, *Sideroxylon inerme*, which are protected under the National Forests Act 84 of 1998. Any impacts on protected trees will require a permit from the relevant Department.

BIODIVERSITY VALUE / SENSITIVITY CRITERIA	DESCRIPTION	SCORE
Irreplaceability (I)	The milkwoods on site are protected under the National Forests Act, but are relatively common and widespread.	1
Threshold (T)	The milkwoods on site are relatively common and widespread	1
Condition (C)	The trees on site are in good condition.	5
Reversibility (R)	Impacts are BARELYREVERSIBLE..	4
<b>IMPACT MAGNITUDE CRITERIA</b>		
Extent (E)	The impact will occur in within the site boundary	1
Duration (D)	Loss of trees on site, if it occurs, is assessed as being permanent (for the structures proposed), although localised.	5
Magnitude (M)	Although localised, impacts on trees will result in processes continuing but in a modified way. The potential impact is therefore scored as being of MEDIUM intensity.	3
Probability of Occurrence (P)	PROBABLE	5
Significance (S) $S = [(R + I + T + C)/4 \times (E + D + M)/3 ]/5$	[[1+1+5+4]/4 x (1+5+3)/3]/5 = [2.75 x 3.00]/5 = 8.25/5 = 1.65 LOW negative significance	

### Possible mitigation measures

Possible mitigation measures that can be applied are as follows:

1. Shift access roads to avoid as many trees as possible. This may require curving the road instead of having it straight, as is currently indicated.
2. Obtain permits for any protected trees that will be affected.

### Impacts on existing & future conservation planning

The site is within CBA1 and CBA2 areas, which are ideal areas to include in future conservation areas due to already being identified as being high value biodiversity areas. The site is also within the buffer of the Wilderness National Lake Area and the Lake Pleasant Private Nature Reserve, and also includes areas highlighted for future protection in the National Protected Area Expansion Strategy (NPAES).

BIODIVERSITY VALUE / SENSITIVITY CRITERIA	DESCRIPTION	SCORE
Irreplaceability (I)	The affected areas are within an CBA1 & 2..	4
Threshold (T)	Loss of habitat within identified high-value biodiversity areas means that alternative sites are required to meet biodiversity targets and to protect ecosystem processes within protected area buffer zones.	3
Condition (C)	The vegetation on site is in good condition.	4
Reversibility (R)	Impacts are IRREVERSIBLE..	5

<b>IMPACT MAGNITUDE CRITERIA</b>		
<b>Extent (E)</b>	The impact will occur in within the site boundary but affects regional level conservation planning	4
<b>Duration (D)</b>	Loss of vegetation on site, if it occurs, is assessed as being permanent (for the structures proposed), although localised.	5
<b>Magnitude (M)</b>	Although localised, impacts on vegetation will result in processes continuing but in a modified way. The potential impact is scored as being of LOW intensity.	2
<b>Probability of Occurrence (P)</b>	PROBABLE	5
<b>Significance (S)</b> $S = [(R + I + T + C)/4 \times (E + D + M)/3 ]/5$	$[(4+3+4+5)/4 \times (4+5+2)/3]/5 = [4.00 \times 3.67]/5 = 14.67/5 = 2.93$ MEDIUM negative significance	

### Possible mitigation measures

Possible mitigation measures that can be applied are as follows:

1. Areas outside of the development footprint must be protected under some form of formal conservation agreement. It has been proposed that the entire property be rezoned "Open Space III" (Nature conservation area). This proposal is supported and will mitigate against future vegetation loss.

It is noted that the current footprint area has undergone several iterations and is currently as small as possible and located in the most appropriate position to minimise loss of habitat. These measures are commended and assist in reducing the potential significance of impacts. It is also noted that there is an existing right to construct a primary dwelling on site and that there are also concession rights that may apply to the site. In this regard, the efforts to minimise the proposed footprint are commended and supported.

### Impacts on downslope cliff areas

The site is on the summit of the coastal cliffs. High-tide often reaches the foot of the cliffs. The scree slopes below the development area are covered in wind-cropped dwarf thicket. Although heavily invaded, this vegetation is sensitive and has a relatively narrow distribution between Glentana and Knysna. The coastal cliffs are mostly Pleistocene age consolidated beach sand and are easily erodible once the vegetation cover has been lost (as can be seen near Gericke Point).

<b>BIODIVERSITY VALUE / SENSITIVITY CRITERIA</b>	<b>DESCRIPTION</b>	<b>SCORE</b>
<b>Irreplaceability (I)</b>	The wind-cropped thicket with the specific composition and structure as found on site is limited to the area between Glentana and Knysna.	2
<b>Threshold (T)</b>	It is estimated that about 10-20% of this ecosystem on this coastline has been degraded.	4
<b>Condition (C)</b>	The potentially affected vegetation the site is in poor condition (heavily invaded).	2
<b>Reversibility (R)</b>	Impacts are probably IRREVERSIBLE - once this vegetation is lost it is unlikely to re-establish.	5
<b>IMPACT MAGNITUDE CRITERIA</b>		
<b>Extent (E)</b>	The impact will occur in within the site boundary but will affect downslope and adjacent areas.	2
<b>Duration (D)</b>	Loss of vegetation on site, if it occurs, is assessed as being permanent (for the structures proposed), although localised.	5

<b>Magnitude (M)</b>	Although localised, impacts on vegetation will result in processes continuing but in a modified way. The potential impact is therefore scored as being of MEDIUM intensity.	3
<b>Probability of Occurrence (P)</b>	PROBABLE	5
<b>Significance (S)</b> $S = [(R + I + T + C)/4 \times (E + D + M)/3 ]/5$	$[(2+4+2+5)/4 \times (2+5+3)/3]/5 = [3.25 \times 3.33]/5 = 10.83/5 = 2.17$ MODERATE negative significance	

### Possible mitigation measures

Possible mitigation measures that can be applied are as follows:

1. Strictly adhere to footprint areas.
2. Management of all activities that could result in downslope effects must be strictly managed, both during construction and operation. This includes water-flow, diffuse pollutants, material slip, etc.
3. No entry beyond construction footprint by construction personnel, especially in downslope areas.
4. No pathways to the beach to be constructed - only public access routes to be used, such as at Groenvlei Beach.
5. An approved Alien Invasive Management Plan must be implemented. Note that removal of aliens without simultaneous rehabilitation will result in slope failure and permanent loss of vegetation characteristic of this ecosystem.

### Summary of potential impacts

The assessment here considered several possible impacts associated with the proposed development. These are as follows:

There are low coastal forests on site that are part of a connected area of forests linked to Goukamma Nature Reserve. Even small impacts on these forests can cause local ecosystem damage, as well as wider fragmentation effects. Due to the relatively long life-span of the trees, impacts may only become evident decades into the future. The footprint area of the proposed project is relatively small, but the significance has been assessed here as being MODERATE. Negative. These forests fit the description of Western Cape Milkwood Forest, protected under the National Forests Act 84 of 1998.

The dominant tree species on the site is the milkwood (*Sideroxylon inerme*). This tree species is protected under the National Forests Act 84 of 1998. Any trees to be damaged by the proposed project will require a permit. As an impact, loss of these trees was assessed as having LOW negative significance.

The site is close to Goukamma Nature Reserve and the Lake Pleasant Private Nature Reserve. It is also within the CBA1 and CBA2 areas, which are defined on the value of the biodiversity, therefore they are seen as being important areas for the conservation of biodiversity. Unsurprisingly, the area has been earmarked for future conservation. Development of the site therefore compromises these conservation objectives, an impact which was assessed as having MODERATE negative significance.

The proposed development is at the summit of the coastal cliffs. There is therefore a strong risk from the project towards any ecosystems directly below the proposed buildings. The vegetation on these slopes is in poor condition due to alien invasion, but it is currently stable. Destabilisation of the slope due to loss of vegetation will lead to collapsing, as can currently be seen close to Gericke Point. Possible impacts related to this from the proposed development were assessed as having MODERATE negative significance.

These impacts will be permanent, are difficult to mitigate, and are probably irreversible.

## Conclusion

Desktop information, field data collection and analysis of aerial imagery provides the following verifications of patterns for the Terrestrial Biodiversity Theme:

1. The site is within one regional vegetation type, Goukamma Strandveld, which is not listed. in any threat category. However, the mapping and description of this vegetation unit has been criticised for not reflecting the high diversity of vegetation, habitats and species that it contains. A recent assessment of coastal dune ecosystems (Cowling et al. 2023) suggests that this vegetation type needs re-assessment and that the coastal components should be a high priority for protection.
2. The proposed development is almost entirely within areas of natural habitat that have high biodiversity value. The site is within CBA1 and CBA2 areas, is an indigenous forest protected under the National Forests Act 84 of 1998, is adjacent to protected areas and therefore falls within the buffer zones of these, and has been earmarked as being desirable for future conservation.
3. The vegetation on site is dominated by the protected tree species, *Sideroxylon inerme*.
4. The proposed development is on the lip of the coastal cliffs that run along this coast. These cliffs are comprised of recent (Holocene era) sand deposits and are therefore unstable without established vegetation.
5. An impact assessment considered four impacts of which three were assessed as being of concern, namely:
  - a. Impacts on forests: MODERATE negative significance.
  - b. Impacts on protected trees: LOW negative significance.
  - c. Impacts on existing and future conservation planning: MODERATE negative significance.
  - d. Impacts on downslope cliff areas: MODERATE negative significance.
6. It is noted that the current footprint area has undergone several iterations and is currently as small as possible and located in the most appropriate position to minimise loss of habitat. These measures are commended and assist in reducing the potential significance of impacts. It is also noted that there is an existing right to construct a primary dwelling on site and that there are also concession rights that may apply to the site. In this regard, the efforts to minimise the proposed footprint are commended and supported.

## TERRESTRIAL BIODIVERSITY STATEMENT:

1. The entire site is in a natural state and also falls within CBA1 and CBA2 areas, as well as being an indigenous natural forest. All parts of the site therefore have VERY HIGH sensitivity with respect to the Terrestrial Biodiversity Theme. According to the "Protocols", a Specialist Assessment is therefore required.
2. An impact assessment assessed that potential impacts associated with the proposed development could have MODERATE and LOW negative significance, primarily because of the high conservation value of the forest habitats on site and the value that these areas have for current and future conservation. Although relatively small in extent, the proposed development will form part of a cumulative trend that will lead to possible disruption of ecological processes.
3. The property is zoned for Agriculture, which carries rights with respect to dwellings that can be constructed. Given the existing rights, the small proposed footprint and intent to protect remaining undeveloped parts of the site from any other loss of vegetation, the proposal provides a compromise that is supportive of conservation. This makes the proposed development as compatible as possible with conservation planning and biodiversity protection while exercising existing rights. On condition that the risks to coastal forest ecosystems are well managed, the proposed project can be approved.
4. This statement is subject to any conditions contained in the final approved EMPr, including the requirement for permits under the National Forests Act.

## RECOMMENDATIONS

The following measures are recommended:

1. An Alien Invasive Management Plan must be compiled for the project, as well as an Ecological Management Plan.
2. Any clearance must be only for the direct footprint of the proposed structure and other required infrastructure or space, including any fire-management requirements. Remaining areas must be kept in a natural state - no gardens are to be created.
3. Any construction disturbances not required for infrastructure must be allowed to convert back to thicket. If this requires active intervention, then it must be formalised in a management plan.
4. Obtain the required permit from the Department of Forestry for loss of forest vegetation on site that constitutes a National Forest, under section 7(3)(a) of the National Forests Act, Act 84 of 1998.
5. Commit remaining undeveloped areas to formal conservation. It has been proposed that the entire property be rezoned “*Open Space III*” (Nature conservation area). This proposal is supported and will mitigate against future vegetation loss.

*Note: The specialist assessments were undertaken on the basis of site sensitivity, reasonable worst-case development envelopes, and earlier layout iterations, as required by the EIA Regulations. Impact ratings, therefore, reflect the inherent sensitivity of the receiving environment and the potential consequences of development in a coastal forest and dune system. The final preferred layout presented in this BAR represents a reduced-impact outcome informed directly by these specialist recommendations, through footprint reduction, avoidance of CBA1 and forest areas, and formal conservation zoning of the remainder of the property. The BAR does not amend or reinterpret specialist findings but demonstrates how the proposed development has been refined to ensure that identified impacts are avoided where possible and reduced to acceptable levels through mitigation and long-term conservation commitments.*

## Sensitivity Maps



**FIGURE 21: SANBI ORIGINAL ECOSYSTEM STATUS INDICATING GOUKAMMA DUNE THICKET**

## SANBI Ecosystem Status: Remaining



**FIGURE 22: SANBI REMAINING ECOSYSTEM STATUS STILL INCLUDING GOUKAMMA DUNE THICKET**

## Western Cape Biodiversity Spatial Plan: Sensitive Areas



**FIGURE 23: WESTERN CAPE BIODIVERSITY SPATIAL PLAN (2017) PROTECTED AREAS (CBA 1 AND CBA 2)**

## Map Indicating Proposed Development Area Within 100 meters of High-Water Mark



**FIGURE 24: PORTIONS OF PORTION 79/205 AND PORTIONS OF THE PROPOSED DEVELOPMENT FOOTPRINT FALL WITHIN 100 METRES OF THE HIGH-WATER MARK.**

## Initial Visual Statement

Paul Buchholz was appointed to undertake the Initial Visual Impact Statement for the proposed development on Portion 79 of Farm Ruygte Valley No. 205, situated near Sedgefield, within the Knysna Municipal Area of the Western Cape. The objective of this assessment is to provide an initial appraisal of the visual and aesthetic sensitivity of the receiving environment, to inform the environmental assessment and conceptual design of the proposed development.

Visual, scenic, and cultural landscape components represent a finite and valuable resource that significantly influences the sense of place and environmental quality. The visual assessment forms part of the iterative design process to ensure that the project integrates sensitively within its setting and minimises potential visual intrusion.

### Scope and Methodology

The visual assessment approach is informed by local and international best-practice methodologies, including:

- The Provincial Guideline for Involving Visual and Aesthetic Specialists in EIA Processes (DEA&DP, 2005);
- The Landscape Institute and IEMA Guidelines for Landscape and Visual Impact Assessment; and
- US Bureau of Land Management Visual Resource Management Framework.

The assessment considers both quantitative factors (e.g. visibility, viewsheds, and elevation) and qualitative factors (e.g. aesthetic value, sense of place, and landscape harmony). Key tasks included:

- Characterisation of the existing landscape and visual setting;
- Identification of key viewpoints and visual receptors;
- Description of the proposed project elements and their visual form;
- Determination of visual sensitivity and modification levels; and
- Preliminary mitigation and design recommendations.

### Site Context and Landscape Character

The property measures approximately 5.21 hectares and is located on a stabilised coastal dune overlooking the Indian Ocean, approximately 700m east of Cola Beach and south of Groenvlei Lake. The site forms part of a predominantly natural coastal landscape characterised by:

- Dense coastal thicket and dune fynbos vegetation;
- Steep dune slopes and elevated topography reaching approximately 70m above sea level;
- Minimal existing built infrastructure; and
- High scenic quality due to panoramic ocean and mountain views.

The landscape's visual integrity is high, with strong natural character and limited human disturbance.

## Visual Sensitivity and Potential Impact

Visual sensitivity is considered moderate to high due to the site's natural character and proximity to the coastal edge. However, several mitigating factors reduce the potential impact:

- The dense vegetation cover and elevated topography provide effective visual screening.
- The site is not visible from the N2, Groenvlei Road, or Lake Pleasant due to natural screening; and
- Views from Groenvlei Beach and coastal areas are obstructed by dune cliffs and vegetation.

Preliminary observations indicate that the proposed development footprint (approximately 0.02% of the site area) can be accommodated with minimal visual intrusion if design mitigation principles are applied.

## Mitigation and Design Recommendations

To ensure minimal visual disturbance and maintain the natural aesthetic quality, the following measures are recommended:

- Retain and integrate existing vegetation as natural screening elements;
- Utilise lightweight structures and natural materials (timber, steel, glass, and stone);
- Apply earth-toned colour palettes compatible with the dune and thicket environment;
- Restrict night lighting through low-intensity, motion-sensor solar lights; and
- Implement vegetation rehabilitation post-construction to restore disturbed areas.

## Assumptions and Limitations

Visual perception is inherently subjective and influenced by the viewer's context. This initial statement is based on available site data, field observations, and preliminary design information. A comprehensive Visual Impact Assessment (VIA) will follow once detailed design plans and elevations become available, incorporating photomontages and quantitative visibility modelling.

## Conclusion

The proposed development, as currently conceptualised, is visually compatible with its natural coastal setting. With the application of appropriate design, placement, and material mitigation, the project's potential visual impact is expected to be low and manageable. The site demonstrates sufficient Visual Absorption Capacity (VAC) to integrate small-scale, eco-sensitive structures without detracting from the area's scenic character.

## **Visual Compliance Statement**

Outline Landscape Architects has been commissioned to prepare a Visual Compliance Statement for the proposed development located on Portion 79 of the Farm Ruygte Valley no. 205, situated between Knysna and Sedgefield, along the Garden Route in the Western Cape Province. This Visual Compliance Statement will examine the potential impacts of the physical characteristics of the proposed development, specifically concerning its form, scale, and bulk, and will assess their potential influence within the local landscape and receptor context.

The scope of work, from the conceptual design, includes:

- Construction of a residential home of 200m<sup>2</sup> in a footprint area.
- Construction of 3 free-standing cottages of 65m<sup>2</sup> in footprint area.
- A raised boardwalk connecting the cottages and house with the parking area.
- Construction of a shed of 80m<sup>2</sup> in the footprint area.
- Construction of a staff quarter building of 50m<sup>2</sup> in footprint area
- A gravel road, approximately 3m in width and parking for 3 vehicles.

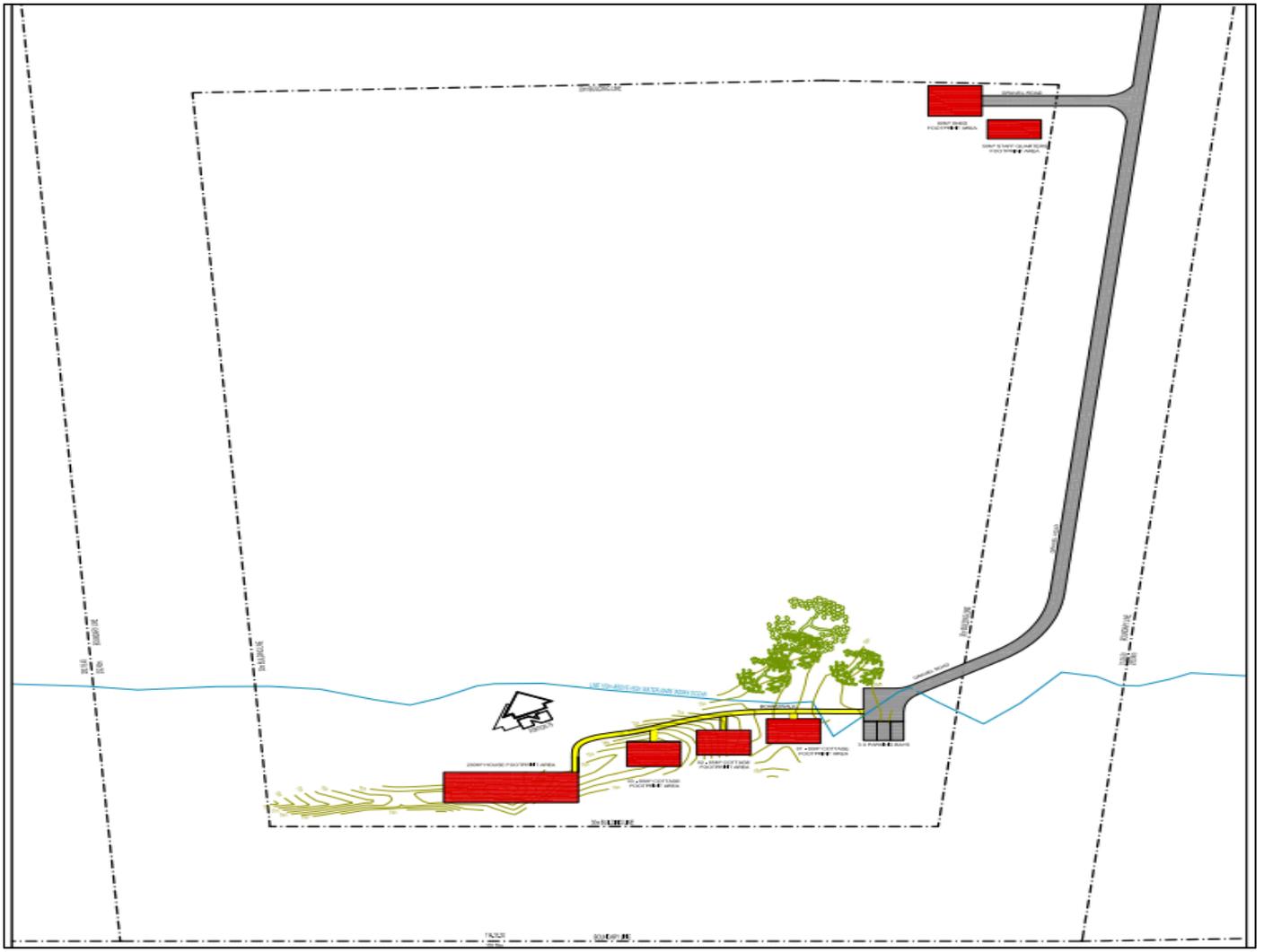
This Visual Compliance Statement will address the following objectives:

- Determination of the extent of the study area.
- Description of the proposed project and the receiving environment.
- Identification of the elements of particular visual value and -quality that could be affected by the proposed project.
- Identification of landscape- and visual receptors in the study area that may be affected by the proposed project and their sensitivity.
- Indication of potential landscape- and visual impacts.



### **LOCALITY PLAN**

The study area is located to the west of Knysna and to the south-east of Sedgefield and is approximately 700m in direct distance to the east of Cola Beach. The site is within the Garden Route District Municipality and the Knysna Local Municipality. The site is located south of Lake Pleasant Resort and Groenvlei Lake, on an unspoilt site above the beach.



**CONCEPTUAL DESIGN PLAN OF THE PROPOSED DEVELOPMENT**



**ARCHITECTURAL CONCEPT IDEAS FOR THE PROPOSED BUILDING DESIGNS**

## Landscape Character

The study area consists primarily of coastal towns and natural fynbos and agricultural landscapes in the inland. Sedgefield is a seaside village along the Garden Route. The prominent thoroughfare road is the N2 connecting Cape Town to Gqeberha. The study area consists of pockets of un-spoilt natural landscape and long stretches of beaches. The background of the site is the Outeniqua Mountain range. The proposed development will be situated on top of a stabilized coastal dune that allows for beautiful vistas over the ocean and towards Gericke's Point. The property is located on low sloping areas behind the front dune edge. The site rises to about 70m above sea level. The area falls within the Fynbos biome. The coastal vegetation consists mainly of coastal shrubs, dune vegetation and small trees. The majority of the site consists of dense, shrubby, thicket vegetation, with large trees close to the highest point of the site.

## Visual Observations

The site visit provided essential insights into the visual dynamics of the proposed development onto the landscape. The site is accessed from Groenvlei Road off the N2. The road passes the Groenvlei Lake and the Lake Pleasant Holiday Resort. A smaller gravel road diverges from the Groenvlei Road, which is a concealed one-way dirt road leading to another residential development on the neighbouring site. A new road will have to be extended and constructed to the proposed development. The development is proposed on the highest point of the site and is on a cliff approximately 70m above the beach. From the site visit, it was established that the site is not visible from the N2 and Lake Pleasant Resort due to the higher topography and dense vegetation of the site. The development will also not be visible to viewers on the beach due to the highly elevated and eroded cliffs.

Visual Absorption Capacity (VAC): Visual Absorption Capacity (VAC) signifies the ability of the landscape to accept additional human intervention without serious loss of character and visual quality or value. VAC is founded on the characteristics of the physical environment, such as:

- Degree of visual screening: A degree of visual screening is provided by landforms, vegetation cover and/or structures such as buildings. For example, a high degree of visual screening is present in an area that is mountainous and is covered with a forest, compared to an undulating and mundane landscape covered in grass.
- Terrain variability: Terrain variability reflects the magnitude of topographic elevation and diversity in slope variation. A highly variable terrain will be recognised as one with great elevation differences and a diversity of slope variation, creating talus slopes, cliffs and valleys. An undulating landscape with a monotonous and repetitive landform will be an example of a low terrain variability.
- Land cover: Land cover refers to the perceivable surface of the landscape and the diversity of patterns, colours and textures that are presented by the particular land cover (i.e. urbanised, cultivated, forested, etc.)

A basic rating system is used to evaluate the three VAC parameters. The values are relative and relate to the type of project that is proposed and how it may be absorbed into the landscape. A three-value range is used; three (3) being the highest potential to absorb an element in the landscape and one (1) being the lowest potential. The values are counted together and categorised in a high, medium or low VAC rating.

The topography of the study area and the moderate height of the vegetation provide a high VAC.

Visual Intrusion: Visual Intrusion is the nature of an object on the visual quality of the environment resulting in its compatibility (absorbed into the landscape elements) or discord (contrasts of the landscape elements) with the landscape and surrounding land uses.

The proposed development is planned to have a very sensitive design approach. The total site is approximately 5 hectares, and the footprint of the buildings encompasses only an area of 525m<sup>2</sup>. Smaller, separate buildings are planned, instead of one large, voluminous building. This allows for the breaking of a solid mass and allows for vegetated areas between buildings, providing screening of the development. The building materials are envisioned to be natural materials, with a combination of light steel and glass structures, to easily blend into the natural environment.

### Identified Impacts

During the site assessment for the proposed development, a few issues were identified that could potentially impact the visual harmony of the environment:

#### Natural Vegetation

The area is characterised by dense natural vegetation typical of the Fynbos biome, which offers visual screening. Existing vegetation should be minimally removed and will be a large mitigating factor to lessen the visual impact of the proposed development. The preservation of as much as possible existing vegetation is important to enhance the site's natural aesthetic appeal.

#### Topography

The topography of the area is varied and sloping landscapes surround the site. The elevated topography of the site allows for optimal views over the ocean, but structures should be designed to fit into the landscape to minimise the visual intrusion of the new buildings. Utilising the natural depressions and contours of the land to minimise visibility during construction activities is important and will facilitate quicker recovery, post-construction, which will help reduce the visual footprint of the development.

#### Existing Infrastructure

There is little existing infrastructure directly surrounding the site; therefore, the area is relatively unspoilt. This emphasises the need for strategic placement and thoughtful design to integrate seamlessly with the existing environment. Special consideration is also required during construction activities so that they do not disrupt the current usage patterns and visual aesthetics of the environment. By proactively addressing each identified challenge, the project can be tailored to respect the local landscape, ensuring that visual impacts are minimised.

#### Visual Influence

The zone of potential visual influence determines the extent of visibility and impact of the proposed development. Due to distance, topography, and dense vegetation, the development's visual impact is expected to be minimal.

The nearest residence is 250m east, occupied by a neighbour with similar interests. Cola Beach (700m west) is shielded by vegetation and terrain, preventing visual impact. Motorists on the N2 (2km north) and Groenvlei Road (1km away) will not have direct views of the site due to the winding nature of the road and existing viewpoints.

Groenvlei Beach, located 70m below the site, primarily attracts locals and fishermen. The eroded cliffs and overhangs obstruct direct views of the development, and beachgoers are naturally focused on the ocean and shoreline, further minimising visual impact.

Existing Visual Context: A thorough review of the area's existing visual context, which comprises natural landscapes and intermittent infrastructural features, has confirmed the project's capacity to harmonise with the regional aesthetic. The strategic, environmentally sensitive design of the development will minimise physical visibility, thereby enhancing visual integration and reducing potential disruptions.

Visibility and Exposure: Strategic visual integration involves employing construction strategies that mimic the natural environment and using landscaping to enhance visual buffering. These mitigation measures will ensure harmonious integration of the proposed development into the environment.

### Expected Visual Impacts

Negative impacts that may arise from the proposed development include:

Alteration of Landscape Character: Although the design should seamlessly be integrated into the landscape, the temporary construction activities and removal of some vegetation could alter the visual character of the natural views.

Dust and Construction Impact: As with most construction projects, activities are expected to generate dust and debris, which could temporarily affect the local visual environment.

Nighttime Lighting: The use of lighting for security and operational purposes may introduce light pollution. This could impact wildlife and diminish the local community's enjoyment of naturally dark night skies. The selection of lighting solutions that will keep light pollution to a minimum should be taken into consideration during the design phase.

To mitigate the visual impacts identified, the detailed design should have mitigation measures in place to reduce visual impacts. These include sensitive site placement of the buildings, natural materials and colours to be used for buildings. A rehabilitation strategy should be put in place where plants that have to be removed due to construction activities can be salvaged and kept in a nursery. These plants can then be replanted once construction is completed.

Construction management practices should be implemented for effective dust suppression techniques and restricting operations to daylight hours to reduce disturbances. Controlled lighting is carefully designed to minimise light pollution, ensuring minimal disruption to the natural nighttime environment.

All temporary structures and debris should be promptly removed after construction to restore the site's visual integrity, maintaining the visual aesthetic of the landscape.

### Conclusion

It can be concluded that the proposed development can be authorised provided it is integrated effectively within the environment with minimal visual intrusions. The use of the land's inherent VAC enhances the project's ability to minimise visual impacts substantially. The visual impact of the project is minimal, given its scope and nature, and must be continually managed through best practice methods throughout the project's lifecycle.

The report has assessed the existing visual conditions and the project's compatibility with the landscape. The potential visual impacts, while inherently minimal due to the project's environmentally sensitive approach, can be effectively mitigated through careful planning, strategic placement, and conscientious ongoing management.

The proposed development is situated in a visually sensitive environment, surrounded by natural vegetation, varied topography, and minimal existing infrastructure. A well-planned design and construction approach will ensure that the development integrates harmoniously with its surroundings while minimising visual impacts.

By preserving natural vegetation, incorporating strategic site placement, and using earth-toned materials, the visual footprint of the development can be significantly reduced. The site's elevated position offers panoramic ocean views, but careful design must ensure that structures blend into the landscape rather than dominate it. The use of natural land depressions and existing vegetation as visual buffers will further reduce visibility from key viewpoints.

The impact on local receptors, including nearby residents, motorists, and beach visitors, is expected to be minimal due to the shielding effects of dense vegetation, topography, and distance. Construction-related impacts, such as dust,

temporary landscape changes, and nighttime lighting, must be carefully managed through dust suppression, controlled lighting, and site rehabilitation efforts.

To maintain the visual integrity of the area, mitigation measures should include the sensitive placement of buildings, the use of natural materials and colours, and a rehabilitation strategy to restore vegetation post-construction. Temporary structures and debris should be promptly removed, ensuring that the final development enhances rather than detracts from the visual appeal of the landscape.

With these mitigation strategies in place, the development is expected to be visually sustainable, aligning with the natural character of the region while minimising disruption to the local environment and community.

## **VRM VISUAL ASSESSMENT – WRONG SITE**

Visual Resource Management Africa (VRMA) was appointed to conduct a Visual Impact Assessment (VIA) for the proposed development on Portion 79 of Farm Ruygte Valley No. 205, within the Knysna Municipality, Western Cape. The assessment applied the BLM (U.S. Bureau of Land Management) Visual Resource Management (VRM) methodology, which classifies landscapes according to scenic quality, viewer sensitivity, and distance zones to determine appropriate development thresholds.

### Methodology and Study Approach

The VIA was undertaken according to the VRM framework, which evaluates:

- Scenic Quality (landform, vegetation, water, colour, cultural modifications, and scarcity value);
- Viewer Sensitivity (proximity of receptors, viewer numbers, frequency, and concern); and
- Distance Zones (foreground, middleground, background).

The objective was to assess whether the proposed development could be visually absorbed within the landscape without causing significant alteration to its character or aesthetic quality.

### Site Description (as assessed by VRMA)

The report describes the site as a “high coastal cliff-edge property immediately above Groenvlei Beach,” characterised by:

“Active erosion along the southern boundary with significant dune movement and a high scenic quality typical of the coastal cliff landscape.” (VRM Africa, 2024: Section 2)

### It further notes:

“The proposed structures are located on the crest of the dune ridge and are likely to intrude on the skyline as viewed from the beach and sea.”

(VRM Africa, 2024: Section 3.1)

According to VRMA, the site is directly visible from Groenvlei Beach, forming part of the immediate coastal viewshed frequented by local recreational users.

### Scenic Quality and Sensitivity

The VRMA study classified the site as having “High Scenic Quality and High Viewer Sensitivity”, corresponding to VRM Class II (High Visual Sensitivity).

### It emphasised that:

“The area possesses exceptional scenic value within the Garden Route coastal corridor, defined by the combination of steep dune cliffs, indigenous vegetation, and expansive ocean views.”

(VRM Africa, 2024: Section 3.2)

Viewer sensitivity was rated High, as beachgoers, local residents, and visitors were considered primary receptors with sustained visual exposure.

### Identified Visual Impacts

The VIA identified twelve key visual risks, including:

- Skyline intrusion from elevated buildings positioned on the dune crest;
- Increased visual contrast against the natural landform and vegetation;
- Linear scarring due to the proposed access road alignment through Goukamma Dune Thicket (CBA) vegetation;
- Loss of visual integrity from vegetation clearance and cut-and-fill operations; and
- High potential for night-time light pollution due to the elevated location.

### The report concluded:

“The proposed development will significantly alter the landscape character of the coastal cliff and result in a visual contrast inconsistent with the surrounding natural landform. The impact is considered high in magnitude and permanent in duration.”

(VRM Africa, 2024: Section 4.1)

### VRMA Recommendations

VRMA recommended that the site be considered unsuitable for development, stating:

“This location should be classified as a Fatal Flaw from a visual perspective. Relocation of the footprint behind the dune crest, where visual containment can be achieved, is strongly recommended.”

(VRM Africa, 2024: Section 4.3)

Mitigation measures such as natural materials, vegetation buffers, and low lighting were noted, but VRMA concluded these would not sufficiently reduce the visual intrusion given the exposed coastal position of the assessed site.

### Correction and Clarification

Following submission of the VRM Africa report, subsequent geospatial verification (Eco Route Environmental Consultancy, 2025) confirmed that the site assessed by VRMA does not correspond to the actual Portion 79 of Farm Ruygte Valley No. 205 under this Basic Assessment process.

### Correct Site Description

The correct project site:

- Lies inland from the coastal cliff, approximately 700 m east of Cola Beach,
- Occupies stabilised consolidated dunes at elevations of 65–75 m above sea level,
- Is covered by dense Goukamma Strandveld and coastal thicket vegetation,
- Has no direct visual exposure to Groenvlei Beach or the N2, and

- Lies behind the dune ridge, not on an active cliff edge.

The actual development footprint, covering  $\pm 1\,175\text{ m}^2$  (0.02% of the property), will be screened by vegetation and topography, and will not result in skyline intrusion or beach visibility.

#### Revised Visual Findings

Subsequent visual specialists – Outline Landscape Architects (2025) and Paul Buchholz (2025) – both confirmed that:

- The site has High Visual Absorption Capacity (VAC) due to dense vegetation and complex terrain;
- No visual exposure exists from the beach, Groenvlei Lake, or public roads;
- The project's architectural scale, materials, and siting are consistent with low visual sensitivity; and
- The expected residual visual impact significance is Low with standard mitigation.

#### Conclusion

While the VRM Africa assessment (2024) provides a useful methodological context, it was conducted on an incorrect coastal parcel and is therefore not applicable to the actual Portion 79 under consideration.

#### For the purposes of the draft Basic Assessment Report:

- The findings of the VRMA report are superseded.
- The correct visual sensitivity classification for the actual site is Low, and
- The proposed development is visually compatible with the natural coastal landscape when mitigation is implemented.

## **Civil and Structural Engineering Confirmation**

The report was prepared by a professionally registered civil and structural engineer in support of the Environmental Impact Assessment for the proposed residential development on Erf 79/205, Ruygte Valley, Cola Beach, Sedgefield. The purpose of the report was to confirm the engineering suitability of the site and to identify design and construction measures required to ensure safe and sustainable development in a coastal dune environment, in accordance with NEMA, the Integrated Coastal Management Act (ICMA), and applicable SANS standards.

#### Site Conditions and Findings

The site forms part of a coastal dune system comprising recent aeolian sands and semi-consolidated fossil dunes typical of the Garden Route coastline.

#### Key findings include:

- Soil conditions: Loose to medium-dense fine sands with good drainage characteristics, but high erodibility and low natural bearing capacity.
- Topography: Steep coastal slopes descending toward the sea.
- Stability: A geotechnical investigation identified structurally weak zones in parts of the site; however, the preferred development footprint (Location PE) avoids these areas and lies outside the mapped 100-year coastal flood and erosion hazard lines.

- Hydrology and coastal context: The site is located within 100 m of the High-Water Mark, triggering coastal assessment requirements. However, the preferred footprint is positioned in a lower-risk portion of the 100 m HWM trigger area, informed by the constraints-led layout and specialist inputs. With appropriate stormwater, erosion-control and foundation measures, hydrological and coastal stability risks are considered manageable.

From an engineering perspective, the site is suitable for the proposed development, provided that the recommended design and construction controls are implemented.

### Recommended Design and Construction Controls

The report prescribes the following measures:

1. Dune stability verification: Formal slope analysis in accordance with SANS 1936-2:2012 prior to construction.
2. Foundation design: Raft, deepened strip or piled foundations anchored in competent material, including a minimum 1.5 m compacted perimeter zone (95% Mod AASHTO).
3. Stormwater management: Non-concentrated discharge, infiltration-based systems, and compliance with SANS 1200 DA.
4. Erosion control: Use of geotextiles, bioengineering solutions and immediate revegetation with indigenous dune species.
5. Engineering supervision: Continuous oversight, compaction testing and certification by an ECSA-registered engineer.
6. Post-construction monitoring: Annual stability and drainage inspections for a minimum of two years after completion.

### Professional Confirmation

The engineer confirms that the proposed residential footprint (Location PE):

- Lies within the 100 m High-Water Mark trigger area, but outside the mapped 100-year flood and erosion hazard zones;
- Is geotechnically and structurally suitable for residential development;
- Will not compromise dune stability or natural coastal processes when developed in accordance with the prescribed controls; and
- Presents no unacceptable engineering or structural risk when constructed under the specified conditions.

### Conclusion

The civil and structural engineering assessment concludes that the site is fit for development, subject to compliance with the recommended foundation, erosion-control, and monitoring measures. The project aligns with the principles of sustainable coastal development, ensures structural safety, and upholds the intent of NEMA and ICMA.

### Professional Opinion:

“Erf 79/205, Ruygte Valley, Cola Beach, is suitable for the proposed residential construction, subject to implementation of the prescribed engineering measures.” — Marius C. van Coller Pr. Eng (ECSA No. 20060275)

## Heritage

Sections 38(1)(a) and 38(1)(c)(i) of the National Heritage Resources Act (Act 25 of 1999) are applicable to the proposed development. A Notification of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC), which confirmed that no further heritage assessment is required in terms of Section 38 of the Act.

## Social Economic Value of the Activity

What is the expected capital value of the activity on completion?	± R 8 00 000.00	
What is the expected yearly income that will be generated by or as a result of the activity?	None	
Will the activity contribute to service infrastructure?	YES	NO
Is the activity a public amenity?	YES	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	± 20	
What is the expected value of the employment opportunities during the development and construction phase?	± R150 000.00	
What percentage of this will accrue to previously disadvantaged individuals?	100%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	3 - 5	
What is the expected current value of the employment opportunities during the first 10 years?	± R1 800 000	
What percentage of this will accrue to previously disadvantaged individuals?	100%	

The vision of the Knysna Municipality, as articulated in its Integrated Development Plan (IDP) (2017–2022 and 2022–2027), prioritises inclusive economic growth, job creation, skills development, and the sustainable use of natural and cultural resources. Central to this vision is the protection of the environmental assets that underpin the local economy, while enabling appropriate, low-impact development that contributes to long-term economic resilience.

The Knysna Spatial Development Framework (SDF, 2020) and Economic Development Strategy identify finance and business services, wholesale and retail trade, and the accommodation and tourism sector as key contributors to the local economy. Tourism, in particular, is recognised as a critical driver of employment and economic activity when it is nature-based, low-intensity, and aligned with conservation and landscape protection objectives.

While the construction sector is not identified as a primary long-term economic driver, it plays an important supporting role by providing short-term employment opportunities through small-scale residential and infrastructure development. This role was particularly evident during the post-2017 fire recovery period, which resulted in a temporary increase in construction-related employment across the municipality.

Against this policy backdrop, the proposed development on Portion 79 of Farm Ruygte Valley No. 205 is expected to make a modest but positive contribution to the local economy through short-term construction employment and ongoing land management and conservation stewardship. The rezoning application includes a tourism-compatible land-use framework in accordance with municipal planning requirements. It is noted that the proposed cottages are intended for private use by family members and guests.

The development is therefore consistent with municipal policy objectives in that it supports conservation-compatible land use outside the urban edge, safeguards the scenic and ecological qualities that underpin the Garden Route tourism economy, and does so without placing any demand on municipal bulk services or infrastructure. The proposal

reinforces sustainable land stewardship while avoiding the intensification, infrastructure burden, or precedent typically associated with commercial tourism development.

### 3. Methodology for Assessment of Impacts

There are mainly three categories of environmental impacts:

**Direct Impacts:** These impacts are caused by the development itself, for example, the clearing of vegetation for a development.

**Indirect Impacts:** These impacts are usually linked closely with the project and may have more profound results than the direct impacts, for example, the degradation of surface water due to soil erosion emanating from the site where vegetation clearance has taken place.

**Cumulative Impacts:** These impacts can be defined as the ability of natural and social environments to incorporate cumulative stresses placed on them and the likelihood of negative synergistic effects. Cumulative impacts also arise when existing future development rights set a precedent in an area. The process of cumulative impacts may arise from any of the following four events:

- A single larger event
- Multiple interrelated events
- Sudden or catastrophic events
- Incremental change

#### Environmental Impacts

##### Ecosystem and Biodiversity

**Impact:** The proposed development has been deliberately sited within a previously degraded CBA2 area that is heavily invaded by *Acacia cyclops*, thereby avoiding direct disturbance to CBA1 Milkwood Forest and intact indigenous vegetation, as confirmed in the Terrestrial Biodiversity Assessment (Appendix D4). The preferred alternative footprint is limited to approximately 1 375 m<sup>2</sup>, which includes the dwelling, access road, parking area and boardwalk infrastructure (refer to the updated Constraints Map and SDP).

While vegetation clearing and construction activities will result in localised and temporary disturbance, these impacts are confined to already transformed areas and do not affect high-sensitivity habitats. The implementation of the Alien Invasive Management Plan and rehabilitation of Goukamma Strandveld are expected to result in an overall improvement in habitat condition and ecological functionality.

Notwithstanding the above, construction-related activities may cause short-term habitat fragmentation and disturbance, particularly when considered in combination with existing residential development in the surrounding area (e.g., a residence approximately 250 m east of the site, as noted in the Visual Compliance Statement, Appendix D1, Page 10).

**Cumulative Effects:** At a local scale, the cumulative effect of the proposed development, when viewed alongside existing low-density rural residences, is considered low, given the small footprint, clustered layout and avoidance of CBA1 areas. However, at a broader landscape scale, incremental loss of natural vegetation associated with future

developments—particularly if not similarly constrained to degraded areas—could reduce long-term biodiversity resilience.

The Terrestrial Biodiversity Assessment concludes that, provided development is restricted to degraded CBA2 areas and is accompanied by active rehabilitation and alien invasive control, the proposal is likely to result in a net positive ecological outcome over the medium to long term.

#### **Mitigation Measures:**

- To minimise impacts and enhance ecological benefits, the following mitigation measures will be implemented:
- Full implementation and ongoing monitoring of the Alien Invasive Management Plan, including systematic removal of *Acacia cyclops* and follow-up control.
- Salvage and replanting of indigenous vegetation within disturbed areas where feasible, as recommended in the Visual Compliance Statement (Appendix D1, Page 11).
- Restriction of all construction activities to the approved development footprint, with no encroachment into CBA1 or forest areas.
- Rehabilitation of all temporarily disturbed areas using locally indigenous species characteristic of the Goukamma Strandveld.
- Enforcement of municipal and provincial biodiversity management requirements. No biodiversity offsets are required for this development due to the limited footprint and net conservation gain, as confirmed in the Terrestrial Biodiversity Assessment.

#### Coastal Stability and Erosion

**Impact:** The Preliminary Geotechnical and Geomatic Report (Appendix D2, pp. 27, 36 and 38) identifies cyclic coastal dune erosion of approximately 4–6 m between 2005 and 2024, with a projected inland retreat of approximately  $\pm 30$  m by 2100, based on historical shoreline movement and sea-level-rise scenarios.

The updated Constraints Map consolidates key spatial constraints relevant to coastal stability and erosion risk, including:

- the 100 m High-Water Mark (HWM) inland trigger zone;
- mapped low- and high-risk coastal erosion and flood lines; and
- areas of potentially unstable or erodible dune soils.

The proposed development footprint is located within the broader 100 m HWM trigger zone; however, the preferred development area is situated on elevated terrain well above the 40 m contour, as reflected on the Constraints Map and confirmed in the Preliminary Geotechnical and Geomatic Report. Importantly, the HWM line depicted on available mapping products is indicative in nature and not a gazetted or legislatively approved development setback line, but rather a planning and regulatory trigger used to identify areas requiring risk-informed assessment.

In accordance with the Integrated Coastal Management Act (ICMA), development within the HWM requires careful risk-based assessment and mitigation, provided that site-specific coastal risk has been assessed and appropriate mitigation measures are implemented. The purpose of the trigger area is therefore to guide informed, risk-averse decision-making, rather than to function as an absolute exclusion zone.

As shown on the updated Constraints Map, the preferred development footprint is positioned outside mapped high-risk coastal erosion and flood zones, and landward of site-specific erosion and flood-risk thresholds identified through

specialist assessment. The layout avoids areas of active dune migration, steep instability and projected inundation and represents the lowest-risk location within a constrained coastal setting.

No permanent structures are proposed within areas identified as having unacceptable long-term erosion or flooding risk. The Coastal Protection Zone (CPZ) context has been acknowledged, and the development footprint has been refined through a constraints-led site selection process to minimise coastal stability impacts. The earlier layout reflected on the previous Constraints Map is retained as Alternative 1, whereas the revised layout (preferred alternative) is informed by updated constraints mapping and specialist inputs.

If development were to be positioned closer to the shoreline or within mapped erosion-prone areas (as illustrated by the higher-risk scenario assessed in Appendix D2), additional stress could be exerted on the erodible dune system. These higher-risk options were therefore excluded during layout refinement.

The Civil and Structural Engineering Confirmation (Appendix D5) confirms that the proposed development is technically feasible, provided that final foundation design, slope stabilisation and stormwater management measures are informed by detailed, ECSA-certified engineering input. The Letter from Dr E. Spicer (Rock Hounds Pty Ltd, 10 September 2025) (Appendix D6) further confirms that the geotechnical investigation provides first-level baseline data only and must be supplemented by detailed, site-specific investigations at the building-plan stage, particularly given the sensitivity of the coastal dune system and the need to maintain vegetated dune stability.

**Cumulative Effects:** At a local scale, cumulative coastal stability impacts are assessed as low, given that the development footprint is small ( $\pm 1\,375\text{ m}^2$ ), confined to a degraded portion of the site, and located outside mapped erosion-risk zones as shown on the updated Constraints Map. At a broader coastal scale, incremental disturbance from multiple coastal developments could contribute to accelerated dune erosion under projected sea-level rise (Appendix D2). The constraints-led approach is therefore critical to ensure development remains risk-averse and avoids encroachment into high-risk areas.

#### **Mitigation and Management Measures (secured through layout, constraints mapping, and the EMPr):**

- All permanent structures are confined to the approved footprint within the 100 m HWM trigger area and are located outside mapped erosion- and flood-risk zones.
- Final foundation, slope-stabilisation and stormwater designs shall be prepared and certified by an ECSA-registered professional engineer.
- A minimum 1.5 m compacted foundation zone shall be implemented around all external walls to enhance structural stability.
- Indigenous dune-stabilising vegetation with root systems  $\geq 600$  mm shall be retained where possible and reinstated in disturbed areas.
- A detailed geotechnical investigation shall be undertaken at the final design stage in accordance with Appendix D6.
- All disturbed areas shall be rehabilitated immediately post-construction using locally indigenous Goukamma Strandveld vegetation.
- No expansion of the development footprint beyond the approved layout within the 100 m HWM trigger area shall be permitted without updated coastal and geotechnical assessments and further authorisation, if required.

#### Coastal Flooding

**Impact:** The Preliminary Geotechnical and Geomatic Report (Appendix D2, pp. 18 and 33) indicates that the site is currently subject to a low flood risk, with very low risk projected up to 2050. The 100-year high-risk coastal flooding projection extends landward toward the Lookout Point area by approximately 2100.

As confirmed on the updated Constraints Map, the proposed development footprint is located within the broader 100 m HWM trigger area but is positioned on elevated terrain above the 40 m contour and outside mapped high-risk coastal erosion and flood zones. The HWM line does not represent a legislated prohibition on development but indicates an area requiring risk-informed assessment and mitigation.

The limited footprint ( $\pm 1\,375\text{ m}^2$ ) and clustered layout ensure that the development does not obstruct natural drainage pathways, nor does it materially increase flood susceptibility on site. Given the small scale of development and its elevated placement, direct flood risk associated with the proposed development is assessed as negligible.

At a broader scale, incremental coastal development—if not guided by constraints mapping and risk-informed siting—could cumulatively influence runoff patterns and coastal hydrology over the long term. In this context, the proposed development’s constraints-led siting, elevated position and off-grid design reduce its contribution to cumulative hydrological change. The incorporation of rainwater harvesting systems further mitigates surface runoff and reduces pressure on the natural drainage regime (Town Planning Report, Appendix D5, p. 11).

**Cumulative Effect:** Cumulative coastal flood risk may increase toward 2100 if multiple developments within the coastal zone are not consistently located and designed in accordance with coastal risk mapping and setback principles. The proposed development’s elevated position, limited footprint and avoidance of flood-risk zones ensure that its contribution to cumulative coastal flood risk remains very low.

#### **Mitigation and Management Measures:**

- All permanent structures are sited in accordance with the updated Constraints Map, outside mapped high-risk coastal flood and erosion zones.
- Final design and layout are informed by the Preliminary Geotechnical and Geomatic Report, with confirmation that development remains above the 40 m contour.
- Buildings shall incorporate flood-resilient and slope-appropriate design measures, including controlled stormwater dispersion.
- Off-grid rainwater harvesting systems shall be maintained to limit surface runoff.
- Future development within the coastal zone should continue to be regulated through coastal constraints mapping to prevent cumulative flood-risk escalation.

#### Social Impacts

**Impact:** The proposed development comprises a private residential dwelling with three additional units for private family and guest accommodation. While a tourism-compatible land-use framework is applied for planning and rezoning alignment purposes, this does not alter the private residential nature of the proposed use. The scale, layout and intensity of the development are consistent with the low-density coastal and conservation character of the Groenvlei area (Town Planning Report, Appendix D5, p. 8).

Public access to Groenvlei Beach via Bushy Way and Groenvlei Beach Road will remain intact and unrestricted. No fencing, signage or landscaping associated with the development will impede traditional coastal access.

Short-term construction activities may result in temporary, localised disruption to access along existing routes. These impacts are expected to be minor and reversible and may contribute marginally to cumulative pressure on access

routes already used by nearby residential and tourism-compatible development(s) (Visual Compliance Statement, Appendix D1, p. 6).

**Cumulative Effect:** Incremental residential or tourism-related development along the coastal corridor could influence community perceptions regarding accessibility or exclusivity if not carefully managed at a municipal level.

**Mitigation and Management Measures:**

- Engage neighbouring landowners and community representatives prior to and during construction to manage temporary access disruptions.
- Ensure Bushy Way and Groenvlei Beach Road remain publicly accessible at all times.
- Prohibit any physical or visual barriers that could imply restriction of public coastal access.
- Implement construction management measures to minimise disruption to existing road users.

Aesthetic and Lifestyle Impacts

(Your content is fine — only one key edit: keep “high VAC” and update footprint references if any occur later.)

**Cumulative Effect:** While proposed private development has a negligible individual visual impact, incremental residential and tourism-compatible development(s) along the coastal ridge could, over time, alter the tranquil character of the Sedgefield coastal landscape if future developments are not consistently guided by constraints-led siting, scale control and sensitive architectural design.

**Mitigation Measures:**

- Engage neighbouring landowners and community representatives prior to and during construction to manage temporary access disruptions.
- Ensure Bushy Way and Groenvlei Beach Road remain publicly accessible at all times.
- Prohibit any physical or visual barriers that could imply restriction of public coastal access.
- Implement construction management measures to minimise disruption to existing road users.

Economic Impacts

**Impact:** Although the land-use application includes a tourism-compatible zoning framework for planning purposes, the proposed cottages are intended for private family and guest accommodation. Economic impacts are therefore limited primarily to the construction phase, during which approximately 5–10 temporary employment opportunities are expected to be created for local skilled and unskilled labour.

**Indirect economic benefits** will accrue to local suppliers and service providers through the procurement of materials, transport, and construction services (Town Planning Report, Appendix D5, pp. 7–8). Whether utilised for private accommodation or low-intensity, tourism-compatible use, the small scale of the development ensures that it will not compete with or displace existing tourism enterprises in the area, such as Lake Pleasant Resort, nor will it materially alter the tourism carrying capacity of the Groenvlei coastal corridor.

**Cumulative Effect:** While the economic footprint of this development is limited, similar low-density, conservation-compatible residential and tourism-compatible developments cumulatively contribute to the local construction and service economy. Conversely, unmanaged expansion of development within sensitive coastal areas could, over time, reduce land availability for conservation or tourism-related activities if not spatially regulated.

**Mitigation Measures:**

- Prioritise local employment and procurement during the construction phase (Appendix D5, p. 7).
- Source ongoing maintenance, rehabilitation, and landscaping services from nearby communities where possible.
- Ensure that municipal spatial planning continues to balance residential, conservation, and tourism-compatible land uses within the Groenvlei coastal corridor.

**Infrastructure and Public Resources Impact:** The proposed development will operate entirely off-grid and will not place any demand on municipal bulk infrastructure or public services. Water supply will be provided through rainwater harvesting and storage systems, wastewater will be managed via sealed conservancy tanks, and electricity will be generated through solar photovoltaic systems (Town Planning Report, Appendix D5, p. 11). No borehole abstraction is proposed as part of the current application. Access will be provided via existing public roads and a private internal access route, with all maintenance costs borne by the landowner. Construction-related vehicle movement and waste generation may result in minor, short-term pressure on local roads and waste facilities, but these impacts will be temporary and managed through standard construction controls.

**Cumulative Effect:** Although this individual development does not burden municipal infrastructure, cumulative residential and tourism-compatible development(s) within the Groenvlei coastal area could, over time, place pressure on municipal services if future projects do not adopt comparable self-sufficiency measures.

#### **Mitigation Measures:**

- Maintain full off-grid operation, including renewable energy generation and on-site water and wastewater management.
- Implement a construction waste management plan, with disposal at licensed municipal facilities.
- Encourage future developments in the area to adopt private infrastructure funding and self-sufficiency standards, consistent with rural and conservation-area planning policy (Appendix D5, p. 10).

#### Conclusion

The cumulative impacts associated with the proposed development on Portion 79 of Farm Ruygte Valley No. 205 are assessed as manageable and acceptable, provided that all prescribed mitigation and management measures are implemented and enforced through the EMP and ongoing compliance monitoring.

From an environmental perspective, the proposed development results in a net positive outcome through targeted removal of invasive alien vegetation, active rehabilitation of degraded CBA2 areas, erosion control, and long-term protection of indigenous coastal vegetation. Although the site is located within the broader 100 m HWM trigger area, the updated Constraints Map confirms that the approved development footprint is positioned outside mapped high-risk coastal erosion and flood-prone areas and landward of site-specific erosion-risk thresholds identified in the Preliminary Geotechnical and Geomatic Report. The coastal dune setting requires careful engineering consideration; however, compliance with ECSA-certified foundation design, slope-stabilisation measures, stormwater management controls, and retention/reinstatement of vegetated dune buffers will reduce the risk of long-term instability.

From a social perspective, the proposal maintains the established low-density rural residential character of the Groenvlei coastal area. Construction-related disturbances will be limited in extent and duration and are expected to be temporary and reversible, while providing modest short-term local employment opportunities. Public access to the coast via Bushy Way and Groenvlei Beach Road will remain intact and unaffected.

From an economic perspective, the development's contribution is intentionally modest and limited primarily to short-term construction employment and local procurement. While the land-use application includes a tourism-compatible zoning framework for planning and rezoning alignment purposes, the proposed cottages are intended for private family and guest accommodation and will not generate ongoing tourism-related employment. Fully off-grid servicing ensures that no demand is placed on municipal infrastructure.

In summary, the cumulative impacts of the proposed development are assessed as low to moderate in significance, subject to strict adherence to the approved layout, constraints-led siting and all environmental and engineering mitigation measures. The proposal delivers ecological and visual benefits, results in minimal and temporary social disturbance, and avoids placing pressure on municipal services. With implementation of the EMPr, ECO oversight and compliance with specialist recommendations, the proposed development represents a context-appropriate and environmentally responsible rural residential development that balances lawful land-use rights with long-term conservation objectives.

### **Definition of key terminology:**

**Nature of the Impact** – A description of positive or negative impacts of the project on the affected environment. This description should include who or what would be affected and how.

**Extent** – the impact could:

- Be site-specific
- Be limited to the site and its immediate surroundings
- Have an impact on the region
- Have an impact on a national scale
- Have an impact across international borders

**Duration** – It is important to indicate whether or not the lifetime of the impact will be:

- Short term (e.g. during construction)
- Medium term (e.g. during part or all of the operational phase)
- Long term (e.g. beyond the operational phase, but not permanently)
- Permanent (where the impact is for all intents and purposes irreversible. An irreversible negative impact may also result in irreplaceable loss of natural capital or biodiversity if it were to result in extinction or loss of species or ecosystem); or

**Intensity or Magnitude** - The size of the impact (if positive) or its severity (if negative):

- Low, where biodiversity is negligibly affected or where the impact is so low that remedial action is not required.
- Medium, where biodiversity pattern, process and/or ecosystem services are altered, but not severely affected, and the impact can be remedied successfully; and
- High, where, pattern, process and/or ecosystem services would substantially be affected. If a negative impact, could lead to irreplaceable loss of biodiversity and/or unacceptable consequences for human wellbeing.

**Probability** –Should describe the likelihood of the impact occurring, indicated as:

- Improbable, where the possibility of the impact is very low, either because of design or historical experience
- Probable, where there is a distinct possibility that the impact will occur.
- Highly probable, where it is most likely that the impact will occur, or
- Definite, where the impact will occur regardless of any prevention measures.

**Significance** – The significance of impacts can be determined through a synthesis of the assessment criteria. Significance can be described as:

- Low, where it would have a negligible effect on biodiversity, and on the decision.
- Medium, where it would have a moderate effect on biodiversity, and should influence the decision.
- High, where it would have, or there would be a high risk of a large effect on biodiversity. These impacts should have a major influence on the decision.
- Very high, where it would have, or there would be a high risk of, an irreversible negative impact on biodiversity and irreplaceable loss of natural capital or a major positive effect. Impacts of very high significance should be a central factor in decision-making.

**Confidence** – The level of confidence in predicting the impact can be described as:

- Low, where there is little confidence in the prediction, due to inherent uncertainty about the likely specialists. However, co-operation between these specialists and the biodiversity specialist is recommended, as biodiversity values are often overlooked by specialists in these other disciplines.
- Medium, where there is a moderate level of confidence in the prediction; or
- High, where the impact can be predicted with a high level of confidence.

## 4. The impacts and risks identified for the preferred alternative

### Preferred Alternative

The preferred alternative comprises a main dwelling ( $\pm 200 \text{ m}^2$ ), three small self-contained units ( $\pm 65 \text{ m}^2$  each), staff accommodation ( $\pm 50 \text{ m}^2$ ), an equipment shed ( $\pm 80 \text{ m}^2$ ), and associated access, parking and pedestrian infrastructure. The amended preferred layout increases the footprint from  $\pm 1\,175 \text{ m}^2$  (previous layout) to  $\pm 1\,375 \text{ m}^2$  in order to avoid the D7 geotechnical constraint while remaining within a compact clustered development envelope. The landowners intend the additional units to be used for private family and guest accommodation. For land-use planning and rezoning purposes, the proposed rezoning provides a tourism-compatible land-use framework that enables multiple accommodation units on land currently zoned Agriculture Zone I, while aligning with long-term conservation and land-management objectives applicable to the site.

Ancillary structures include staff accommodation ( $\pm 50 \text{ m}^2$ ) and a storage shed ( $\pm 80 \text{ m}^2$ ) for tools and equipment associated with land maintenance and conservation management. Vehicular access will be provided via an existing-access-aligned gravel road not exceeding 3 m in width, located along the eastern boundary of the property and terminating at a designated parking area. From the parking area, an elevated timber boardwalk will provide pedestrian access to the dwelling and accommodation units, thereby minimising soil compaction, reducing surface disturbance, and maintaining natural drainage patterns.

The preferred residential cluster is positioned within the southern portion of the property on elevated terrain, as informed by the updated Site Constraints Map (Preferred Alternative) and the findings of the Terrestrial Biodiversity Assessment (Appendix D4), Visual Compliance Statement (Appendix D1), and Preliminary Geotechnical and Geomatic Report (Appendix D2). The layout avoids CBA1 (Maintain) areas, indigenous forest/Milkwood stands, steep or unstable slopes and mapped coastal erosion and flood-risk zones. Although portions of the site fall within the broader 100 m High-Water Mark (HWM) trigger area, the preferred footprint is sited outside mapped high-risk coastal erosion and flooding areas and represents the lowest practicable risk location within a constrained coastal environment.

Although the property is currently zoned Agriculture Zone I, no agricultural activities are proposed due to the site's poor soil capability and limited agricultural viability, as confirmed by the Agricultural Compliance Statement (Appendix D3). Instead, the ecological and scenic value of the property will be enhanced through active conservation management, alien invasive vegetation removal, and rehabilitation of degraded areas, supported through the proposed rezoning to Open Space III (Nature Conservation Area) and implementation of the EMPr.

Architecturally, the development adopts a lightweight, environmentally sensitive design approach, utilising steel, timber, glass and natural stone in place of conventional brick-and-mortar construction. This reduces excavation requirements, lowers embodied energy, and limits visual intrusion within the coastal landscape.

The total building footprint is approximately 525 m<sup>2</sup>, with the access road, parking area and boardwalk infrastructure resulting in a total development footprint of approximately 1 375 m<sup>2</sup> under the preferred alternative. This equates to approximately 2.7% of the total property area (±5.1576 ha), ensuring that approximately 97.3% of the site remains in a natural or rehabilitated state. The limited, clustered footprint—together with constraints-led siting and off-grid servicing—reduces the risk of habitat loss, erosion, coastal instability, visual intrusion and pressure on municipal infrastructure, while supporting long-term biodiversity protection and stewardship of the coastal landscape.

**Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.**

As per the identified triggered Activities in NEMA, the following impacts need to be assessed:

Listed Activity described in GN R. 325, 324, 327	Activity description	Identified Impacts
<p><b>GN R.327 (Listing Notice 3) Activity 12</b> Listed activity as described in GN R.327 (Activity 12): <i>The clearance of an area of <b>300 square metres</b> or more of indigenous vegetation, where such clearance occurs—</i></p> <p><i>(a) within a Critical Biodiversity Area as identified in a biodiversity plan; or</i> <i>(b) within a buffer area identified in such a plan.</i></p>	<p>The construction of the proposed dwelling, accommodation units, access road, parking area and associated infrastructure will require the clearance of indigenous vegetation exceeding 300 m<sup>2</sup> within a mapped CBA2 (Restore) area. The vegetation to be cleared comprises degraded Goukamma Strandveld with a high proportion of invasive alien species, notably <i>Acacia cyclops</i>.</p>	<p>GN R.327 Activity 12 is triggered due to the clearance of more than 300 m<sup>2</sup> of indigenous vegetation within a mapped CBA2 area. Although the affected area is degraded and invaded, the activity remains applicable in terms of the EIA Regulations. Mitigation includes targeted alien invasive removal, plant rescue, and rehabilitation using locally indigenous species, which is expected to result in a net ecological improvement over the medium to long term, as confirmed by the Terrestrial Biodiversity Assessment.</p>
<p><b>GN R.327 (Listing Notice 3) Activity 17</b></p>	<p>Development—</p> <ul style="list-style-type: none"> <li>(vi) in the sea;</li> <li>(vii) in an estuary;</li> <li>(viii) within the littoral active zone;</li> <li>(ix) in front of a development setback;</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>(x) if no development setback exists, within a <b>distance of 100 metres</b></li> </ul>	<p>GN R.327 Activity 17 is triggered, as the proposed development includes infrastructure and structures with a development footprint exceeding 50 m<sup>2</sup> located within 100 metres inland of the High-Water Mark of the sea, in an area where no formally approved coastal development setback line</p>

	<p><b>inland of the high-water mark</b> of the sea or an estuary, whichever is the greater;</p> <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) <b>infrastructure or structures with a development footprint of 50 square metres or more</b> —</li> </ul> <p>but excluding—</p> <ul style="list-style-type: none"> <li>(ee) 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>(ff) 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> </ul>	<p>exists. The applicability of this listed activity is confirmed by the Constraints Map and the Preliminary Geotechnical and Geomatic Report.</p>
<p><b>GN R.327 (Listing Notice 3) Activity 19A:</b></p>	<p>The infilling or depositing of any material of more than 5 cubic metres into, or the <b>dredging, excavation, removal or moving of</b> soil, sand, shells, shell grit, pebbles or rock of more than <b>5 cubic metres</b> from—</p> <ul style="list-style-type: none"> <li>(iv) the seashore;</li> <li>(v) the littoral active zone, an estuary or a distance of <b>100 metres inland</b> of the <b>high-water mark</b> of the sea or an estuary, whichever distance is the greater; or</li> <li>(vi) the sea; —</li> </ul> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <ul style="list-style-type: none"> <li>(e) will occur behind a development setback;</li> </ul>	<p>GN R.327 Activity 19A is triggered, as the proposed development will require excavation and movement of soil exceeding 5 m<sup>3</sup> within 100 metres inland of the High-Water Mark during the construction of foundations, access infrastructure, and associated services. No formally approved coastal development setback line applies to the site. The applicability of this activity is confirmed by the Constraints Map and the Preliminary Geotechnical and Geomatic Report.</p>

	<p>(f) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(g) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(h) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>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.</p>	
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**The Environmental Impacts associated with the construction of the primary residential home, the 3 free-standing cottages, the raised boardwalk, the shed, the staff quarter building and the gravel road.**

**Environmental Impacts:**

- Surface water run-off/groundwater/soil, air quality
- 100m High Water Mark and Dune Stability
- Impacts on the Critical Biodiversity Area
- Socio-economic impacts
- Noise disturbance
- Aesthetic impacts
- Safety on site
- Waste
- Cultural-historical impacts

**Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.**

**Planning, Design and Construction Phase**

Potential impacts on geographical and physical aspects	Surface water run-off/groundwater/soil, air quality
Nature of impact:	Construction associated with the Preferred Alternative — including controlled vegetation clearance limited to ±1 375 m <sup>2</sup> , excavation for foundations, grading of a narrow gravel access road, and installation of raised pedestrian boardwalks — will temporarily disturb loose, sandy coastal soils that exhibit high permeability and low clay content. These soils are inherently susceptible to erosion, surface scouring, and compaction if left exposed. Temporary loss of vegetative cover may increase surface run-off velocity and reduce natural infiltration capacity during heavy rainfall events. There is a short-term risk of hydrocarbon or cement contamination if construction materials are mishandled; however, groundwater occurs at depth and is not intercepted by excavation. Air-quality impacts are limited to localised dust generation and minor exhaust emissions from light construction

	machinery, both of which are temporary and reversible and will not result in measurable deterioration of regional air quality.
<b>Extent and duration of impact:</b>	Local, short-term — confined to the active construction footprint and immediate surroundings for the ±6–12 month construction period.
<b>Probability of occurrence:</b>	High without mitigation.
<b>Degree to which the impact can be mitigated:</b>	High - impacts are readily manageable through erosion, sediment, and pollution control measures.
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	Low — soil disturbance is reversible; groundwater is protected by depth and containment; vegetation loss occurs within degraded CBA2 areas and is offset by rehabilitation.
<b>Cumulative impact prior to mitigation:</b>	Moderate — small-scale erosion and dust emissions could incrementally contribute to local dune disturbance when considered together with nearby rural development, although effects remain localised.
<b>Significance rating prior to mitigation:</b>	Medium
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Install silt fences, sediment traps, and temporary swales to control run-off.</li> <li>• Restrict clearing strictly to the approved footprint.</li> <li>• Immediately rehabilitate exposed soils with indigenous vegetation.</li> <li>• Store fuels and lubricants in bunded areas; no servicing of vehicles on site.</li> <li>• Provide spill kits and enforce hazardous material protocols.</li> <li>• Spray water on dusty surfaces during windy conditions.</li> <li>• Maintain machinery to reduce emissions.</li> <li>• ECO monitoring throughout construction.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Low — erosion, contamination, and dust risks are reduced to negligible levels; rehabilitation improves long-term soil stability.
<b>Significance rating after mitigation:</b>	Low

Potential impact on geographical aspects	100 m High-Water Mark (HWM) and dune stability
<b>Nature of impact:</b>	The Preferred Alternative is located within the 100 m High-Water Mark (HWM) trigger area; however, this trigger functions as a risk screening tool rather than a legislated prohibition. The Preliminary Geotechnical and Geomatic Report (Appendix D2) confirms that the proposed footprint is positioned on elevated terrain (~80 m above mean sea level) and outside mapped high-risk coastal erosion and flood-prone zones. The specialist documents historic cyclic dune erosion of approximately 4–6 m between 2005 and 2024 and projects a potential inland retreat of ±30 m by 2100 under climate-change sea-level rise scenarios. The preferred footprint was selected through a constraints-led process to avoid structurally weak zones (e.g. D7 fracture areas and PE scenario slopes) and represents the most stable buildable location on the property. Temporary disturbance of loose, highly erodible dune sands may occur during vegetation clearance and foundation excavation. Without controls, this could reduce root cohesion, increase wind and stormwater erosion, and mobilise surface sediments. However, the disturbance is spatially limited to ±1 375 m <sup>2</sup> within a 5.16 ha property and occurs in previously degraded, alien-invaded areas. No active dune crest, scarp face, or dynamic littoral zone processes will be directly impacted.

<b>Extent and duration of impact:</b>	Localised and footprint-confined. Construction disturbance is short-term (6–12 months), with medium-term stabilisation dependent on rehabilitation success. The dune system beyond the approved footprint remains unaffected.
<b>Probability of occurrence:</b>	Medium–High without mitigation, because the development occurs in a dynamic coastal dune environment characterised by loose sandy soils, steep gradients, and exposure to wind-driven erosion. The probability is linked to soil physics rather than the development scale.
<b>Degree to which the impact can be reversed:</b>	High. Dune systems are naturally resilient, provided sediment loss is prevented and vegetative cover is restored. The specialist confirms that re-vegetation with indigenous Strandveld species rapidly reinstates root cohesion and surface stability (Appendix D2).
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	Low. The affected footprint lies within degraded CBA2 vegetation already invaded by <i>Acacia cyclops</i> . No primary dune geomorphological features or irreplaceable coastal formations occur within the development area.
<b>Cumulative impact prior to mitigation:</b>	Moderate. While the individual footprint is small, unmanaged incremental coastal development across the region could cumulatively weaken dune resilience under long-term sea-level rise scenarios. The rating reflects regional vulnerability, not site-specific severity.
<b>Significance rating prior to mitigation</b>	Medium–High — justified because the activity occurs in a sensitive coastal environment with known erosion dynamics. Even a small disturbance in such systems is rated conservatively until mitigation is applied.
<b>Degree to which the impact can be mitigated:</b>	High. The specialist confirms that engineering controls + vegetation stabilisation effectively reduce risk to acceptable levels.
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Strict confinement of all works to the approved footprint shown on the Constraints Map.</li> <li>• ECSA-certified foundation and slope stabilisation design (Appendix D5).</li> <li>• Geotextile erosion barriers during construction.</li> <li>• Phased vegetation clearing to retain root cohesion.</li> <li>• Retention of indigenous dune vegetation <math>\geq 600</math> mm root depth where feasible.</li> <li>• Immediate post-construction rehabilitation using local Strandveld species.</li> <li>• ECO coastal stability monitoring during and after construction.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Low. Stabilised dunes, controlled stormwater dispersion, and vegetation restoration ensure the development does not measurably contribute to regional erosion trends. The footprint becomes geomorphologically neutral post-rehabilitation.
<b>Significance rating after mitigation</b>	Low — mitigation reduces the probability of erosion to negligible levels and restores dune function. The residual impact is within acceptable coastal risk tolerance as confirmed by the specialist.

<b>Potential impact on biological aspects</b>	<b>Habitat and biodiversity loss</b>
<b>Nature of impact:</b>	Vegetation clearing within the $\pm 1\,375$ m <sup>2</sup> footprint will remove degraded CBA2 vegetation dominated by invasive <i>Acacia cyclops</i> , with limited indigenous Strandveld loss. Habitat disturbance may

	temporarily displace small fauna. No CBA1 forest or high-sensitivity habitat is affected. Removal of invasive species combined with rehabilitation is expected to improve the ecological condition relative to baseline.
<b>Extent and duration of impact:</b>	Local; short-term disturbance, medium-term ecological recovery (1–3 years).
<b>Probability of occurrence:</b>	Definite — vegetation clearing is unavoidable within the footprint.
<b>Degree to which the impact can be reversed:</b>	High — habitat restored through rehabilitation.
<b>Degree to which the impact may cause irreplaceable loss:</b>	Low — degraded habitat only.
<b>Cumulative impact prior to mitigation:</b>	Moderate — incremental vegetation loss regionally.
<b>Significance rating prior to mitigation:</b>	Medium
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Alien invasive eradication programme.</li> <li>• Indigenous plant rescue and on-site nursery.</li> <li>• Raised boardwalks to minimise ground disturbance.</li> <li>• Fauna relocation during clearing.</li> <li>• Monthly ECO biodiversity inspections.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Low / potentially positive — ecological improvement.
<b>Significance rating after mitigation:</b>	Low (positive trend)

<b>Potential impacts on socio-economic aspects:</b>	<b>Socio-economic</b>
<b>Nature of impact:</b>	<b>Positive impact:</b> The Preferred Alternative will generate modest but meaningful local socio-economic benefit primarily during construction through temporary employment and procurement. The Town Planning Report (Appendix D5, pp. 7–8) anticipates local spending on labour, building materials, transport, and specialist services. The development is fully off-grid and does not burden municipal services, meaning it does not divert public resources away from community priorities. The scale is low-intensity and private in nature, so no displacement, service exclusion, or negative social impacts on surrounding communities are expected.
<b>Extent and duration of impact:</b>	Local; short-term (construction phase ±6–12 months).
<b>Probability of occurrence:</b>	Definite
<b>Degree to which the impact can be reversed:</b>	Positive impacts are time-bound but beneficial; economic benefit ceases post-construction but does not create negative dependency.
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	None
<b>Cumulative impact prior to mitigation:</b>	Minor positive — contributes incrementally to the local economy.
<b>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Medium-High (Positive)
<b>Degree to which the impact can be mitigated:</b>	High — benefit can be strengthened through local hiring/procurement commitments.
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Prioritise local employment and procurement wherever feasible (Town Planning Report, p. 7).</li> <li>• Provide basic safety/skills transfer where feasible to strengthen local capacity.</li> <li>• Ensure fair labour conditions, wages, and OHSA compliance.</li> <li>• Maintain clear communication with neighbours to prevent social friction during construction.</li> </ul>

<b>Cumulative impact post mitigation:</b>	Sustained positive (short-term) contribution; no negative cumulative socio-economic effects expected due to low intensity and private/off-grid nature.
<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	High – Positive

<b>Potential visual impacts</b>	<b>Aesthetic impact</b>
<b>Nature of impact:</b>	Construction activities associated with the Preferred Alternative will temporarily introduce visual disturbance through vegetation clearing ( $\pm 1\,375\text{ m}^2$ ), movement of light construction machinery, and temporary material stockpiles. According to the Visual Compliance Statement (Appendix D1), the site exhibits a high Visual Absorption Capacity (VAC) due to dense Goukamma Strandveld vegetation, dune topography, and natural screening. The specialist confirms that the development is not visible from key public viewpoints, including Groenvlei Beach, Cola Beach, and the N2 corridor. Temporary construction visibility may occur only from the nearest neighbouring residence (~250 m east), and this effect is short-term and reversible. The final architectural form, use of natural materials, and clustered footprint ensure long-term visual integration with the coastal landscape.
<b>Extent and duration of impact:</b>	Local; limited to the immediate site and nearest residence during the 6–12 month construction phase. No long-term visual intrusion is expected post-rehabilitation (Visual Compliance Statement, p. 11).
<b>Probability of occurrence:</b>	Definite — temporary construction activity will be visible at close range.
<b>Degree to which the impact can be reversed:</b>	High — visual disturbance ceases immediately after construction and rehabilitation.
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	None — scenic coastal landscape character remains intact.
<b>Cumulative impact prior to mitigation:</b>	Low — the development footprint is visually contained and screened. The specialist confirms a negligible contribution to regional scenic degradation.
<b>Significance rating of impact prior to mitigation</b>	Low
<b>Degree to which the impact can be mitigated:</b>	High
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Retain existing vegetation buffers wherever possible.</li> <li>• Screen active construction areas using green shade cloth.</li> <li>• Immediate rehabilitation using indigenous Strandveld species.</li> <li>• Use earth-toned, non-reflective finishes.</li> <li>• Remove all temporary construction materials promptly.</li> <li>• Install low-intensity downward lighting only.</li> <li>• Weekly ECO visual compliance inspections.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Negligible — the specialist confirms the site will remain visually absorbed within the dune landscape.
<b>Significance rating after mitigation</b>	Very Low

<b>Potential impact on safety</b>	<b>Safety on site</b>
<b>Nature of impact:</b>	Construction activities associated with the Preferred Alternative introduce occupational health and safety risks typical of small-scale

	building works, including interaction with moving machinery, excavation hazards, uneven and unstable sandy terrain, manual handling of materials, and temporary exposure to fuels and construction chemicals. The coastal dune environment increases slip and collapse risk where sands are loose and erodible, particularly in areas identified as geotechnically weak in the Preliminary Geotechnical and Geomatic Report (Appendix D2). Additional risk arises from potential unauthorised public access to the site during construction, given proximity to informal access routes and the coastal setting. Without formal controls, these hazards could result in injury to workers or members of the public.
<b>Extent/duration:</b>	Local; confined to the 5.16 ha property and immediate access interface; limited to the active construction phase (±6–12 months). Residual risk post-construction is negligible once the site is stabilised and occupied.
<b>Probability:</b>	High without controls, because construction inherently involves hazardous equipment, excavations, and unstable surfaces. With proper controls, probability reduces to low.
<b>Reversibility:</b>	Most incidents (minor injuries, slips, cuts) are reversible with medical treatment; however, severe incidents could be irreversible.
<b>Irreplaceable loss:</b>	Low–Moderate, limited to potential human injury risk; no ecological or heritage resources are at risk from safety incidents.
<b>Cumulative prior:</b>	Moderate. If multiple coastal construction sites operate simultaneously without strong safety standards, cumulative strain could be placed on local emergency services.
<b>Significance prior:</b>	Medium
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• Full compliance with the Occupational Health and Safety Act (OHSA) and Construction Regulations.</li> <li>• Preparation and implementation of a site-specific Health and Safety Plan before works commence.</li> <li>• Appointment of a qualified Safety Officer and regular toolbox talks.</li> <li>• Mandatory PPE (helmets, boots, gloves, eye protection, high-visibility clothing).</li> <li>• Controlled access: temporary fencing, signage, and designated entry points to prevent unauthorised public entry.</li> <li>• Safe excavation practices: shoring or battering of unstable sandy slopes where required; no open trenches left unattended</li> <li>• Spill response readiness and safe chemical storage in bunded areas.</li> <li>• Emergency procedures: first-aid kits on site, trained first-aid personnel, emergency contact numbers displayed, clear evacuation routes.</li> <li>• Fire safety: basic firefighting equipment available; no uncontrolled open flames; worker training in fire response.</li> <li>• Daily site inspections and incident reporting; ECO oversight to confirm compliance with EMPr safety provisions.</li> </ul>
<b>Cumulative post:</b>	Low — strong OHSA compliance and site controls prevent contribution to regional safety risks.
<b>Significance after:</b>	Low

<b>Potential noise impacts:</b>	<b>Noise disturbance</b>
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<b>Nature of impact:</b>	Construction noise from vegetation clearing, limited earthworks, foundation preparation, and small-scale building activities will temporarily elevate ambient noise levels in an otherwise quiet rural coastal environment. Potential receptors include the nearest residence ( $\pm 250$ m east) and occasional road users. Fauna within adjacent vegetation may experience short-term disturbance during peak activity periods. However, the footprint is small, works are temporary, and no industrial plant or long-duration high-decibel activities are proposed. Compliance with municipal noise control requirements and restricted work hours reduces nuisance risk to acceptable levels.
<b>Extent and duration of impact:</b>	Local; short-term (construction phase $\pm 6$ –12 months), daylight hours only.
<b>Probability of occurrence:</b>	Definite — construction noise is unavoidable but controllable.
<b>Degree to which the impact can be reversed:</b>	High — noise stops immediately on completion of works.
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	None
<b>Cumulative impact prior to mitigation:</b>	Minor — short-term.
<b>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Low
<b>Degree to which the impact can be mitigated:</b>	High
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Restrict working hours (e.g., 07h00–17h00), no Sundays/public holidays.</li> <li>• Use well-maintained equipment; limit idling; fit silencers where applicable.</li> <li>• Notify the nearest receptor of periods of higher noise (foundation/earthworks).</li> <li>• Limit heavy vehicle movements to mid-day/off-peak where feasible.</li> <li>• ECO to record complaints and ensure corrective actions are implemented promptly.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Negligible
<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Very Low

<b>Potential impacts on the cultural-historical aspects:</b>	<b>Cultural-historical</b>
<b>Nature of impact:</b>	Ground disturbance for foundations and minor service trenches could theoretically expose chance archaeological material, fossil material in sands, or unmarked graves, although the DFFE Screening Tool indicates low archaeological sensitivity and no known heritage resources are recorded within the development footprint. The site is largely dune-derived sands and previously disturbed/alien-invaded areas. The primary heritage risk is therefore a low-probability “chance find” event during excavation rather than a known impact to a mapped heritage resource.
<b>Extent and duration of impact:</b>	Construction phase only (excavation period).
<b>Probability of occurrence:</b>	Improbable
<b>Degree to which the impact can be reversed:</b>	Irreversible if a heritage resource were damaged, but the likelihood is low and controlled through stop-work procedures.

<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	Potentially high if heritage resources were encountered and not managed; however, this is not expected and is mitigated through protocol measures.
<b>Cumulative impact prior to mitigation:</b>	Low — due to the absence of known heritage features and small footprint.
<b>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Low
<b>Degree to which the impact can be mitigated:</b>	High — through chance-find protocols and training.
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Apply National Heritage Resources Act provisions and include a stop-work chance finds procedure in the EMPr.</li> <li>• Conduct environmental awareness training, including identification of heritage indicators (bones, artefacts, shell middens, grave markers).</li> <li>• If finds occur stop work, secure area, notify relevant authority/specialist; only resume once cleared.</li> <li>• Include Fossil Finds Procedure (FFP) for potential fossil/archaeological material in sands.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Negligible
<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Very Low

<b>Potential impact on biological aspects:</b>	<b>Waste</b>
<b>Nature of impact:</b>	Construction will generate general waste (packaging, plastics, off-cuts), rubble, and potentially hazardous waste (oily rags, empty containers, small quantities of contaminated sand if a spill occurs). In a coastal dune environment, unmanaged waste can disperse rapidly via wind and runoff, causing littering, wildlife ingestion risk, and contamination of soils. The risk is short-term and entirely management-dependent. With a controlled waste system, the project will not create a persistent pollution source.
<b>Extent and duration of impact:</b>	Local; construction phase only.
<b>Probability of occurrence:</b>	Probable (without mitigation) because waste generation is inevitable; low with waste controls.
<b>Degree to which the impact can be reversed:</b>	High — wastes can be removed and areas cleaned/restored.
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	None — if managed; pollution risk is preventable and reversible.
<b>Cumulative impact prior to mitigation:</b>	Low — could contribute to broader coastal litter issues if unmanaged.
<b>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Low
<b>Degree to which the impact can be mitigated:</b>	High
<b>Proposed mitigation:</b>	<ul style="list-style-type: none"> <li>• Provide clearly marked bins for general waste, recyclables, and hazardous waste; secure bins against wind.</li> <li>• Remove waste frequently; dispose at licensed facilities; maintain safe disposal certificates</li> <li>• Prohibit burying or burning of waste on site.</li> <li>• Spill response procedures: contaminated sand removed to licensed facility.</li> <li>• ECO inspections and toolbox talks covering waste impacts and housekeeping standards.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Little / no potential soil, water or air pollution.

<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High):</b>	Low
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(b) Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

**Operational Phase**

Potential impacts on geographical and physical aspects	Surface water / groundwater / soil
<b>Nature of impact:</b>	<p>During operation, impacts relate to domestic wastewater generation, rainwater harvesting systems, small-scale stormwater runoff, and long-term soil stability around structures. Wastewater will be stored in sealed conservancy tanks and removed by licensed contractors; failure or leakage could contaminate soil or shallow groundwater if not properly managed.</p> <p>Compaction around buildings and access areas may slightly alter natural drainage patterns, but the small footprint and permeable surfaces limit hydrological disruption. The raised boardwalk design prevents long-term soil sealing and allows natural infiltration. Stormwater runoff from roofs is captured via rainwater harvesting systems, reducing discharge volumes. No borehole abstraction is proposed, and groundwater will not be intercepted.</p>
<b>Extent/duration:</b>	Local, long-term but footprint-limited; confined to the ±1 375 m <sup>2</sup> developed area.
<b>Probability:</b>	Low–Medium without maintenance; Low with proper management.
<b>Reversibility:</b>	High — soil and drainage impacts are reversible through rehabilitation and infrastructure repair.
<b>Irreplaceable loss:</b>	None — no irreversible geological or hydrological resources are affected.
<b>Cumulative prior:</b>	Low–Moderate — cumulative runoff effects could occur if multiple coastal developments ignored stormwater management.
<b>Significance prior:</b>	Medium
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• Routine inspection and pumping of conservancy tanks by licensed contractors.</li> <li>• Secondary containment around wastewater storage.</li> <li>• Maintain rainwater harvesting systems to prevent overflow erosion.</li> <li>• Use permeable surfaces for parking and pathways.</li> <li>• Stormwater dispersed via vegetated swales.</li> <li>• Immediate repair of leaks or erosion features.</li> <li>• ECO compliance inspections during the early operational phase.</li> </ul>
<b>Cumulative post:</b>	Low — controlled runoff and wastewater management prevent cumulative hydrological degradation.
<b>Significance after:</b>	Low

<b>Potential impact on geographical and physical aspects</b>	<b>100 m High-Water Mark (HWM) / coastal processes (operational phase)</b>
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<b>Nature of impact:</b>	During the operational phase, no further vegetation clearance or earthworks are anticipated within the 100 m High-Water Mark (HWM) trigger area. The primary operational risk relates to long-term human presence, informal foot traffic, and maintenance activities that could destabilise dune vegetation if not properly controlled. Because the development is permanently located within a dynamic coastal system, cumulative micro-disturbances — such as trampling, minor landscaping, or unmanaged stormwater — could gradually weaken dune cohesion if the site is not actively managed. However, the approved layout deliberately confines activity to a compact node positioned outside mapped coastal erosion and flood-risk zones, as confirmed in the Preliminary Geotechnical and Geomatic Report and Constraints Map. The raised boardwalk system prevents repeated soil compaction and protects root systems critical to dune stability. Indigenous rehabilitation, alien clearing, and vegetation restoration strengthen the protective dune buffer over time. The operational phase, therefore, shifts from disturbance to long-term stabilisation and stewardship. No shoreline hardening, seawalls, or engineering interference with natural coastal processes is proposed.
<b>Extent/duration:</b>	Local; permanent but footprint-limited; confined to ±1 375 m <sup>2</sup> within the 5.16 ha property.
<b>Probability:</b>	Low with ongoing vegetation management; Medium without active stewardship.
<b>Reversibility:</b>	High — dune systems remain biologically recoverable through vegetation restoration and erosion control.
<b>Irreplaceable loss:</b>	Low — the affected area is degraded CBA2; dune function can be restored if disturbance occurs.
<b>Cumulative prior:</b>	Moderate — cumulative degradation could occur regionally if multiple coastal properties fail to manage vegetation and foot traffic within the HWM zone.
<b>Significance prior:</b>	Medium
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• Permanent retention and reinforcement of indigenous dune vegetation.</li> <li>• Strict prohibition of informal pathways outside boardwalk areas.</li> <li>• Annual coastal stability inspections by ECO or environmental practitioner.</li> <li>• Immediate rehabilitation of any exposed sand patches.</li> <li>• Ongoing alien invasive clearing programme.</li> <li>• Stormwater dispersed through vegetated areas; no concentrated discharge down slopes.</li> <li>• No expansion of footprint or new infrastructure within the 100 m HWM zone without reassessment.</li> <li>• Dark-sky compliant lighting to protect dune fauna.</li> <li>• Environmental awareness for occupants regarding dune sensitivity.</li> </ul>
<b>Cumulative post:</b>	Low — active stewardship improves dune stability and offsets broader coastal pressure.
<b>Significance after:</b>	Low

<b>Potential impact on biological aspects</b>	<b>Habitat disturbance</b>
<b>Nature of impact:</b>	Operational presence introduces low-level human disturbance (lighting, movement, noise, domestic activity). Wildlife may

	temporarily avoid the immediate building cluster, but 97.3% of the property remains natural habitat. Alien clearing and rehabilitation result in long-term habitat improvement. No fencing that restricts wildlife movement is proposed. Night lighting could affect nocturnal fauna if poorly designed.
<b>Extent/duration:</b>	Local; permanent but low intensity.
<b>Probability:</b>	Definite (human presence exists).
<b>Reversibility:</b>	High — habitat quality improves through rehabilitation.
<b>Irreplaceable loss:</b>	None — net ecological gain expected.
<b>Cumulative prior:</b>	Moderate — cumulative human presence in coastal areas can reduce wildlife tolerance.
<b>Significance prior:</b>	Medium
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• Dark-sky compliant lighting (downward-facing, motion-activated).</li> <li>• No external floodlighting.</li> <li>• Ongoing alien invasive control.</li> <li>• Indigenous vegetation restoration.</li> <li>• Limit domestic pets roaming freely.</li> <li>• • Maintain ecological corridors across the site.</li> </ul>
<b>Cumulative post:</b>	Low–Positive — rehabilitation offsets disturbance.
<b>Significance after:</b>	Low (potentially positive)

Potential noise impacts	Operational Noise
<b>Nature of impact:</b>	Normal residential noise (vehicles, conversation, maintenance) will occur but remains consistent with rural residential character. No commercial or high-noise activities are proposed.
<b>Extent/duration:</b>	Local; permanent but low intensity.
<b>Probability:</b>	Definite.
<b>Reversibility:</b>	Immediately upon cessation of activity.
<b>Irreplaceable loss:</b>	None.
<b>Cumulative prior:</b>	Low.
<b>Significance prior:</b>	Low
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• No amplified outdoor sound systems.</li> <li>• Maintain quiet rural character.</li> <li>• Restrict maintenance noise to daylight hours.</li> </ul>
<b>Cumulative post:</b>	Negligible.
<b>Significance after:</b>	Very Low

Potential visual impacts	Aesthetic / visual character (operational phase)
<b>Nature of impact:</b>	<p>During the operational phase, visual impacts relate to the permanent presence of built form within a previously undeveloped coastal landscape. The site forms part of a visually sensitive rural coastal system characterised by natural dune vegetation, steep topography, and a strong sense of landscape seclusion.</p> <p>The Visual Compliance Statement confirms that the site has a high Visual Absorption Capacity (VAC) due to dense Goukamma Strandveld</p>

	<p>vegetation, pronounced coastal landforms, and topographic screening from key public viewpoints. The preferred development footprint is positioned within a visually contained depression, below skyline level and outside prominent ridgelines, ensuring that structures do not interrupt the natural coastal silhouette. According to the specialist assessment, the development will not be visible from Groenvlei Beach, Cola Beach, or the N2, and visibility from surrounding properties is highly restricted due to vegetation screening.</p> <p>Limited partial visibility may occur from the nearest residence ±250 m east, but this is filtered through vegetation and will not materially alter the perceived landscape character. The architectural language — lightweight structures using timber, steel, glass and natural stone — has been selected specifically to minimise visual mass, colour contrast, and reflectivity. Earth-toned finishes and non-reflective materials further reduce visual intrusion. Lighting design is low-intensity, downward-facing and motion-activated in accordance with specialist recommendations to preserve night-sky conditions and prevent glare within the coastal environment.</p> <p>The operational phase, therefore, represents a visually recessive intervention that integrates into the existing landscape rather than competing with it.</p>
<b>Extent/duration:</b>	Local, permanent but visually contained, limited to a single clustered node within a high VAC landscape.
<b>Probability:</b>	Definite — built form is permanent, but visibility is low.
<b>Reversibility:</b>	Moderate — structures are removable, and vegetation rehabilitation can fully restore the visual character if ever decommissioned.
<b>Irreplaceable loss:</b>	None — scenic character remains intact due to screening and siting.
<b>Cumulative prior:</b>	Moderate — cumulative coastal development could gradually erode scenic character if not subject to strict visual controls.
<b>Significance prior:</b>	Medium
<b>Mitigation (specialist recommendations):</b>	<ul style="list-style-type: none"> <li>• Retain all perimeter vegetation to maintain visual screening.</li> <li>• Use earth-toned, non-reflective exterior finishes.</li> <li>• No skyline or ridgeline construction.</li> <li>• Prohibit future expansion outside the approved footprint.</li> <li>• Maintain natural dune vegetation as a permanent buffer.</li> <li>• Apply dark-sky compliant lighting only.</li> <li>• Immediately rehabilitate any disturbed areas.</li> <li>• No reflective roofing or glazing facing the coast.</li> <li>• Conduct periodic visual audits as part of ECO monitoring.</li> <li>• Any future additions must undergo site-specific visual assessment.</li> </ul>
<b>Cumulative post:</b>	Low — development remains visually recessive and reinforces conservation-led coastal character.
<b>Significance after:</b>	Low

## **Alternative 1 (Not Preferred)**

Alternative 1 represents the earlier layout configuration based on the previous site constraints mapping, prior to refinement through the updated integrated constraints analysis. The development components remain identical in scale and intent to the preferred alternative, comprising a main dwelling ( $\pm 200 \text{ m}^2$ ), three small self-contained units ( $\pm 65 \text{ m}^2$  each), staff accommodation ( $\pm 50 \text{ m}^2$ ), an equipment shed ( $\pm 80 \text{ m}^2$ ), and associated parking and access infrastructure. The landowners intend the additional units to be used exclusively for private family and guest accommodation. From a land-use planning perspective, the proposed rezoning provides a tourism-compatible framework required to enable multiple accommodation units on agriculturally zoned land, while aligning with conservation and long-term land management objectives.

Ancillary structures include staff accommodation and a storage shed for conservation management and maintenance purposes. Vehicular access is similarly provided via a gravel road not exceeding 3 m in width along the eastern boundary, terminating at a small parking area connected to the buildings via a raised timber boardwalk designed to minimise soil compaction and preserve natural drainage.

Under Alternative 1, the residential cluster was positioned within the southern portion of the property based on the previous constraint's interpretation. While the layout avoided mapped CBA1 areas and indigenous forest, subsequent specialist review and updated constraints integration identified that portions of the earlier configuration were closer to geotechnically sensitive dune zones and areas with higher long-term coastal risk exposure than necessary.

Although the footprint remains small ( $\pm 1 175 \text{ m}^2$ , representing  $<0.02\%$  of the site), the earlier layout did not optimise the setback from mapped erosion-risk zones to the same degree achieved in the preferred alternative. The updated constraints map incorporates refined coastal risk modelling, slope analysis, and vegetation sensitivity mapping, allowing the development footprint to shift marginally landward into a lower-risk, more visually contained position without increasing disturbance.

Architecturally, Alternative 1 retains the same lightweight design approach using steel, timber, glass, and natural stone to reduce excavation and visual mass. However, the previous siting offered slightly reduced visual containment compared to the preferred alternative and did not maximise natural screening provided by dune vegetation and topography.

### Reasons Alternative 1 is Not Preferred

Alternative 1 is considered environmentally acceptable but not optimal for the following reasons:

- It is positioned closer to identified geotechnical sensitivity zones than the preferred alternative
- It offers reduced long-term resilience to projected coastal erosion scenarios
- It provides slightly less visual containment within the dune landscape
- It does not fully maximise the lowest-risk development envelope identified in the updated constraints map
- It represents an earlier planning iteration superseded by improved specialist data integration

While Alternative 1 would still result in a low-impact development, the preferred alternative achieves a better balance between ecological protection, coastal stability, visual integration, and long-term climate resilience. Accordingly, Alternative 1 is considered feasible but sub-optimal, and is therefore not selected as the preferred development option.

**Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.**

As per the identified triggered Activities in NEMA, the following impacts need to be assessed:

Listed Activity described in GN R. 325, 324, 327	Activity description	Identified Impacts
<p><b>GN R.327 (Listing Notice 3) Activity 12</b></p> <p>Listed activity as described in GN R.327 (Activity 12):</p> <p><i>The clearance of an area of <b>300 square metres</b> or more of indigenous vegetation, where such clearance occurs—</i></p> <p><i>(a) within a Critical Biodiversity Area as identified in a biodiversity plan; or</i></p> <p><i>(b) within a buffer area identified in such a plan.</i></p>	<p>The construction of the proposed dwelling, accommodation units, access road, parking area and associated infrastructure will require the clearance of indigenous vegetation exceeding 300 m<sup>2</sup> within a mapped CBA2 (Restore) area. The vegetation to be cleared comprises degraded Goukamma Strandveld with a high proportion of invasive alien species, notably <i>Acacia cyclops</i>.</p>	<p>GN R.327 Activity 12 is triggered due to the clearance of more than 300 m<sup>2</sup> of indigenous vegetation within a mapped CBA2 area. Although the affected area is degraded and invaded, the activity remains applicable in terms of the EIA Regulations. Mitigation includes targeted alien invasive removal, plant rescue, and rehabilitation using locally indigenous species, which is expected to result in a net ecological improvement over the medium to long term, as confirmed by the Terrestrial Biodiversity Assessment.</p>
<p><b>GN R.327 (Listing Notice 3) Activity 17</b></p>	<p>Development—</p> <ul style="list-style-type: none"> <li>(xi) in the sea;</li> <li>(xii) in an estuary;</li> <li>(xiii) within the littoral active zone;</li> <li>(xiv) in front of a development setback; or</li> <li>(xv) if no development setback exists, within a <b>distance of 100 metres inland of the high-water mark</b> 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) <b>infrastructure or structures with a development footprint of 50 square metres or more —</b></li> </ul> <p>but excluding—</p> <ul style="list-style-type: none"> <li>(gg) the development of infrastructure and structures within existing ports or harbours that will not</li> </ul>	<p>GN R.327 Activity 17 is triggered, as the proposed development includes infrastructure and structures with a development footprint exceeding 50 m<sup>2</sup> located within 100 metres inland of the High-Water Mark of the sea, in an area where no formally approved coastal development setback line exists. The applicability of this listed activity is confirmed by the Constraints Map and the Preliminary Geotechnical and Geomatic Report.</p>

	<p>increase the development footprint of the port or harbour;</p> <p>(hh) 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;</p>	
<p><b>GN R.327 (Listing Notice 3) Activity 19A:</b></p>	<p>The infilling or depositing of any material of more than 5 cubic metres into, or the <b>dredging, excavation, removal or moving of</b> soil, sand, shells, shell grit, pebbles or rock of more than <b>5 cubic metres</b> from—</p> <p>(vii) the seashore;</p> <p>(viii) the littoral active zone, an estuary or a distance of <b>100 metres inland</b> of the <b>high-water mark</b> of the sea or an estuary, whichever distance is the greater; or</p> <p>(ix) the sea; —</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(i) will occur behind a development setback;</p> <p>(j) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(k) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(l) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>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.</p>	<p>GN R.327 Activity 19A is triggered, as the proposed development will require excavation and movement of soil exceeding 5 m<sup>3</sup> within 100 metres inland of the High-Water Mark during the construction of foundations, access infrastructure, and associated services. No formally approved coastal development setback line applies to the site. The applicability of this activity is confirmed by the Constraints Map and the Preliminary Geotechnical and Geomatic Report.</p>

**The Environmental Impacts associated with the construction of the primary residential home, the 3 free-standing cottages, the raised boardwalk, the shed, the staff quarter building and the gravel road.**

**Environmental Impacts:**

- Surface water run-off/groundwater/soil, air quality
- 100m High Water Mark and Dune Stability

- Impacts on the Critical Biodiversity Area
- Socio-economic impacts
- Noise disturbance
- Aesthetic impacts
- Safety on site
- Waste
- Cultural-historical impacts

Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

**Planning, Design and Construction Phase**

Potential impacts on geographical and physical aspects	Surface water run-off / groundwater / soil / air quality
<b>Nature of impact</b>	Construction activities associated with Alternative 1, including ±1 175 m <sup>2</sup> vegetation clearance, grading of the gravel access road, excavation for foundations, and installation of boardwalk structures, may temporarily increase surface run-off and disturb highly erodible coastal sandy soils (>750 mm depth; <15% clay). The Preliminary Geotechnical and Geomatic Report (Appendix D2, pp. 7–10) identifies weak soil layers at HW2 requiring engineered intervention. Removal of Acacia cyclops and temporary vegetation loss may exacerbate erosion if exposed sand is not stabilised immediately. Groundwater occurs at depth and is not intersected by shallow works; contamination risks are short-term and manageable through bunding and spill control. Dust and exhaust emissions from machinery are localised, temporary, and reversible (Visual Compliance Statement, Appendix D1, p. 11).
<b>Extent and duration of impact</b>	Local, short-term — confined to the development footprint and neighbouring properties during the 6–12 month construction phase, with possible residual erosion risk for 1–2 rainy seasons if rehabilitation is delayed.
<b>Probability of occurrence</b>	High (without mitigation), due to erodible dune sands and coastal wind exposure.
<b>Degree to which the impact can be mitigated</b>	High – impact is readily mitigable through engineering and rehabilitation controls.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	Low. Soil erosion is reversible; groundwater is deep and protected; vegetation occurs within degraded CBA2 areas and will be rehabilitated. Air-quality impacts are temporary.
<b>Cumulative impact prior to mitigation</b>	Moderate. Local erosion could incrementally contribute to dune instability when combined with other low-density coastal developments; dust impacts remain negligible regionally.
<b>Significance rating prior to mitigation</b>	Medium
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Install silt fences, sediment traps, and stormwater cut-off drains.</li> </ul>

	<ul style="list-style-type: none"> <li>• Phase clearing to minimise exposed sand.</li> <li>• Immediate stabilisation using mulch/geotextiles.</li> <li>• Final building positions and foundations must be confirmed against the <i>Alternative 1 (previous) Constraints Map</i>. Where works fall within or adjacent to mapped weak zones (e.g., D7 / HW2), foundations and drainage must be designed and certified by an ECSA-registered engineer and/or micro-siting applied to avoid the weak zone where feasible.”</li> <li>• Bunded fuel storage; spill kits on site.</li> <li>• No cement mixing on bare soil.</li> <li>• Water spraying for dust control.</li> <li>• ECO monitoring and immediate rehabilitation.</li> <li>• Indigenous vegetation restoration and alien control.</li> </ul>
<b>Cumulative impact post mitigation</b>	Low — erosion and contamination risks are reduced to negligible levels; rehabilitation improves dune stability and soil retention.
<b>Significance rating after mitigation</b>	Low

<b>Potential impact on geographical and physical aspects</b>	<b>100 m High-Water Mark (HWM) and dune stability</b>
<b>Nature of impact</b>	<p>Construction activities associated with Alternative 1 will occur within the 100 m High-Water Mark trigger area as confirmed on the Constraints Map. Works include excavation for foundations, access road grading, and vegetation clearance within a dynamic coastal dune system consisting of loose, highly erodible sands (&gt;750 mm depth; &lt;15% clay). The Preliminary Geotechnical and Geomatic Report (Appendix D2, pp. 27, 36, 38) records historic cyclic dune retreat of approximately 4–6 m (2005–2024) and projects potential inland migration of ±30 m by 2100. Disturbance of dune-stabilising vegetation may temporarily reduce slope stability and increase erosion susceptibility if not controlled. Structurally weak zones (including D7 and steeper slope sections) present elevated instability risk.</p> <p>The layout was informed by the <i>Alternative 1 (previous) Constraints Map</i> and specialist findings; however, where any components fall near mapped weak/instability zones (e.g., D7 / steeper slope sections), additional geotechnical design measures and/or micro-siting will be required to manage stability risk.</p>
<b>Extent and duration of impact</b>	Local, short- to medium-term — confined to the development footprint within the 5.16 ha property. Effects may persist for 1–5 years if disturbed dunes are not stabilised promptly.
<b>Probability of occurrence</b>	Medium–High without mitigation due to location within an active dune system exposed to wind and rainfall.

<b>Degree to which the impact can be mitigated</b>	High — dune systems respond well to rapid stabilisation and vegetation rehabilitation.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	Low–Moderate. The affected area is small and degraded, but uncontrolled erosion could reduce the dune protective function.
<b>Cumulative impact prior to mitigation</b>	Moderate. Incremental dune disturbance combined with other coastal developments could reduce long-term resilience if unmanaged.
<b>Significance rating prior to mitigation</b>	Medium-High
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Strict confinement of works to the approved footprint.</li> <li>• Avoid weak zones (D7); ECSA-certified foundation and drainage design.</li> <li>• Install erosion barriers, geotextiles, and phased clearing.</li> <li>• Immediate rehabilitation with indigenous Strandveld vegetation.</li> <li>• Maintain dune root structures where feasible.</li> <li>• Alien invasive removal and long-term restoration.</li> <li>• ECO monitoring during and after construction.</li> </ul>
<b>Cumulative impact post mitigation</b>	Low — stabilised dunes and restored vegetation improve long-term resilience relative to the current degraded condition.
<b>Significance rating after mitigation</b>	Low

<b>Potential impact on biological aspects</b>	<b>Habitat and biodiversity loss</b>
<b>Nature of impact</b>	<p>Construction activities associated with Alternative 1 will require vegetation clearance within a degraded CBA2 (Restore) area dominated by Acacia cyclops with remnant Goukamma Strandveld. Approximately 1 175 m<sup>2</sup> of vegetation will be removed for buildings, access and boardwalk infrastructure.</p> <p>This will temporarily reduce habitat availability and may displace small mammals, reptiles and birds. The Terrestrial Biodiversity Assessment confirms that CBA1 areas, indigenous forest and other high-sensitivity features are avoided within the Alternative 1 footprint (subject to final pegging and ECO verification).</p> <p>The affected habitat is already ecologically compromised by invasive alien vegetation. Without mitigation, edge effects such as trampling, erosion and alien spread could extend beyond the footprint.</p>
<b>Extent and duration of impact</b>	Local, short- to medium-term — limited to the development footprint. Vegetation loss occurs during the 6–12-month construction phase. Recovery is expected within 1–3 years following rehabilitation.
<b>Probability of occurrence</b>	Definite — vegetation clearance is unavoidable within the approved footprint.

<b>Degree to which the impact can be mitigated</b>	High — alien removal and rehabilitation result in ecological improvement.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	Low — the area is degraded and dominated by invasive species; no irreplaceable biodiversity features occur within the footprint.
<b>Cumulative impact prior to mitigation</b>	Moderate. Incremental coastal habitat loss combined with regional development may reduce biodiversity resilience over time.
<b>Significance rating prior to mitigation</b>	Medium
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Implement Alien Invasive Management Plan (removal of Acacia cyclops).</li> <li>• Plant rescue and on-site indigenous nursery.</li> <li>• Use raised boardwalks to minimise soil disturbance.</li> <li>• Restrict construction to the demarcated footprint.</li> <li>• Pre-construction fauna walk-downs.</li> <li>• Monthly ECO ecological monitoring.</li> <li>• Immediate rehabilitation using locally indigenous Strandveld species.</li> </ul>
<b>Cumulative impact post mitigation</b>	Low to positive — restoration improves ecological condition relative to the baseline degraded state.
<b>Significance rating after mitigation</b>	Low (potentially positive)

<b>Potential impacts on socio-economic aspects</b>	<b>Socio-economic</b>
<b>Nature of impact</b>	<p>Construction of Alternative 1 will generate short-term local employment and procurement opportunities. Temporary jobs will be created for general labour, skilled trades, transport, materials supply and support services.</p> <p>The project remains private, small-scale and low intensity, meaning no displacement of existing land uses, no loss of livelihoods, and no pressure on municipal infrastructure. The socio-economic impact is therefore positive, modest in scale, and consistent with rural conservation land use.</p>
<b>Extent and duration of impact</b>	Local; short-term (construction phase ±6–12 months). Benefits confined to the Sedgefield / Knysna municipal area.
<b>Probability of occurrence</b>	Definite — employment and procurement will occur during construction.
<b>Degree to which the impact can be mitigated</b>	High — benefits can be maximised through local hiring and fair labour practices.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	None — no socio-economic resources are lost.
<b>Cumulative impact prior to mitigation</b>	Minor positive — contributes marginally to local economic activity when combined with other small rural developments.

<b>Significance rating prior to mitigation</b>	Medium-High (Positive)
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Prioritise ≥70% local labour recruitment.</li> <li>• Skills transfer and safety training.</li> <li>• Use local suppliers and contractors where feasible.</li> <li>• Fair wages and OHSA compliance.</li> <li>• Transparent contractor recruitment.</li> </ul>
<b>Cumulative impact post mitigation</b>	Sustained positive — strengthens local economic participation without infrastructure burden.
<b>Significance rating after mitigation</b>	High (Positive)

<b>Potential noise impacts</b>	<b>Noise disturbance</b>
<b>Nature of impact</b>	Construction of Alternative 1 will temporarily increase ambient noise through the operation of light construction machinery, vehicle movement, grading, foundation work and material handling. Noise may disturb the nearest residence (±250 m east), users of Groenvlei Beach Road and local fauna occupying the adjacent dune and Strandveld habitat. The scale of work is small and confined to ±1 175 m <sup>2</sup> , and no heavy industrial equipment is required. The Terrestrial Biodiversity Assessment confirms that wildlife disturbance will be temporary and reversible. All activities will comply with Knysna Municipal noise by-laws.
<b>Extent and duration of impact</b>	Local; short-term — limited to the construction footprint and immediate surroundings for ±6–12 months during daylight hours only.
<b>Probability of occurrence</b>	Definite — construction noise is unavoidable during active works.
<b>Degree to which the impact can be mitigated</b>	High — noise is controllable through timing, equipment standards and site management.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	None — impacts are temporary and reversible.
<b>Cumulative impact prior to mitigation</b>	Minor — short-term increase in background noise levels in a rural setting.
<b>Significance rating prior to mitigation</b>	Low
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Restrict working hours to 07h00–17h00 weekdays.</li> <li>• No work Sundays or public holidays.</li> <li>• Maintain equipment and fit silencers.</li> <li>• Avoid simultaneous high-noise operations.</li> <li>• Notify nearest residents prior to noisy phases.</li> <li>• Limit heavy vehicle movement to off-peak periods.</li> <li>• ECO monitoring of complaints.</li> </ul>
<b>Cumulative impact post mitigation</b>	Negligible — residual noise is brief, localised and reversible.
<b>Significance rating after mitigation</b>	Very Low

Potential visual impacts	Aesthetic impact
<b>Nature of impact</b>	Construction of Alternative 1 will temporarily alter the visual character of the coastal landscape through vegetation clearing ( $\pm 1\,175\text{ m}^2$ ), operation of machinery, stockpiling of materials and visible construction activity. The Visual Compliance Statement confirms the site has a high Visual Absorption Capacity (VAC) due to dense Strandveld vegetation, dune topography and natural screening. The site is not visible from Groenvlei Beach, Cola Beach or the N2. Visual exposure is limited to very local viewpoints, mainly the nearest residence $\pm 250\text{ m}$ east and occasional users of Groenvlei Beach Road. The disturbance is temporary and confined to the construction period. No skyline intrusion or long-range visual scarring will occur.
<b>Extent and duration of impact</b>	Local; short-term — confined to the construction footprint and immediate surroundings for $\pm 6\text{--}12$ months.
<b>Probability of occurrence</b>	Definite — temporary visual disturbance occurs during active construction.
<b>Degree to which the impact can be mitigated</b>	High — visual effects are easily controlled through screening and housekeeping.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	None — visual impacts are temporary and fully reversible.
<b>Cumulative impact prior to mitigation</b>	Low — minor short-term addition to existing rural visual activity.
<b>Significance rating prior to mitigation</b>	Low
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Retain natural vegetation buffers wherever possible.</li> <li>• Fence and screen the site using green shade cloth.</li> <li>• Maintain strict housekeeping and remove waste daily.</li> <li>• Cover stockpiles and limit exposed materials.</li> <li>• Avoid unnecessary scarring of dunes.</li> <li>• Immediate rehabilitation and replanting post-construction.</li> <li>• Weekly ECO visual inspections.</li> </ul>
<b>Cumulative impact post mitigation</b>	Negligible — the site visually recovers immediately after rehabilitation.
<b>Significance rating after mitigation</b>	Very Low

Potential impact on biological aspects	Safety on site
<b>Nature of impact</b>	Construction activities under Alternative 1 involve machinery operation, excavation, working on uneven dune terrain, material handling, and temporary infrastructure. These conditions create occupational risks, including slips, falls, equipment accidents, dust inhalation, and fire hazards. The geotechnical setting — erodible sands, local steep slopes, and identified weak zones — increases the baseline hazard level if unmanaged. There is also a risk of unauthorised public access

	from Groenvlei Beach Road entering an active construction site. Without strict safety management, incidents could occur.
<b>Extent and duration of impact</b>	Local; confined to the 5.16 ha property during the 6–12 month construction phase.
<b>Probability of occurrence</b>	High without controls; Moderate with controls.
<b>Degree to which the impact can be mitigated</b>	High — construction safety risks are well understood and controllable under OHSWA frameworks.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	Low–Moderate — Severe incidents could involve irreversible human injury, but the likelihood is low with compliance.
<b>Cumulative impact prior to mitigation</b>	Moderate — contributes to the general construction risk profile in the Sedgefield area if unmanaged.
<b>Significance rating prior to mitigation</b>	Medium
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Full Occupational Health &amp; Safety Act compliance.</li> <li>• Site-specific Health &amp; Safety Plan.</li> <li>• Appoint a qualified safety officer.</li> <li>• Mandatory PPE and training.</li> <li>• Controlled access fencing and signage.</li> <li>• Fire-fighting equipment and emergency drills.</li> <li>• Daily safety inspections and incident reporting.</li> <li>• Spill kits and hazardous material controls.</li> </ul>
<b>Cumulative impact post mitigation</b>	Low — risk reduced to standard construction baseline.
<b>Significance rating after mitigation</b>	Low

Potential impact on biological aspects	Waste
<b>Nature of impact</b>	Construction under Alternative 1 will generate general building rubble, packaging waste, scrap materials, and small volumes of hazardous waste (e.g., fuel containers, oily rags, cement residues). If poorly managed, waste could contaminate soil, surface water, and vegetation within the coastal dune environment. Wind-blown litter could spread into adjacent natural vegetation and contribute to visual pollution. Improper handling of hazardous waste could create localised soil or groundwater contamination. The sensitive sandy soils and coastal setting increase the need for strict waste control.
<b>Extent and duration of impact</b>	Local: limited to the construction phase and immediate site footprint.
<b>Probability of occurrence</b>	Probable without management; Low with proper controls.
<b>Degree to which the impact can be mitigated</b>	High — standard construction waste management is effective.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	None — impacts are reversible and localised.
<b>Cumulative impact prior to mitigation</b>	Low–Moderate — contributes incrementally to local pollution risk if unmanaged.

<b>Significance rating prior to mitigation</b>	Low
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Provide clearly marked waste containers on site.</li> <li>• Separate recyclable and hazardous waste.</li> <li>• Remove waste regularly to licensed facilities.</li> <li>• Maintain disposal certificates.</li> <li>• No dumping or burning on site.</li> <li>• Environmental awareness training for workers.</li> <li>• ECO monitoring of waste management compliance.</li> </ul>
<b>Cumulative impact post mitigation</b>	Very Low — negligible pollution risk.
<b>Significance rating after mitigation</b>	Low

(c) Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

#### Operational Phase

<b>Potential impacts on geographical and physical aspects</b>	<b>Surface water run-off / groundwater / soil</b>
<b>Nature of impact</b>	During operation, the development will function as a low-intensity private residential cluster with off-grid services. Impermeable surfaces are limited and most of the site remains vegetated. Minor ongoing impacts could arise from concentrated runoff around structures, small fuel storage for maintenance equipment, and wastewater management. Because the site is located on sandy coastal soils with high permeability, any accidental contamination could infiltrate rapidly if not controlled. However, sealed conservancy systems and rainwater harvesting significantly reduce pollution risk. Long-term soil stability is expected to improve due to rehabilitation and vegetation restoration.
<b>Extent and duration of impact</b>	Local, long-term but low intensity and confined to the developed footprint.
<b>Probability of occurrence</b>	Low with proper infrastructure maintenance.
<b>Degree to which the impact can be mitigated</b>	High — operational controls are straightforward.
<b>Degree to which the impact may cause irreplaceable loss of resources</b>	None — impacts are reversible and localised.
<b>Cumulative impact prior to mitigation</b>	Low — contributes minimally to regional hydrological change.
<b>Significance rating prior to mitigation</b>	Low
<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Maintain sealed wastewater systems.</li> <li>• Regular inspection of tanks and plumbing.</li> <li>• No chemical dumping.</li> <li>• Maintain vegetated buffers.</li> <li>• Permeable surfaces for parking.</li> <li>• Stormwater dispersion away from slopes.</li> </ul>
<b>Cumulative impact post mitigation</b>	Very Low — negligible hydrological impact.
<b>Significance rating after mitigation</b>	Very Low

Potential impact on geographical and physical aspects	100 m High-Water Mark (HWM) / coastal processes (operational phase)
<b>Nature of impact:</b>	During the operational phase, no further vegetation clearance or earthworks are anticipated within the 100 m High-Water Mark (HWM) trigger area. The primary operational risk relates to long-term human presence, informal foot traffic, and maintenance activities that could destabilise dune vegetation if not properly controlled. Because the development is permanently located within a dynamic coastal system, cumulative micro-disturbances — such as trampling, minor landscaping, or unmanaged stormwater — could gradually weaken dune cohesion if the site is not actively managed. However, the approved layout deliberately confines activity to a compact node positioned outside mapped coastal erosion and flood-risk zones, as confirmed in the Preliminary Geotechnical and Geomatic Report and Constraints Map. The raised boardwalk system prevents repeated soil compaction and protects root systems critical to dune stability. Indigenous rehabilitation, alien clearing, and vegetation restoration strengthen the protective dune buffer over time. The operational phase, therefore, shifts from disturbance to long-term stabilisation and stewardship. No shoreline hardening, seawalls, or engineering interference with natural coastal processes is proposed.
<b>Extent/duration:</b>	Local; permanent but footprint-limited; confined to ±1 175 m <sup>2</sup> within the 5.16 ha property.
<b>Probability:</b>	Low with ongoing vegetation management; Medium without active stewardship.
<b>Reversibility:</b>	High — dune systems remain biologically recoverable through vegetation restoration and erosion control.
<b>Irreplaceable loss:</b>	Low — the affected area is degraded CBA2; dune function can be restored if disturbance occurs.
<b>Cumulative prior:</b>	Moderate — cumulative degradation could occur regionally if multiple coastal properties fail to manage vegetation and foot traffic within the HWM zone.
<b>Significance prior:</b>	Medium
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• Permanent retention and reinforcement of indigenous dune vegetation.</li> <li>• Strict prohibition of informal pathways outside boardwalk areas.</li> <li>• Annual coastal stability inspections by ECO or environmental practitioner.</li> <li>• Immediate rehabilitation of any exposed sand patches.</li> <li>• Ongoing alien invasive clearing programme.</li> <li>• Stormwater dispersed through vegetated areas; no concentrated discharge down slopes.</li> <li>• No expansion of footprint or new infrastructure within the 100 m HWM zone without reassessment.</li> <li>• Dark-sky compliant lighting to protect dune fauna.</li> <li>• Environmental awareness for occupants regarding dune sensitivity.</li> </ul>
<b>Cumulative post:</b>	Low — active stewardship improves dune stability and offsets broader coastal pressure.
<b>Significance after:</b>	Low

Potential impact on biological aspects	Habitat disturbance
<b>Nature of impact:</b>	Operational presence introduces low-level human disturbance (lighting, movement, noise, domestic activity). Wildlife may temporarily avoid the immediate building cluster; however, approximately 97.7% of the ±5.16 ha property remains in a natural/rehabilitatable state under Alternative 1, with disturbance confined to the ±1 175 m <sup>2</sup> footprint.  Alien clearing and rehabilitation result in long-term habitat improvement. No fencing that restricts wildlife movement is proposed. Night lighting could affect nocturnal fauna if poorly designed.
<b>Extent/duration:</b>	Local, permanent but low intensity.
<b>Probability:</b>	Definite (human presence exists).
<b>Reversibility:</b>	High — habitat quality improves through rehabilitation.
<b>Irreplaceable loss:</b>	None — net ecological gain expected.
<b>Cumulative prior:</b>	Moderate — cumulative human presence in coastal areas can reduce wildlife tolerance.
<b>Significance prior:</b>	Medium
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• Dark-sky compliant lighting (downward-facing, motion-activated).</li> <li>• No external floodlighting.</li> <li>• Ongoing alien invasive control.</li> <li>• Indigenous vegetation restoration.</li> <li>• Limit domestic pets roaming freely.</li> <li>• • Maintain ecological corridors across the site.</li> </ul>
<b>Cumulative post:</b>	Low–Positive — rehabilitation offsets disturbance.
<b>Significance after:</b>	Low (potentially positive)

Potential noise impacts	Operational Noise
<b>Nature of impact:</b>	Normal residential noise (vehicles, conversation, maintenance) will occur, but remains consistent with rural residential character. No commercial or high-noise activities are proposed.
<b>Extent/duration:</b>	Local, permanent but low intensity.
<b>Probability:</b>	Definite.
<b>Reversibility:</b>	Immediately upon cessation of activity.
<b>Irreplaceable loss:</b>	None.
<b>Cumulative prior:</b>	Low.
<b>Significance prior:</b>	Low
<b>Mitigation:</b>	<ul style="list-style-type: none"> <li>• No amplified outdoor sound systems.</li> <li>• Maintain quiet rural character.</li> <li>• Restrict maintenance noise to daylight hours.</li> </ul>
<b>Cumulative post:</b>	Negligible.
<b>Significance after:</b>	Very Low

Potential visual impacts	Aesthetic / visual character (operational phase)
<b>Nature of impact:</b>	<p>During the operational phase, visual impacts relate to the permanent presence of built form within a previously undeveloped coastal landscape. The site forms part of a visually sensitive rural coastal system characterised by natural dune vegetation, steep topography, and a strong sense of landscape seclusion.</p> <p>The Visual Compliance Statement confirms that the site has a high Visual Absorption Capacity (VAC) due to dense Goukamma Strandveld vegetation, pronounced coastal landforms, and topographic screening from key public viewpoints. The Alternative 1 development footprint is positioned within a visually contained depression, below skyline level and outside prominent ridgelines, ensuring that structures do not interrupt the natural coastal silhouette. According to the specialist assessment, the development will not be visible from Groenvlei Beach, Cola Beach, or the N2, and visibility from surrounding properties is highly restricted due to vegetation screening.</p> <p>Limited partial visibility may occur from the nearest residence ±250 m east, but this is filtered through vegetation and will not materially alter the perceived landscape character. The architectural language — lightweight structures using timber, steel, glass and natural stone — has been selected specifically to minimise visual mass, colour contrast, and reflectivity. Earth-toned finishes and non-reflective materials further reduce visual intrusion. Lighting design is low-intensity, downward-facing and motion-activated in accordance with specialist recommendations to preserve night-sky conditions and prevent glare within the coastal environment.</p> <p>The operational phase, therefore, represents a visually recessive intervention that integrates into the existing landscape rather than competing with it.</p>
<b>Extent/duration:</b>	Local, permanent but visually contained, limited to a single clustered node within a high VAC landscape.
<b>Probability:</b>	Definite — built form is permanent, but visibility is low.
<b>Reversibility:</b>	Moderate — structures are removable, and vegetation rehabilitation can fully restore the visual character if ever decommissioned.
<b>Irreplaceable loss:</b>	None — scenic character remains intact due to screening and siting.
<b>Cumulative prior:</b>	Moderate — cumulative coastal development could gradually erode scenic character if not subject to strict visual controls.
<b>Significance prior:</b>	Medium
<b>Mitigation (specialist recommendations):</b>	<ul style="list-style-type: none"> <li>• Retain all perimeter vegetation to maintain visual screening.</li> <li>• Use earth-toned, non-reflective exterior finishes.</li> <li>• No skyline or ridgeline construction.</li> <li>• Prohibit future expansion outside the approved footprint.</li> <li>• Maintain natural dune vegetation as a permanent buffer.</li> <li>• Apply dark-sky compliant lighting only.</li> <li>• Immediately rehabilitate any disturbed areas.</li> <li>• No reflective roofing or glazing facing the coast.</li> </ul>

	<ul style="list-style-type: none"> <li>• Conduct periodic visual audits as part of ECO monitoring.</li> <li>• Any future additions must undergo site-specific visual assessment.</li> </ul>
<b>Cumulative post:</b>	Low — development remains visually recessive and reinforces conservation-led coastal character.
<b>Significance after:</b>	Low

## No-Go Alternative Impact Summary

The No-Go Alternative entails maintaining Portion 79 of Farm Ruygte Valley No. 205 in its current undeveloped and unmanaged state, with no construction or formal land-use change taking place. Under this option, no residential dwelling or associated infrastructure would be established, and the property would remain vacant in its existing condition.

While the No-Go Alternative would avoid all construction-related disturbance, it would also maintain the current degraded ecological baseline. Portions of the site are heavily invaded by *Acacia cyclops* and associated alien vegetation, resulting in reduced ecological functioning and suppressed indigenous Strandveld regeneration. Without formal intervention, these invasive conditions are likely to persist or worsen over time. The No-Go Alternative therefore represents ecological stagnation rather than ecological protection.

The proposed development, by contrast, includes binding commitments to alien invasive removal, rehabilitation, and long-term stewardship secured through rezoning to Open Space III (Nature Conservation Area). This rezoning framework would protect more than 99% of the property in a conservation-compatible land-use category, ensuring that active ecological restoration and management occur. In this context, the No-Go Alternative does not represent the best environmental outcome, as it fails to achieve measurable biodiversity improvement.

From a land-use planning perspective, the No-Go Alternative does not align with the landowner's existing lawful development rights under Agriculture Zone I zoning, which permits the establishment of a dwelling house as a primary right. The applicant seeks to exercise these rights in a controlled and environmentally responsible manner that is consistent with municipal and provincial spatial development frameworks. Preventing any development on privately owned land where lawful rights exist would not advance sustainable planning objectives, particularly where the proposed activity has been specifically designed to avoid sensitive areas and secure conservation outcomes.

From a socio-economic perspective, the No-Go Alternative results in the loss of modest but meaningful local benefits associated with the construction phase, including short-term employment and procurement of local services. Although the proposed units are intended for private family and guest use, their development and ongoing maintenance contribute to small-scale local economic activity without placing any burden on municipal infrastructure due to the fully off-grid service model.

From an agricultural perspective, the No-Go Alternative offers no tangible advantage. The Agricultural Compliance Statement confirms that the property has negligible agricultural potential due to sandy soils, steep slopes, small cadastral extent ( $\pm 5.16$  ha), and ecological constraints. Retaining the site in its current undeveloped condition does not contribute to food production, agricultural viability, or rural livelihoods.

In summary, the No-Go Alternative maintains the status quo but does not promote ecological restoration, sustainable land management, or responsible use of lawful development rights. It preserves a degraded baseline rather than improving it, and it provides no measurable environmental or socio-economic benefit beyond avoiding short-term construction disturbance.

The proposed development — characterised by a very small footprint, avoidance of sensitive habitats, off-grid infrastructure, and legally secured conservation commitments — represents the Best Practicable Environmental Option (BPEO). It achieves a balanced outcome that improves ecological condition, respects lawful land-use rights, and supports sustainable rural development within a coastal conservation landscape.

**Conclusion:** While the No-Go Alternative avoids development, it fails to realise the site's conservation potential, restricts lawful land-use rights, and foregoes modest socio-economic benefits. The preferred alternative results in net ecological gain through rehabilitation and long-term conservation protection, while maintaining a minimal physical

footprint. From an environmental, planning, and sustainability perspective, the proposed development is the more responsible and desirable outcome.

**Environmental Impacts:**

- Stormwater runoff and erosion as a result of the construction of the internal road
- Impacts on Ecosystems – biodiversity
- Impacts on the Critical Biodiversity Area

Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

Potential impacts on geographical and physical aspects:	Surface water run-off/groundwater/soil, air quality
Nature of impact:	Under the <b>No-Go Alternative</b> , no construction or operational activities would occur. The site would remain in its current undeveloped state, with no soil disturbance, vegetation clearance, compaction, excavation, or alteration of natural drainage patterns. Consequently, there would be no change to surface water run-off characteristics, groundwater conditions, soil stability, or air quality beyond existing baseline conditions.
Extent and duration of impact:	No disturbances of the soil on the site.
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

Potential impacts on geographical and physical aspects:	100-Highwater Mark and Dune Stability

Nature of impact:	Under the No-Go Alternative, no construction, grading, excavation, or foundation works would occur within or adjacent to the 100 m High-Water Mark (HWM). Coastal dunes, stabilising vegetation, and natural landforms would remain undisturbed, allowing existing natural erosion, accretion, and sediment dynamics to continue unchanged. As a result, no dune destabilisation, vegetation loss, or interference with coastal processes would occur.
Extent and duration of impact:	No disturbances of the soil on the site.
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential impacts on biological aspects:</b>	<b>Habitat and biodiversity loss</b>
Nature of impact:	Under the No-Go Alternative, no vegetation clearance, habitat alteration, or construction-related disturbance would occur. The degraded CBA2 area would remain in its current ecological condition, with existing indigenous and invasive vegetation, as well as associated fauna (e.g. small mammals, birds, reptiles), continuing to function naturally. No additional habitat loss, fragmentation, or biodiversity stress would result from development activities.
Extent and duration of impact:	No loss of vegetation as a result of construction activities.
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option

Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential impacts on socio-economic aspects:</b>	<b>Socio-economic</b>
Nature of impact:	No job creation- negative Impact.
Extent and duration of impact:	Not applicable to the No-Go option
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be reversed:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential noise impacts:</b>	<b>Noise disturbance</b>
Nature of impact:	No additional ambient noise will be created.
Extent and duration of impact:	Not applicable to the No-Go option

Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be reversed:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential visual impacts:</b>	<b>Aesthetic impact</b>
Nature of impact:	No development will be undertaken,
Extent and duration of impact:	Not applicable to the No-Go option
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be reversed:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential impacts on the cultural-historical aspects:</b>	<b>Cultural-historical</b>
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Nature of impact:	It is not expected that any cultural-historical aspects will be impacted as a result of no construction activities being undertaken.
Extent and duration of impact:	Not applicable to the No-Go option
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be reversed:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential impact on biological aspects:</b>	<b>Safety on site</b>
Nature of impact:	No development will be undertaken.
Extent and duration of impact:	Not applicable to the No-Go option
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be reversed:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

<b>Potential impact on biological aspects:</b>	<b>Waste</b>
Nature of impact:	No waste will be generated.
Extent and duration of impact:	Not applicable to the No-Go option
Probability of occurrence:	Not applicable to the No-Go option
Degree to which the impact can be reversed:	Not applicable to the No-Go option
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable to the No-Go option
Cumulative impact prior to mitigation:	Not applicable to the No-Go option
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option
Degree to which the impact can be mitigated:	Not applicable to the No-Go option
Proposed mitigation:	Not applicable to the No-Go option
Cumulative impact post mitigation:	Not applicable to the No-Go option
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable to the No-Go option

## Section I

### Conclusion and Recommendations

The proposed development on Portion 79 of Farm Ruygte Valley No. 205 has been assessed in accordance with the National Environmental Management Act (NEMA), the Environmental Impact Assessment Regulations, 2014 (as amended), and all applicable sectoral legislation and spatial planning frameworks.

The assessment confirms that the preferred alternative — comprising a main dwelling ( $\pm 200 \text{ m}^2$ ), three small self-contained units ( $\pm 65 \text{ m}^2$  each), staff accommodation ( $\pm 50 \text{ m}^2$ ), an equipment shed ( $\pm 80 \text{ m}^2$ ), and associated access and parking infrastructure — represents a low-intensity, conservation-compatible residential development. The additional units are currently intended for private family and guest accommodation. From a planning perspective, the rezoning application provides a tourism-compatible framework required to enable multiple accommodation units while simultaneously aligning with long-term conservation and land-management objectives.

Although the development footprint is located within 100 m of the High-Water Mark and triggers listed activities in terms of GN R.327, specialist investigations and the constraints-led site layout demonstrate that the proposal:

- avoids sensitive coastal and ecological features,
- is confined to a very small footprint ( $\pm 1\,375 \text{ m}^2$ ; approximately 2.7% of the property),
- does not encroach into mapped high-risk erosion or flood zones,

- avoids CBA1 and indigenous forest areas, and
- secures long-term protection of approximately 97.3% of the property through rezoning to Open Space III (Nature Conservation Area).

Potential environmental impacts associated with construction and operation — including soil disturbance, dune stability risks, biodiversity loss, and visual intrusion — have been assessed as low to moderate prior to mitigation and low to very low post-mitigation. No fatal flaws were identified by any specialist study.

Importantly, the application for tourism-related zoning rights will function as a private, low-intensity residential development. The proposal, therefore, does not introduce new infrastructure demand or precedent-setting development intensity within the Groenvlei coastal area.

From a planning and sustainability perspective, the project aligns with:

- the Knysna Spatial Development Framework (2020),
- the Western Cape Provincial Spatial Development Framework (2014),
- the Garden Route Environmental Management Framework, and
- the Guideline on Need and Desirability (DEA&DP, 2017),

all of which promote conservation-compatible development outside the urban edge, particularly where agricultural potential is limited and biodiversity value is high.

The No-Go Alternative, while environmentally neutral in the short term, would not secure long-term conservation outcomes, would limit active rehabilitation of degraded areas, and would unnecessarily constrain the landowner's lawful development rights. It is therefore not considered the most sustainable option.

### Recommendations

- It is recommended that Environmental Authorisation be granted for the proposed development, subject to the following key conditions:
- Strict adherence to the approved layout and Constraints Map, ensuring that all development remains within the defined footprint and avoids high-risk erosion, flood, and ecological sensitivity areas.
- Implementation of all mitigation measures contained in the BAR, EMPr, and specialist reports, with particular emphasis on:
  - erosion and dune-stability controls,
  - alien invasive vegetation management,
  - rehabilitation using indigenous Goukamma Strandveld species, and
  - stormwater and surface-run-off management.
- Appointment of an independent Environmental Control Officer (ECO) for the construction phase to monitor compliance and submit audit reports.
- ECSA-certified geotechnical and structural design at building-plan stage, informed by detailed site-specific investigations, particularly given the coastal dune context and proximity to the High-Water Mark.
- Ongoing operational management, including alien invasive control, vegetation maintenance, and restricted access to designated roads and boardwalks to prevent secondary habitat degradation.
- Confirmation that the development will remain private in nature, with tourism zoning authorised through the appropriate statutory processes.

Subject to these recommendations, the proposed development is considered environmentally acceptable, policy-compliant, and consistent with the principles of sustainable development and integrated environmental management as required by NEMA.

## Recommended Mitigation and Conditions of Authorisation

Should Environmental Authorisation be granted for the proposed development on Portion 79 of Farm Ruygte Valley No. 205, it is recommended that the following mitigation measures and conditions of authorisation be imposed to ensure compliance with the principles of the National Environmental Management Act (NEMA), the EIA Regulations, 2014 (as amended), and all applicable sectoral and planning legislation.

### **General Conditions**

The development shall be implemented strictly in accordance with:

- the approved Site Development Plan (SDP);
- the updated Constraints Map; and
- the final approved Environmental Management Programme (EMPr).
- No development activities shall occur outside the approved development footprint of approximately  $\pm 1\,375\text{ m}^2$ .
- Any deviation from the approved layout, footprint, access routes, or infrastructure design shall require prior written approval from the Competent Authority.
  - The main dwelling and associated cottages shall function as a low-intensity private residential and tourism-compatible accommodation cluster in accordance with approved zoning rights.
  - Any future expansion, increase in unit numbers, or change in land-use intensity shall require separate statutory approval.

### **Coastal Location, High-Water Mark and Dune Stability Conditions**

- All permanent structures shall be confined to the approved development footprint located within 100 m inland of the High-Water Mark (HWM), as assessed and authorised in terms of GN R.327 (Listing Notice 3).
- No structures, services, access routes, or ancillary infrastructure shall be permitted closer to the coastline than those reflected on the approved SDP and Constraints Map.
- Development shall avoid all mapped high-risk coastal erosion and flood-prone areas as identified in the Preliminary Geotechnical and Geomatic Report and consolidated in the Constraints Map.

The integrity and stability of the coastal dune system shall be protected through:

- retention of stabilising indigenous vegetation where feasible;
- immediate rehabilitation of disturbed areas using locally indigenous Goukamma Strandveld species; and
- avoidance of unnecessary ground disturbance within the coastal zone.
- A detailed, site-specific geotechnical investigation shall be undertaken at the building-plan stage, and all foundation, slope-stabilisation, and stormwater designs shall be prepared and certified by an ECSA-registered professional engineer, with specific consideration of:
  - erodible sandy soils;
  - identified structurally weak zones, including D7; and
  - projected long-term coastal retreat and sea-level-rise scenarios.

### **Biodiversity and Vegetation Management Conditions**

- Vegetation clearing shall be strictly limited to the approved development footprint and confined to the degraded CBA2 portion of the site.
- No clearing, disturbance, or encroachment shall occur within:
  - CBA1 (Maintain) areas;

- indigenous coastal forest; or
- protected Milkwood Forest areas.
- An Alien Invasive Management Plan shall be implemented for the duration of the development, with priority given to the systematic removal and long-term control of Acacia cyclops.
- A search-and-rescue operation for indigenous plant species shall be undertaken prior to construction, and an on-site nursery shall be established and maintained for rehabilitation purposes.
- Rehabilitation of all temporarily disturbed areas shall be undertaken progressively and completed immediately following construction, using locally indigenous species characteristic of the Goukamma Strandveld.

### **Construction Phase Environmental Management**

- An independent Environmental Control Officer (ECO) shall be appointed prior to commencement of construction.

#### **The ECO shall:**

- monitor compliance with the EMPr and conditions of authorisation;
- conduct regular site inspections; and
- compile and submit audit reports to the Competent Authority if required.
- Construction activities shall be restricted to daylight hours only.
- Erosion and surface run-off control measures shall include, but not be limited to:
  - installation of silt fences and sediment traps;
  - use of stormwater swales directing flows away from slopes and dune systems; and
  - phased vegetation clearing to minimise exposure of bare soil.
- Raised timber boardwalks shall be utilised where approved to minimise soil compaction and disturbance of natural drainage patterns.

### **Operational Phase Conditions**

- The development shall operate entirely off-grid, utilising:
  - solar energy generation;
  - rainwater harvesting and storage systems; and
  - sealed conservancy tanks or approved on-site wastewater treatment systems.
- All stormwater infrastructure shall be maintained to prevent erosion, concentration of run-off, or discharge toward the coastal zone.
- Pedestrian and vehicle movement shall be restricted to approved access roads and boardwalks to prevent secondary habitat degradation.
- Ongoing alien invasive vegetation control, rehabilitation, and vegetation maintenance shall be implemented for the operational life of the development.

### **Monitoring and Adaptive Management**

- The landowner shall ensure ongoing monitoring of:
  - coastal dune stability and erosion;
  - vegetation condition and rehabilitation success; and
  - stormwater performance.
- Should any unanticipated environmental impacts arise, adaptive management measures shall be implemented in consultation with the relevant specialists and the Competent Authority.

## **Final Recommendation**

Subject to the implementation of the above mitigation measures and conditions of authorisation, the proposed development is considered environmentally acceptable, manageable, and consistent with the principles of Integrated Environmental Management, sustainable coastal development, and conservation-compatible land use.