Eco Route
ENVIRONMENTAL CONSULTANCY
CC. 1998/031976/23

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DRAFT BASIC ASSESSMENT REPORT

FOR

PROPOSED DEVELOPMENT OF A RESIDENTIAL DWELLING ON PORTION 76 OF THE FARM 216 UITZICHT, KNYSNA, 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:	MIDNIGHT STORM INVESTMENTS 180 (PTY) LTD
PREPARED BY:	ECO ROUTE ENVIRONMENTAL CONSULTANCY
DEPARTMENT REF:	**14/12/16/3/3/1/3185**
AUTHOR:	BIANCA GILFILLAN (EAPASA REG 2023/7929)
DATE:	NOVEMBER 2025

ECO-ROUTE
ENVIRONMENTAL
CONSULTANCY

REGISTRATION NO. 1998/031976/23

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STATEMENT OF INDEPENDENCE

I, **Bianca Gilfillan**, of Eco Route Environmental Consultancy, in terms of section 33 of the NEMA, 1998 (Act No. 107 of 1998), as amended, hereby declare that I provide services as an independent Environmental Assessment Practitioner (EAPASA Reg: **2023/7929**) and receive remuneration for services rendered for undertaking tasks required in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended). I have no financial or other vested interest in the project.

EAP SIGNATURE: B. G

Contents

Appendix G = Public Participation.

Appendix H = Draft EMPr

Introduction

Portion 76 of Farm Uitzicht No. 216 is located approximately 1.5 km north of Brenton-on-Sea, within the jurisdiction of the Knysna Municipality, Western Cape. The southern boundary abuts Brenton Beach, and the total property extent is approximately 21.01 hectares.

Proposed Development Description

The proposed development comprises the construction of a single main dwelling in the south-western portion of the property, identified as the most suitable location based on specialist input and alternatives assessment. The development is designed to be environmentally sensitive, maintaining the ecological character of the area.

Main Dwelling

- A single-storey structure of approximately 1000 m² (including covered verandas and integrated garage), downscaled from the previously proposed 3000 m².
- Designed in a low-profile, contemporary coastal style, using earth-toned, non-reflective materials to blend with the natural dune landscape.
- Positioned to minimise ecological disturbance and visual intrusion, in accordance with visual, botanical, and geotechnical recommendations.

Access

- Access to the site will be via the existing servitude from Kerk Laan, with a short internal driveway linking to the house.
- The access route will follow natural contours to reduce the need for cut-and-fill and minimise vegetation clearance.

Water Supply

- The development will be self-sufficient in water supply, relying primarily on rainwater harvesting from roof surfaces.
- A minimum rainwater storage capacity of 20 000 litres will be provided.
- Borehole abstraction will only be used as a supplementary source, subject to licensing by the Breede-Gouritz Catchment Management Agency (CMA).

Wastewater Management

- On-site sanitation will be provided via a septic tank and soakaway system, designed and located in accordance with the geotechnical report to avoid groundwater contamination.

Stormwater Management

- Runoff will be managed through infiltration-based measures such as:
  - Rainwater tanks
  - Permeable driveway surfaces
  - Swales and soakaways, where applicable
- No subsoil drains are required along roads but are recommended behind retaining walls if used.

Landscaping

- Only indigenous vegetation will be used to:
  - Maintain ecological integrity
  - Reduce fire risk
  - Ensure the visual integration of the development with the surrounding landscape
- No disturbance will occur beyond the demarcated development footprint.
- Construction Footprint
- The total construction disturbance area will not exceed 0.25 ha (2 500 m²), representing less than 1.2% of the property.
- The layout was selected to avoid sensitive vegetation types and reduce fragmentation of natural habitats.

Eco Route Environmental Consultancy was appointed by the applicant as an independent environmental practitioner to facilitate the Basic Assessment Process as stipulated in terms of the National Environmental Management Act (NEMA, Act 107 of 1998) as amended in 2017.

Marike Vreken, an urban and environmental planner, were appointed to apply for the required land use rights from Knysna 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 -	
(a) Details of – (i) The EAP who prepared the report; and (ii) The expertise of the EAP, including curriculum vitae.	**Section A** of the Report.
(b) The location of the activity, including – (i) The 21-digit surveyor General Code of each cadastral land parcel. (ii) Where available the physical address and farm name. (iii) Where the required information items (i) and (ii) is not available, the co-ordinates of the boundary of the property.	(i) **Section B** of the Report. (ii) **Section B** of the Report. (iii) **Section B** of the Report.
(c) a plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is (i) A linear Activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) On land where the property has not been defined, the coordinates within which the activity is to be undertaken.	**Section C** of this Report (i) N/A (ii) N/A

(d) a description of the scope of the proposed activity, including – (i) All listed and specified activities triggered and being applied for; and (ii) A description of the activities to be undertaken including associated structures and infrastructure	**Section D** of this Report (i) **Section D** of this Report (ii) **Section D** of this Report
(e) A description of the policy and legislative context within which the development is proposed, including – (i) An identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and have been considered in preparation of the report; and (ii) How the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks and instruments.	**Section E** of this Report (i) **Section E** of this Report (ii) **Section E** of this Report
(f) A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location.	**Section F** of this report
(g) A motivation for the preferred site, activity and technology alternative	**Section G** of this report.
(h) A full description of the process followed to reach the proposed preferred alternative within the site including: (i) Details of all alternatives considered. (ii) Details of the public participation process undertaken in terms of regulation 41 of the regulations, including copies and supporting documents and inputs. (iii) A Summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them. (iv) The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects. (v) The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts – (aa) can be reversed (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated. (vi) The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives. (vii) Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be	 **Section G** of this report. **Section H** of this report. **Section H (1)** of this report. **Section H (2)** of this report. **Section H (4)** of this report. **Section H (3)** of this report. **Section H (5)** of this report.

affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects.	
(viii) The possible mitigation measures that could be applied and level residual risk	**Section I** of this report.
(ix) The outcome of the site selection matrix	**Section G** of this report.
(x) If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and	
(xi) A concluding statement indicating the preferred alternatives, including the preferred location of the activity.	**Section I** of this report.

Section A

Details of the EAP that prepared the draft Basic Assessment Report

Draft Basic Assessment Report has been compiled by:	Eco Route Environmental Consultancy
Environmental Assessment Practitioner:	Bianca Gilfillan
Highest Qualification:	BSc. Hons. Environmental Science
EAPASA Registration Number:	2023/7929
Postal Address:	P.O. Box 1252 Sedgefield 6573
Cell:	079 1895060
Fax:	086 402 9562
Email:	bianca@ecoroute.co.za

Expertise of the EAP, including a Curriculum Vitae

EXPERIENCE AND COMPETENCY– Environmental Impact Assessment

Name of Team member and role	Project	Notes
Name: Bianca Gilfillan Role: 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.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Low-cost housing development in Swellendam.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Various residential developments along the West Coast include Langebaan, Jacobsbaai, St Helena Bay, Dwarskersbos and Elands Bay.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Extension and development of Zweletemba Township (Worcester) abutting the Hex River, including river flood mitigation works.	Environmental Authorization was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Development of resorts, tourist facilities, golf courses and residential accommodation at Quaggaskloof, Worcester.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Applications for equestrian Estate in the West Coast and Boland areas.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Upgrade of the Water Treatment Works in Vanryhnsdorp.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Optimisation of existing Radnor Compost Facility, Parow and establishment of a Materials Recovery Facility (MRF), a Refuse Transfer Station (RTS)	Environmental Authorisation was obtained.

	and a Composting Facility - i.e. an Integrated Waste Management Facility (IWMF).	
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Rezoning and construction of an incinerator at Swartklip Products, Khayelitsha.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Extension of the Khayelitsha Railway Line, Cape Town.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Development and upgrading of various service stations, convenience stores and car wash facilities for ENGEN Petroleum Ltd.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Construction of a pipeline from the Potsdam Wastewater Treatment Works (WWTW) to a reservoir, Durbanville.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Relocation of a golf course and development of tourist facilities and residential accommodation at Clanwilliam Dam, Clanwilliam.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Development of chicken farms and upgrading of abattoirs, Cape Town.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Wind farm development in Hopefield and Beaufort West.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Rerouting and establishment of a new pipeline at Lebanon mountain area.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Development of housing units at Royal Palms, Paarl.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner.	Development of a waste disposal site in Murraysburg, Beaufort West.	Environmental Authorisation was obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner – Environmental Control Officer	• Soil erosion as a result of wildfires in the Cape Peninsula Mountains. • Zweletemba Township extension, Worcester. • Mfuleni flood relief housing project. • Extension of Khayelitsha Railway Line, Cape Town. • Various projects in sensitive environments for Sentech, the City of Cape Town, Breede Valley Municipality, Shoprite Checkers Properties, etc. • Housing developments in Dwarskersbos, Velddrift and Laaiplek. • Housing development in Atlantis, Kanonkop. • Construction of substations in Cape Town for COCT. • Low-cost housing in Swellendam for the Municipality.	Approval obtained.
Name: Bianca Gilfillan Role: Environmental Assessment Practitioner- Audits	• Boskloof Farm Eureogap compliance for the use of "virgin land" for export vineyards. • Food and human health safety in Protea Boerdery, Worcester, for Europgap. • ISO 14000 Management systems. • Various Filling Service Stations	Approval obtained.

CURRICULUM VITAE (CV)

Position Title and No.	Environmental Assessment Practitioner
Name of Expert:	Bianca Gilfillan

Date of Birth:	20/12/1981
Country of Citizenship/Residence	South Africa

Education:

Institution: Cape Peninsula University

Year: 2002

Degree: National Diploma in Environmental Management

Institution: Cape Peninsula University

Year: 2003

Degree: BTECH: Environmental Management

Institution: University of the Western Cape

Year: 2009

Degree: BSc. Hons in Environmental Management

Institution: Cape Peninsula University

Year: 2009

Degree: Certificate in Business Administration

Institution: Cape Peninsula University

Year: 2010

Degree: Certificate in Project Management

Employment record relevant to the assignment:

Period	Employing organisation and your title/position. Contact info for references	Country	Summary of activities performed relevant to the Assignment
2003 - 2021	Senior Environmental Assessment Practitioner Reference: Dupré Lombaard	South Africa	Basic Assessment Reports, Environmental Impact Assessment Reports, Environmental programmes, Environmental Control Officer
2022 -2024	Senior Environmental Assessment Practitioner	South Africa	Basic Assessment Reports, Environmental Impact Assessment Reports and Environmental Control Officer pertaining to: • Residential Developments • Industrial Developments • Filling Station Developments • Nature Reserves

			Environmental Management Programmes & Frameworks pertaining to: • Residential Developments • Industrial Developments

Membership in Professional Associations:

International Association for Impact Assessment (IAIAsa)

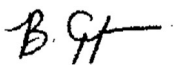
Environmental Assessment Practitioners Association of South Africa (EAPASA)

Language Skills:

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

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 OCTOBER 2025

Name of Expert | Signature | Date

Section B

Location Information

Province:	Western Cape
District Municipality:	Eden Municipality
Local Municipality:	Knysna Municipality
Ward number(s):	Ward 5
Nearest town(s):	Knysna
Farm name(s) and number(s):	Farm Uitzicht No 216

Portion number(s):	Portion 76

Property Information

Farm Name	Portion 76 of the Farm Uitzicht NO 216
Surveyor General 21-digit code:	C03900000000021600076
Zoning:	Agriculture I
Urban Edge:	Property located outside urban edge of Brenton on sea
Applicant name:	Midnight Storm Investments 180(Pty)Ltd
Registration number (if applicant is a company):	2004/207248/07
Trading name (if any):	Midnight Storm Investments 180(Pty)Ltd
Responsible person name:	Dr. Andre Peach and Dr. HJ Swart
Applicant/ Responsible person ID number:	6501175015081 / 5409145091086
Responsible position, e.g. Director, CEO, etc.:	Directors
Physical address of applicant:	653 Kamdebos Road, Florauna 0182
Postal address:	PO Box 59000 Karenpark
Postal code:	0118
Telephone:	083 271 9532
Fax:	012 3359591
E-mail:	andrepeach@lantic.net
GPS point middle of property:	**Lat:** -34.068388 **|** **Lon:** 23.002727

Property Description

Portion 76 of the Farm Uitzicht No. 216 is located within the Knysna Municipal Area in the Western Cape Province. The southern boundary of the property directly abuts the Brenton Beach coastal dune system.

The entire property is mapped as a Critical Biodiversity Area (CBA) in terms of the Western Cape Biodiversity Spatial Plan (WCBSP, 2017; 2023 update). A CBA is defined as an area in a natural condition that is essential to meet biodiversity targets for species, ecosystems, ecological processes, or critical ecological infrastructure.

The management objective for CBAs is to maintain them in a natural or near-natural state, with no further loss of natural habitat permitted. Where degradation has occurred, rehabilitation is encouraged, and only low-impact, biodiversity-sensitive land uses are considered appropriate.

<u>According to vegetation mapping and specialist studies:</u>

- The northern portion of the property supports Knysna Sand Fynbos, which is classified as Critically Endangered (CR) under the National Environmental Management: Biodiversity Act (NEM:BA), 2022.
- The southern portion of the property comprises Goukamma Dune Thicket, which is listed as Least Threatened.

The property is currently undeveloped and vacant, with no existing residential structures on site.

Section C - Locality Map

Locality

Legend

Location Information

Lat: -34.067589 | Lon: 23.004063

Name:	n/a
Farm Nr:	76/216
Area (Ha):	21.01
SG Code:	C03900000000021600076
SG Region:	KNYSNA
Legal Status:	Registered

Property Boundary Marked in Red

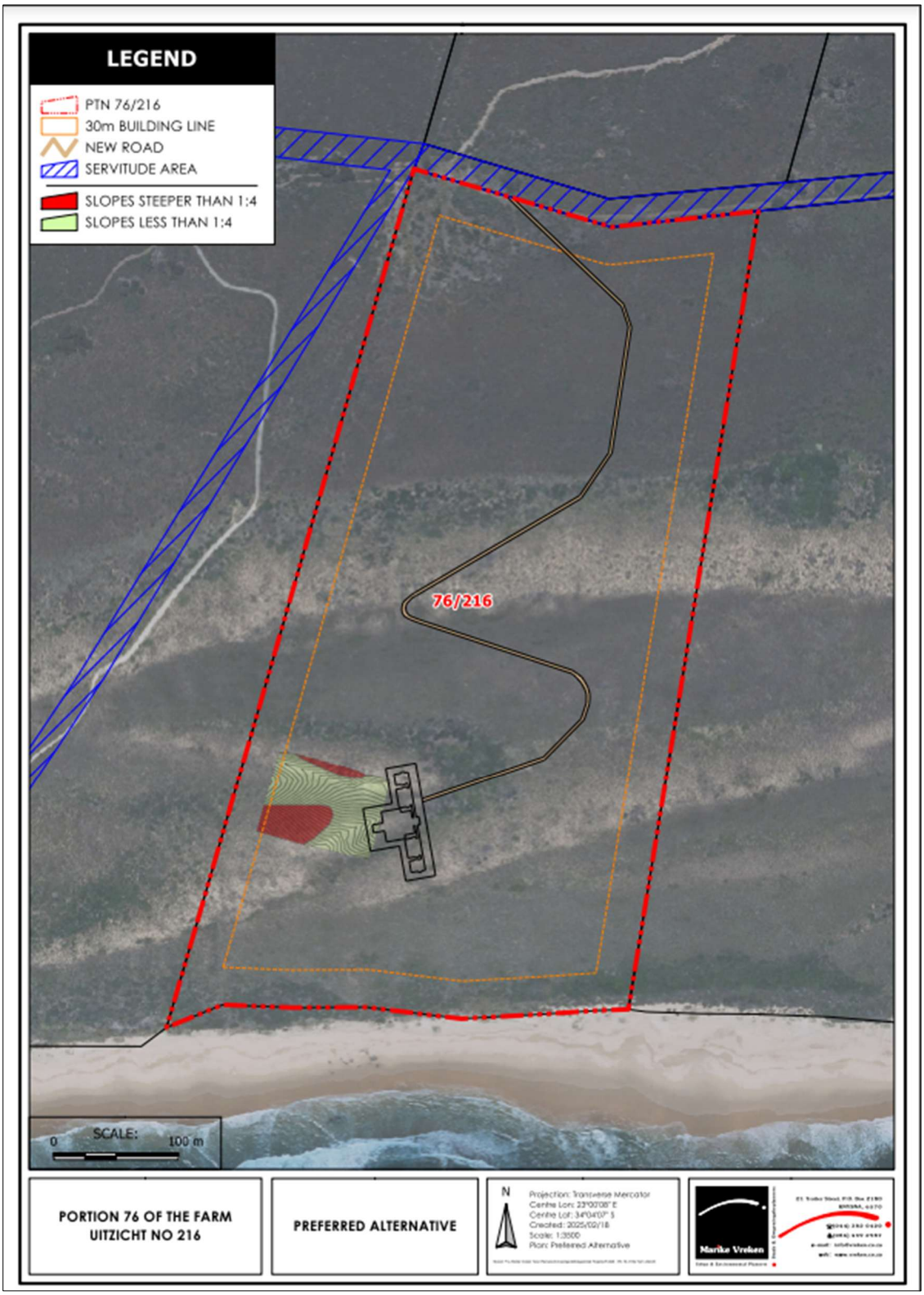
Scale: 1:36 112

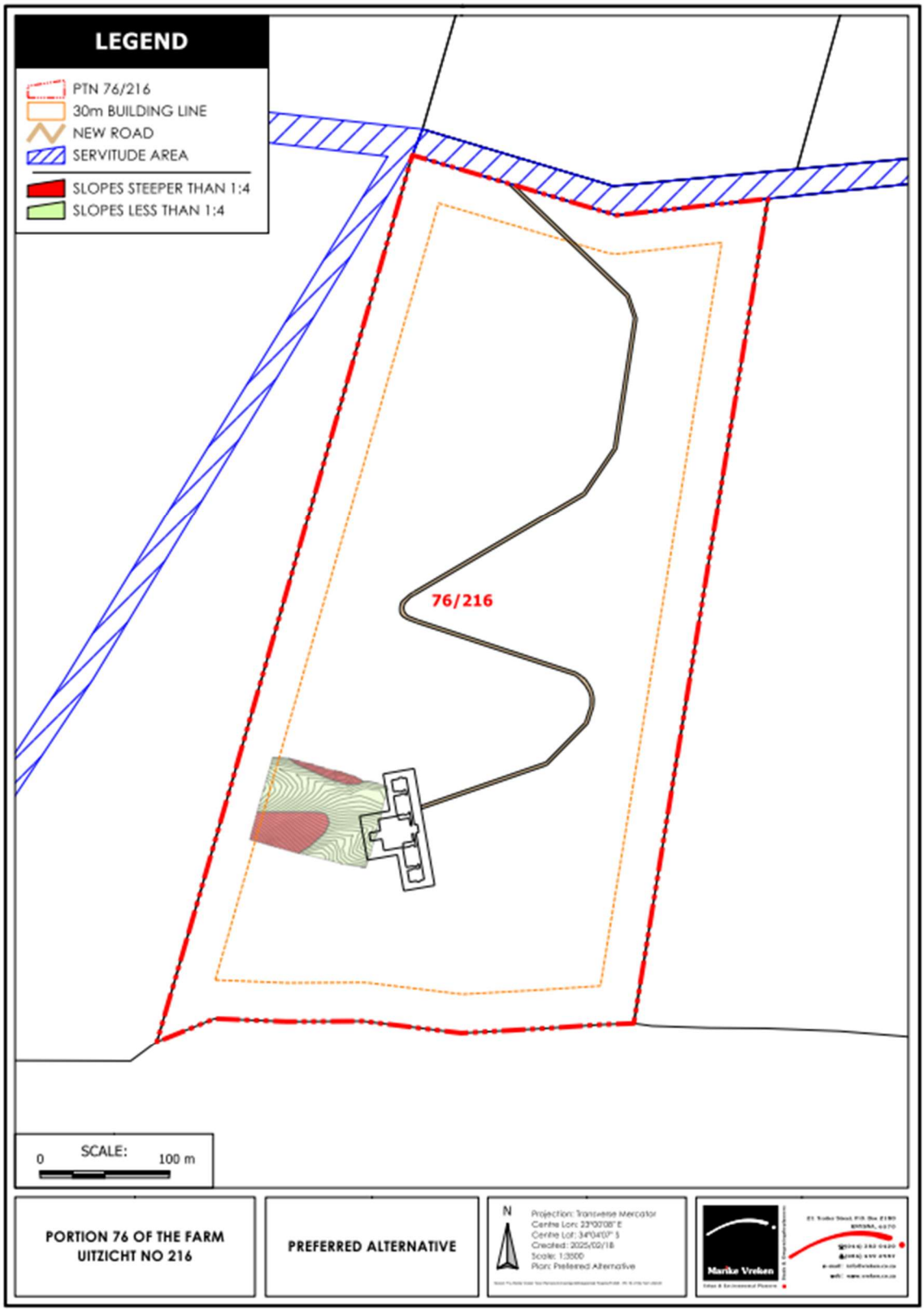
Date created: August 10, 2020

Compiled with CapeFarmMapper

Western Cape Government
Agriculture

Aerial Plan of the proposed activity (1000m^2)




LEGEND
PTN 76/216
30m BUILDING LINE
NEW ROAD
SERVITUDE AREA
SLOPES STEEPER THAN 1:4
SLOPES LESS THAN 1:4
76/216
SCALE:
0
100 m
PORTION 76 OF THE FARM UITZICHT NO 216
PREFERRED ALTERNATIVE
N
Projection: Transverse Mercator
Centre Lon: 23°00'00" E
Centre Lat: 34°04'07" S
Created: 2025/02/18
Scale: 1:3000
Plan: Preferred Alternative
Marike Vreken

Section D

Description of the scope of the proposed activity

In terms of NEMA (April 2020):

(Refer to Architectural Drawings – 'Nico Vreken Architect')

The applicant proposes to exercise the primary land use rights of Portion 76 of the Farm Uitzicht No. 216, Knysna Municipality, through the construction of a single primary dwelling (main farmhouse) within the south-western portion of the site. The development proposal has been refined to significantly reduce its environmental footprint.

Main Dwelling House (Preferred Alternative)

- A low-profile, single-storey structure, limited to a total built footprint of ±1 000 m², including covered verandas and an integrated garage.
- The design will reflect a contemporary coastal style, making use of non-reflective, earthy-toned materials to blend with the natural surroundings and reduce visual impact.

Access to Portion 76 of the Farm Uitzicht 216:

- A short internal driveway will be constructed, providing access from the existing servitude road off Kerk Laan to the dwelling footprint.
- The driveway will follow the natural contours of the site to minimise cut-and-fill, erosion risk, and vegetation clearance.

The existing public access road is shown on the General Plan (SG 6783/1951) and is indicated as a public access servitude (Kerk Laan), measuring 60 Cape Feet wide (i.e. 18,891m wide). Kerk Laan forms the northern boundary of the application area.

FIGURE 2: APPLICATION AREA IN RELATION TO EXISTING ACCESS SERVITUDE

Internal Road

The proposal entails the construction of a new internal road to provide access to the southern part of the property. The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide and the disturbed area for construction of the road varies between 4 to 5.5 meters wide.

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 Forestry, Fisheries and the Environment (DFFE). The following activities, as per NEMA Regulations, have been identified below:

Listed activity as described in GN R.325, 324, 327	Description of project activity
Listing Notice 3 Activity No. 4 The development of a road wider than 4 meters with a reserve less than 13.5 meters **(i) Western Cape** ii. Areas outside urban areas: (aa) Areas containing indigenous vegetation	The internal road will connect the northwestern side of the property to the southwest side of the property in order to gain access to the proposed construction of the main residential dwelling. The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide and

	disturbed area for construction of the road varies between 4 to 5.5 meters wide.
Listing Notice 3 Activity No. 12 The clearance of an area of 300 square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. **(a) Western Cape** I. Within any critically endangered or endangered ecosystems listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; II. Within critical biodiversity areas identified in bioregional plans.	The Ecosystem Threat status indicates that the Northern Portion of the property is classed as Critical Endangered and the Southern Portion as Least Threatened. This is as a result of the vegetation found on the site. The Northern Portion is identified as having Knysna Sand Fynbos with an ecological status of Critically Endangered and the Southern Portion as Goukamma Dune Thicket with an ecological status of Least Threatened. The entire property has been designated a CBA status.

Principals contained in Section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998), as amended Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. The property is currently vacant with no residential dwellings on site.

Development must be socially, environmentally and economically sustainable.

(a) Sustainable development requires the consideration of all relevant factors including the following:

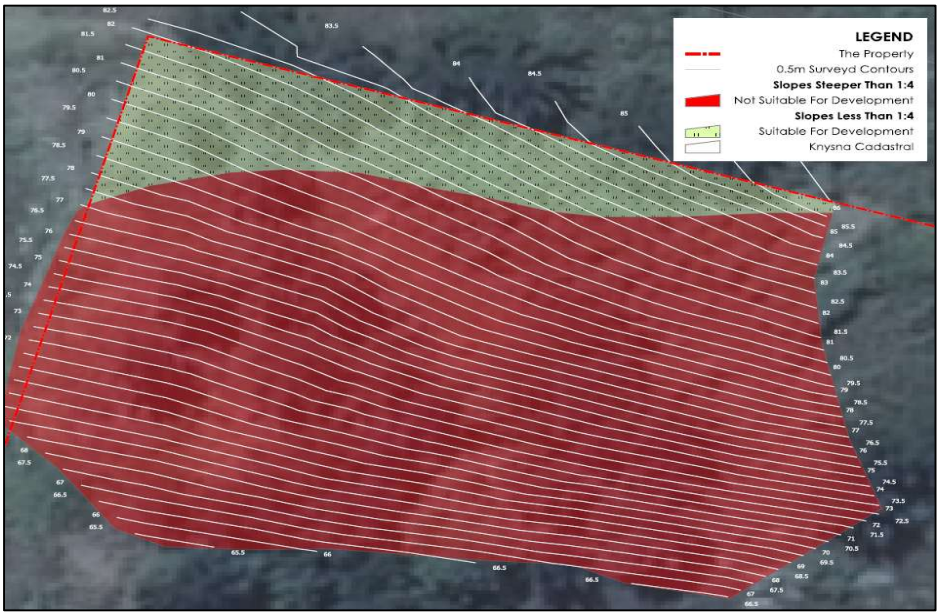
(ii) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied.

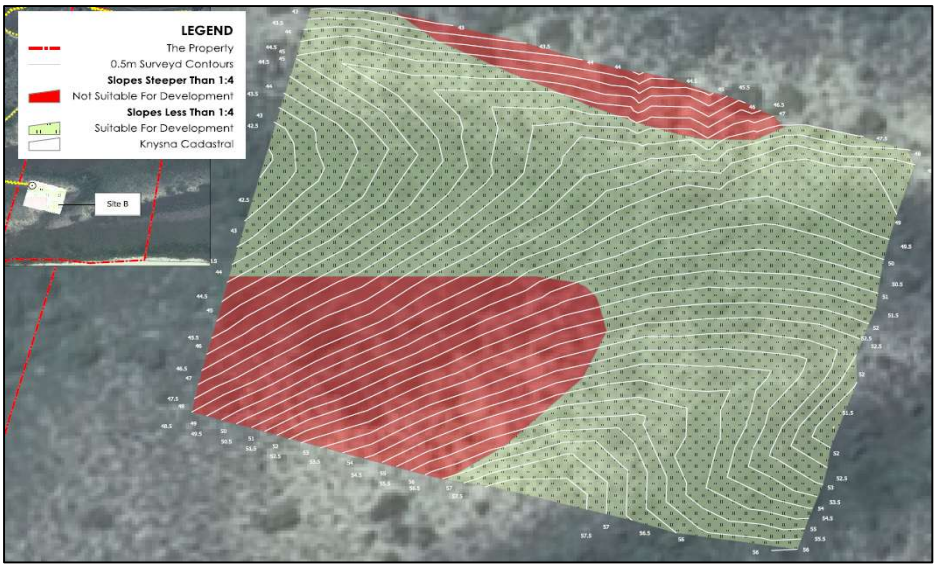
It is suggested that the proposed development works closely with SanParks to minimise negative impacts on the receiving environment. A survey was conducted by Eden Geomatics 2016 on the two identified sites suitable for development, situated on the northwestern corner and the south western corner of portion 76 of the farm Uitzicht 216.

The property is characterised by hilly topography, with distinct ridgelines and thickly vegetated valleys with moderate slopes.

The height of the application area is at an average height of between 40m and 60m above MSL. The average slope percentage is within the 25%+ category. The southern portion of the property has relatively steep slopes up to 55%.

The identified site has relatively even sloped in the southern portion of the site, which is suitable for development. The new buildings are proposed on one site in the areas suitable for development. No development is proposed on the other sections of the site where steep slopes and uneven ground are present.





The internal road was designed after a geotechnical specialist was appointed to ensure that the negative impacts on the receiving environment are avoided and mitigated.

(iii) That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied.

An environmental impact assessment within this report will identify negative and positive environmental impacts and ensure that mitigation measures are identified to avoid pollution and degradation of the receiving environment.

(iv) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied.

Biodiversity, heritage and scenic resources all form part of the rural conservation agenda, both at the landscape and farm level. The WCG approach to Conservation is to formally protect priority conservation areas, establish ecological linkages across the rural landscape, and mainstream a conservation ethic into all rural activities.

The objectives for this category, as per the guidelines, are:

- Protect and conserve important terrestrial, aquatic (rivers, wetlands and estuaries) and marine habitats, as identified through a Systematic Biodiversity Planning or similar conservation planning process.
- Facilitate the formal protection of priority conservation areas (public and private), as well as implement conservation management actions for CBAs and ESAs that are not formally proclaimed nature reserves.
- Towards mitigating the impacts of climate change, to establish ecological corridors across the rural landscape.
- Protect the scenic qualities of the Western Cape's cultural and natural landscapes.
- Protect the Western Cape's rural 'sense of place' and structures of heritage and archaeological significance and ensure that new development respects cultural landscapes and sites.

(v) 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.

The waste hierarchy will be followed during the construction and operational phase of the project.

(vi) (v) 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.

No wastage will occur on-site during the construction phase. Rainwater tanks will be established at each building. Solar energy is to be implemented. The development is proposed to be "off-grid".

(vii) (vi) 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.

Rainwater tanks and solar energy will be implemented.

(viii) (vii) 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.

A risk-averse and cautious approach is being applied when assessing the receiving environment and people's environmental rights.

(ix) (viii) 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.

Negative impacts on the environment and people's environmental rights will be identified and mitigation measures put in place to prevent negative impacts and enhance positive impacts.

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 of a Main residential dwelling and internal road on Portion 76 of the Farm Uitzicht No 216.

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**
ENVIRONMENTAL CONSERVATION ACT (ACT 73 OF 1989)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/~~ **RELEVANT CONSIDERATION**	The Environment Conservation Act makes provision for the protection of areas which have particular environmental importance, which are sensitive, or which are under intense pressure from development. In many regions, our coastal zone needs protection for all these reasons.
NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) AND THE 2014 EIA REGULATIONS AS AMENDED IN 2017	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/~~ **AUTHORIZATION** / ~~COMMENT/ RELEVANT CONSIDERATION~~	In process of a BAR application

NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (ACT NO 10 OF 2004)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/ AUTHORIZATION~~ / **COMMENT/** ~~RELEVANT CONSIDERATION~~	Cape Nature to provide comments. A vegetation Sensitivity analysis specialist study was undertaken.
NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT (ACT NO 24 OF 2008)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT~~/ **RELEVANT CONSIDERATION**	The ICM Act is a specific environmental management act under the umbrella of NEMA. The proposed development does not fall within the littoral active zone.
NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (ACT 57 OF 2003) REGULATIONS FOR THE PROPER ADMINISTRATION OF THE KNYSNA PROTECTED ENVIRONMENT (R 1175 OF DEC 2009)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/~~ **RELEVANT CONSIDERATION**	The property does not fall within the protected area neither does it border a protected area.
NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (ACT 59 OF 2008)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/~~ **RELEVANT CONSIDERATION**	The Waste Hierarchy will be adhered to during the construction and operational phase. The EMPr covers the waste disposal aspect in detail.
NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT (ACT NO 39 OF 2004)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities.	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/ RELEVANT CONSIDERATION~~	N/A

NATIONAL FORESTS ACT (ACT 84 OF 1998)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *DAFF Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION /~~ **COMMENT/ RELEVANT CONSIDERATION**	Should a protected tree need to be cut/ destroyed relevant authorization will be obtained from the Department of DEFF
FORESTRY LAWS AMENDMENT ACT (ACT 35 OF 2005)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *DAFF Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/~~ **RELEVANT CONSIDERATION**	N/A
NATIONAL WATER ACT (ACT 36 OF 1998)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *Dept of Water Affairs Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION /~~ **COMMENT/ RELEVANT CONSIDERATION**	The borehole on the site needs to be registered.
WATER SERVICES ACT (ACT 108 OF 1997)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *Dept of Water Affairs Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION /~~ **COMMENT/ RELEVANT CONSIDERATION**	The borehole on the site needs to be registered.
SEA SHORE ACT (ACT 21 OF 1935)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/~~ **RELEVANT CONSIDERATION**	The proposed development does not fall within the littoral active zone.

	relevant Competent Authorities.		
WESTERN CAPE NATURE CONSERVATION LAWS AMENDMENT ACT (ACT 3 OF 2000)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *CapeNature Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION /~~ **COMMENT/ RELEVANT CONSIDERATION**	Cape Nature to provide comments. A vegetation Sensitivity analysis specialist study was undertaken.
CONSERVATION OF AGRICULTURAL RESOURCES ACT (ACT 43 OF 1983)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *Dept. of Agriculture Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION /~~ **COMMENT/ RELEVANT CONSIDERATION**	Department of Agriculture to provide comment.
NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities identified as relevant Competent Authorities.	**PERMIT** ~~/ LICENSE/ AUTHORIZATION / COMMENT/ RELEVANT CONSIDERATION~~	An application will be made in terms of section 38(8) of the NHRA.
NATIONAL HEALTH ACT (ACT 61 OF 2003)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities have been identified as relevant Competent Authorities. *Dept. of Health Jurisdiction*	~~PERMIT / LICENSE/ AUTHORIZATION / COMMENT/~~ **RELEVANT CONSIDERATION**	In terms of this Act, a Health and Safety Officer and protocol must be implemented during the construction phase.
THE SOUTH AFRICAN ROADS AGENCY LIMITED AND NATIONAL ROADS ACT (ACT 7 OF 1998)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities, have been identified as	~~PERMIT / LICENSE/ AUTHORIZATION /~~ **COMMENT**/ ~~RELEVANT CONSIDERATION~~	Asked to participate during the PPP

	relevant Competent Authorities. *SANRAL Jurisdiction*		
Outiniqua Sensitive Coastal Area Extension Report (OSCAER)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities, have been identified as relevant Competent Authorities.	**PERMIT** ~~/ LICENSE/ AUTHORIZATION / COMMENT/ RELEVANT CONSIDERATION~~	After Environmental Authorisation is obtained, it is required to apply for an OSCAER permit

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
EIA guideline and information document series. Guideline on transitional arrangements March 2013	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Generic Terms of Reference for EAPS and Project Schedules	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Public Participation	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Alternatives	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Need and Desirability	Department of Environmental Affairs, Republic of South Africa.

	All Provincial Departments that have been identified as Competent Authorities.
DEA&DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP)	Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)

Section F

Need and Desirability for the proposed development

The need for and the desirability of a proposed development forms a key component of any EIA application. The consideration of proposed developments in the context of the various spatial planning tools and policies applicable to the study area forms an integral part of the present environmental processes. The "need and desirability" will be determined by considering the broader community's needs and interests as reflected in a credible IDP, SDF and EMF for the area, and as determined by the EIA. It is essential that national policies and strategies support growth in the economy. It is also essential that these policies take cognisance of strategic concerns such as climate change and food security, as well as the sustainability in the supply of natural resources and the status of our ecosystem services. In other words, to achieve our Constitutional goal of a better quality of life for all now and in future, through equitable access to resources and shared prosperity, it is essential that society improves on the efficiency and responsibility with which we use resources, and improve on the level of integration of social, economic, ecological and governance systems *[DEA (2017), Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa ISBN: 978-0-9802694-4-4]*

Identification of plans, guidelines, spatial tools, municipal development frameworks and instruments that are applicable to the proposed activity

The table below identifies all plans, guidelines, spatial tools and municipal development frameworks that are applicable to the proposed activity. The information was obtained from the Marike Vreken Specialist Town Planning Report for EIA purposes, April 2020:

Is the activity permitted in terms of the property's existing land use rights?
The Application area is zoned "Agriculture Zone I", and "Agriculture" is a primary land use right in this zoning category. The Section 8 Zoning Scheme Regulations, 1988 define "Agriculture" as: *"…the cultivation of land for raising crops and plants, including plantations, or the breeding of animals, including any form of farming activity, for example, stock, **bee or bird farming**, or any stud farm or farm for the keeping or breeding of animals, or a riding schools, or running a game farm on an extensive basis, **or natural veld**, and comprises only those activities and buildings that directly relate to the main farming activities on the farm, but does not include abattoirs, feed pen farming, aquaculture or other defined consent uses..."*

The proposal is to exercise the primary land use rights of the property, (i.e. construction of a farmhouse (Main dwelling unit). The dwelling unit complies with the definition of 'dwelling unit'[1] as per the Section 8 Zoning Scheme Regulations, 1988.

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

The Western Cape Provincial SDF was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that "communicates the provinces spatial planning agenda".

The PSDF sets out a policy framework within which the Western Cape Government will carry out its spatial planning responsibilities. Each of the three spatial themes contributes to the achievement of the Western Cape strategic objectives. These policies are categorised into three themes, namely:

- **Resources:** Sustainable use of spatial assets and resources
- **Space Economy:** Opening up opportunities in the Space Economy
- **Settlement:** Developing Integrated and sustainable settlements.

The Western Cape's agenda for spatial transformation and improved efficiencies in the use of natural resources are closely linked. The PSDF states that the paradigm that economic growth implies the ongoing depletion of the province's natural capital needs to be broken. This is the rationale for the PSDF embracing a transition to a Green Economy. The so-called 'decoupling' of economic growth strived for requires reductions/substitutions and/or replacements in the use of limited resources while avoiding negative environmental impacts. The table below contains a summary of the key transitions promoted in the PSDF:

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 infrastrucutre	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

KEY TRANSITIONS FOR THE PSDF

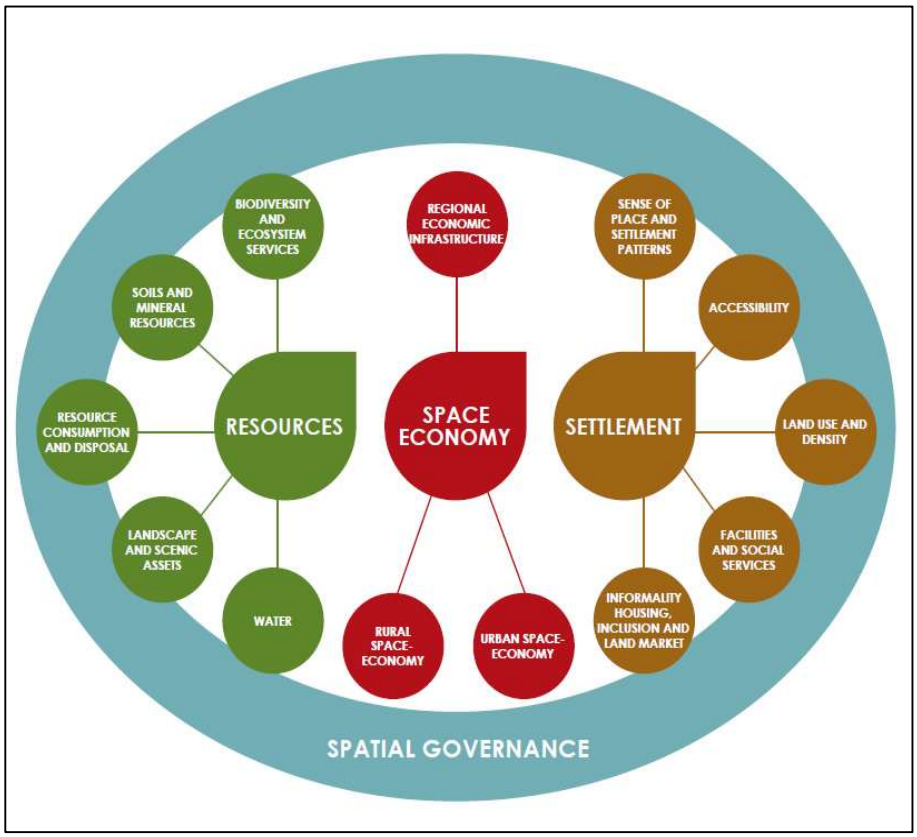
The recent shift in legislative and policy frameworks has clearly outlined the roles and responsibilities of provincial and municipal spatial planning and should be integrated towards the overall spatial structuring plan for the province to create and preserve the resources of the province more effectively through sustainable urban environments for future generations. This shift in spatial planning meant that provincial inputs are, in general, limited to provincial-scale planning.

[1] **'Dwelling unit'** means a self-contained interleading group of rooms with not more than one kitchen, used only for the living accommodation and housing of a single family, together with such outbuildings as are ordinarily used therewith.

The proposed development complements the SDF's spatial goals that aim to take the Western Cape on a path towards:

(i) Greater productivity, competitiveness and opportunities within the spatial economy.
(ii) More inclusive development and strengthening of the economy in rural areas.
(iii) Strengthening resilience and sustainable development.

However, it is important to note that some of the key policies laid down by the PSDF have a bearing on the proposed development.



POLICIES APPLICABLE TO THE PROPOSED DEVELOPMENT

POLICY R1: PROTECT BIODIVERSITY AND ECOSYSTEM SERVICES

POLICY STATEMENT	DEVELOPMENT'S RESPONSE
1. The Western Cape's CBA mapping which CapeNature is currently updating and refining, together with the draft priority climate change adaptation corridors delineate the Western Cape's biodiversity network. Continue to use CBA mapping to inform spatial planning and land use management decisions in the province.	*The entire property is earmarked as "Terrestrial CBA".* *The objective of this is to "…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…"* *EIA is currently in the process and the mapping has to be "ground-truthed" and motivated. The Proposed Site A has been disturbed and is suitable for building a dwelling house*

	development. No development is proposed on the remainder of the site.

POLICY R3: SAFEGUARD THE WESTERN CAPE'S AGRICULTURAL AND MINERAL RESOURCES, AND MANAGE THEIR SUSTAINABLE USE

POLICY STATEMENT	DEVELOPMENT'S RESPONSE
1. Record unique and high potential agricultural land (as currently being mapped by the Provincial Department of Agriculture) in municipal SDFs, demarcate urban edges to protect these assets, and adopt and apply policies to protect this resource (especially in areas where raw water is available)	*The application area makes no contribution whatsoever to agricultural production at this stage for crop and grazing purposes. However, the preservation of natural veld and bee farming will be practised on this property and both are agricultural activities. Bee farming may occur as a small-scale complementary use, but the farmhouse is the primary right being exercised. It can, therefore, be concluded that the property has low agricultural potential and no productive agricultural land will be lost by allowing the construction of the proposed buildings.*

The property is situated outside of the Urban Edge

Planning Implication:

The subject property is situated **outside** the urban edge of the Brenton on-sea area. The landowner will be exercising their primary land use rights for Agriculture Zone I properties; however, they require an EIA to allow development in a CBA area and the relaxation of the prescribed building lines. The mapping must be "ground-truthed" and motivated during the EIA process. WCPSDF puts a lot of focus on the protection/conservation of cultural and scenic landscapes. The application area is located on a prominent hill area. The visual impact was taken into consideration with the current design. The proposal is in line with the provisions of this spatial document and will not detract from the existing spatial pattern of the area, which is agriculture-zoned properties.

The development proposal is consistent with the strategic objectives and policies as set out by the Western Cape Spatial Development Framework. As stated above, it is directly in line with Policies R1 & R3.

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?).

Knysna Integrated Development Plan (2017–2022)

The IDP is the planning instrument that drives the process to address the socio-economic challenges as well as the service delivery and infrastructure backlogs experienced by communities in the municipality's area of jurisdiction.

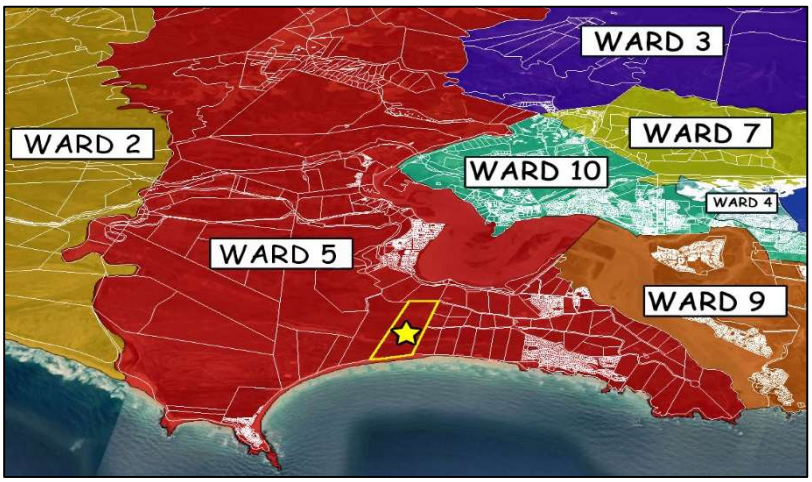
Knysna Municipality approved the 4th generation IDP during June 2017. According to this IDP, the municipality's vision is to:

- Encourage all members of society to participate in and support the municipal governance structure and to create opportunities for dialogue.
- Conserving and managing natural resources.
- Planning for the growth and development of quality municipal services to support the community.
- Creating an enabling environment to foster the development of our people and enabling them to contribute.
- Supporting and encouraging the development of investment, business, tourism and emerging industries.

The Knysna IDP identified seven Strategic objectives that are aligned with the national strategic focus areas as well as the Provincial Strategic Goals of the Western Cape Government. These objectives applicable to the proposed development are:

STRATEGIC OBJECTIVE	INTERVENTIONS
To ensure the provision of bulk infrastructure and basic service through the upgrading and replacement of ageing.	**Streets and stormwater:** ▪ To improve the conditions of all roads, streets and stormwater drainage in terms of the Pavement Management System (PMS). ▪ Forming partnerships with property owners to assist with the upgrading and maintenance of road infrastructure.
To promote a safe and healthy environment through the protection of our natural resources.	**Environmental Conservation:** ▪ Promote inclusive living spaces.

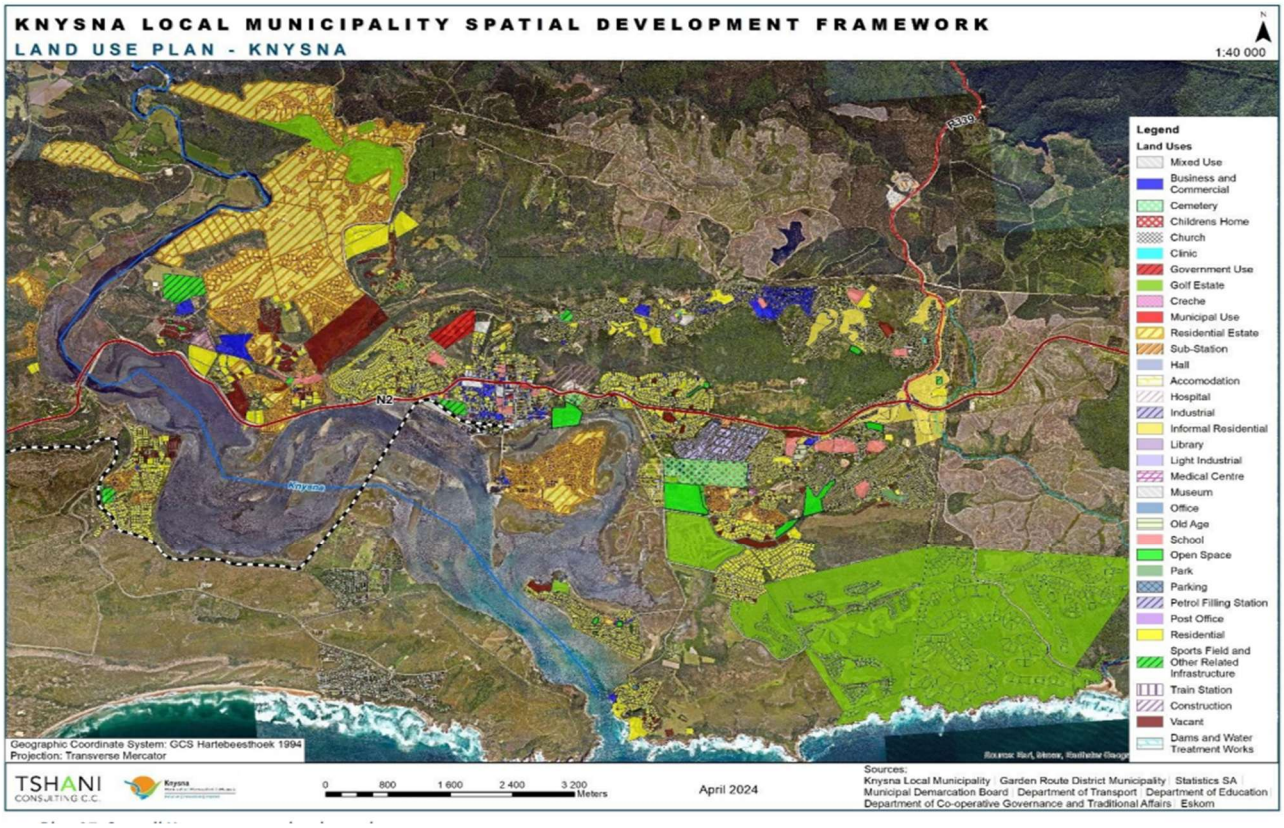
The subject property is located in Ward 5 of the Knysna Municipality. None of the issues raised in the community for Ward 5 applies to the proposed development.



KNYSNA WARDS

Planning Implication:

The IDP is a municipal planning tool to integrate municipal planning and allocate municipal funding to achieve strategic objectives that will contribute to the overall municipal vision. Temporary employment opportunities will be created during the construction phase. The proposal will also allow for a new agricultural activity in the form of bee farming that will also contribute to the growth of the local economy. It can be concluded that the proposed development is consistent with the strategic objectives and the envisioned outcome for the Knysna Municipal area.



According to the Knysna **SDF,** the application area is earmarked as a rural cluster or node as described in paragraph 6.1.2.a (IV)[2].

The Knysna SDF classifies this area as primarily rural and agricultural in nature; however, it is important to note that commercial agriculture may not be actively pursued in numerous cases. While very limited municipal infrastructural investment should occur, guidance is required for the management of land use within these settlements.

<u>Land-use Management Guidelines for rural clustering include:</u>

- Their agricultural character must be maintained.
- This applies to the aesthetics, the number of buildings, and the minimum erf sizes.
- A minimum subdivision size of 3ha or greater, depending on the ruling order, the property size in the node would apply.
- The primary right would be a dwelling house, essential outbuildings, and such agricultural buildings as are necessarily required for bona fide agricultural activity on the property.
- Options for rural recreational and economic opportunities could be considered, as long as it is in keeping with the rural character
- No municipal infrastructural services are to be delivered in the short to medium term.

Scenic Routes

The Brenton District Road 1600 is classified by the Knysna SDF as a Scenic Route[3].

This route should be a carrier of people (locals and tourists) travelling (bicycle & motorised transport) to specific destinations and having coordinated nodal stops (viewpoints) at specific points, where people have the opportunity to stop and enjoy the scenery.

The property is located in Ward 5. According to the Latest IDP review 2016/2017, there are no development projects for this specific location in Ward 5. However, the proposed development is consistent with the following strategic objectives:

- *To create an enabling environment for economic growth that attracts investors, encourages innovation and facilitates pro-poor interventions.*
- *To promote access for all citizens to equitable, appropriate and sustainable infrastructure and services within a safe environment.*

The above information was extracted from the Marike Vreken Urban and Environmental Planners report dated April 2020.

Approved Structure Plan of the Municipality

There is no approved structure plan for this specific location.

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 EMF states the following on page 23:

Rural development, i.e. development outside the Urban Edge, shall not exceed densities of 1du/10ha and may be considerably lower in landscapes with low visual carrying capacity.

Draft Western Cape Rural Development Guidelines (2009)

The Western Cape Provincial Government has developed guidelines to provide guidance to its social partners on land use planning and management outside the urban edge (i.e. in rural areas). Forming part of the roll-out of the Provincial Spatial Development Framework (PSDF), their objectives in introducing rural land use planning and management guidelines are:

- To promote sustainable development in appropriate rural locations throughout the Western Cape and ensure that the poor also share in the growth of the rural economy.
- To safeguard the functionality of the province's life-supporting ecosystem services (i.e. environmental goods and services).
- To maintain the integrity, authenticity and accessibility of the Western Cape's significant farming, ecological, cultural and scenic rural landscapes, and natural resources.
- To provide clarity to the provincial government's social partners on what kind of development is appropriate beyond the urban edge, suitable locations where it could take place, and the desirable form and scale of such development

According to these guidelines, the principles underpinning the Western Cape's rural land use management guidelines are as follows:

- Decisions on rural development applications should be based on the following sustainable land use principles:

- social inclusion,
- effective protection and enhancement of the environment,
- prudent use of natural resources, and
- maintaining high and stable levels of economic growth.

- Good quality and ***carefully sited development should be encouraged in existing settlements.***
- ***Accessibility*** should be a ***key consideration*** in all development decisions.
- New building development in the open countryside away from existing settlements should be strictly controlled regarding scale, height, colour, roof profile, etc.
- ***Priority*** should be given ***to the re-use of previously developed*** sites in preference to greenfield sites.
- All ***development in rural*** areas should ***be well developed and inclusive***, in keeping and scale with its location, and sensitive to the character of the rural landscape and local distinctiveness.

Detailed management guidelines are presented for the full spectrum of rural land uses. The provincial approach to managing the various rural land uses is as follows:

Conservation use: Biodiversity, heritage and scenic resources all form part of the rural conservation agenda, both at landscape and farm scales. The approach is to formally protect priority conservation areas, ***establish ecological linkages across*** the rural landscape, and ***mainstream a conservation ethic into all rural activities.***

Holiday accommodation: Given the Western Cape's unique rural communities and landscapes, tourism offers exciting prospects to diversify and strengthen the rural economy. Accordingly, the provincial approach is to facilitate the provision of a variety of holiday accommodation across the rural landscape that is in keeping with the local character.

Rural Housing: Towards integrated rural development and sustainable human settlements in the Western Cape, ***new housing development beyond the urban edge urgently needs to be curtailed***. The provincial approach is to channel pressures for residential development to existing towns, villages and hamlets. The only two exceptions put forward for housing development in the rural landscape are: providing 'on-and-off farm' security of tenure for farm workers; and providing restricted residential rights to incentivise the consolidation of rural properties of high biodiversity value and their incorporation into the conservation estate.

Tourist facilities: Towards ***diversifying*** the Western Cape's ***rural economic base*** into the ***tourism*** and ***recreation sectors and*** developing these sectors on a sustainable and equitable basis, the provincial approach is to facilitate appropriate investment in these sectors across the rural landscape.

The proposed development will also aim to conserve, rehabilitate and strengthen the existing biodiversity properties to achieve a higher conservation value, which would be beneficial to surrounding property owners.

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.)

Need

Need, as defined by DFFE, refers to the timing of the proposal, as such the question 'Do we need this development now?' In answering this question, the planning and land use policy of the area must be examined. Therefore, consistency with the existing approved Spatial Development Framework (SDF), the current Integrated Development Plan (IDP) and other municipal planning policies is important in the consideration of need.

Further considerations of need include the need of the community/area of the activity & land use – is the development "a societal priority". Need for a project also relates to the service capacity and consistency with infrastructure planning.

The landowner seeks to exercise their primary agricultural zoning rights by constructing a lawful dwelling house (farmhouse) on Portion 76. The need for residential accommodation is recognised as a basic landowner right in terms of Agriculture Zone I.

Bee farming has been identified as a complementary agricultural activity on the property, consistent with the agricultural zoning, but it is not the primary driver of the development. The proposed dwelling is not dependent on the scale of the bee farming operation and has been designed to be self-sufficient in terms of services (rainwater, septic system, solar).

The proposal, therefore, represents a low-impact, biodiversity-sensitive land use, consistent with the requirements of a Critical Biodiversity Area (CBA) and is motivated primarily on the basis of the landowner's right to a farmhouse, with bee farming as an incidental activity contributing to broader ecosystem services. The development footprint has been reduced to approximately 1000 m² to further minimise environmental impact while maintaining the landowner's right to a lawful farmhouse. There exists a distinct necessity for the proposal. There exists a distinct necessity for the proposal, which is relevant not only to the landowner but also to the wider public.

Desirability

The desirability of a proposed development also relies heavily on the consistency with policy documentation but has a distinctly spatial focus. The guideline on Need and Desirability specifically poses the question *"Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?"*

NEMA also links the desirability of development to the concept of the *"best practicable environmental option"*; this refers to the option that provides the most benefit and *causes the least damage to the environment, at a cost acceptable to society, in the long term as well as in the short term*. The consideration of alternatives is therefore closely related to this concept.

The subject property is currently zoned "Agriculture Zone I" in terms of the Section 8 Zoning Scheme Regulations (1988). The landowners intend to exercise their existing land use rights by utilising the property for agricultural activities and by constructing a dwelling house, as permitted by the specified scheme.

The entire application area is earmarked as a Critical Biodiversity Area, and therefore, the application must be made to obtain Environmental authorisation. The proposal was specifically designed for the best practicable environmental solution with the least disturbance. The refined design has downscaled the original dwelling from 3 000 m² to 1000 m² to ensure a proportionate and environmentally sensitive development footprint.

The proposal is in line with the applicable policy documentation (Western Cape Provincial SDF, Western Cape Rural Development Guidelines, Eden SDF, Knysna SDF and the Knysna IDP) meaning that it is in line with the spatial proposal and vision for the area whilst complying to the development guidelines for the current proposal. Therefore, the approval of this application would not compromise the integrity of the applicable policy documents agreed to by the relevant authorities.

It can, therefore, be concluded that the proposal can be regarded as desirable.

The above boxes for need and desirability can be ticked. The proposed development will not have a detrimental impact as it is in line with all planning legislation and consistent with the applicable spatial planning policies.

Planning Evaluation

The boxes above pertaining to need and desirability have been discussed and assessed.

The proposal aims to exercise the current land use rights to construct a primary dwelling house. The dwelling design and scale have been revised to a 1000 m² single-storey structure that aligns with the topography, thereby further reducing ecological disturbance. The dwelling unit complies with the definition of a dwelling unit as defined in the Section 8 Zoning Scheme Regulations, 1988. The proposed footprint in the building line area is an existing disturbed area.

The proposal is directly aligned with the strategic Objectives R1 & R3 as set out in the Western Cape Spatial Development Framework and in line with the overall vision for the area. The proposal is in line with the Provincial Rural Development Guidelines Criteria for implementation: Agriculture (Bird & Bee Farming), Rural Accommodation (Main dwelling), Conservation (Natural veld). The proposal is consistent with the Spatial Policy Statements & Guidelines of the Eden Spatial Development Framework and directly aligned with:

- Guideline 1.1.1. Contain development and manage rural areas through the appropriate application of SPCs
- Guideline 1.5.6. Coastal management

The proposal is in line with the demarcation as per the current Knysna SDF, which will remain agricultural. The Integrated Development Plan (IDP) sets out strategic objectives to achieve the desired goal of the Knysna Municipality. The proposal is directly linked with two of the strategic objectives, namely:

- To ensure the provision of bulk infrastructure and basic service through the upgrading and replacement of services.
- To promote a safe and healthy environment through the protection of our natural resources.

The landowners intend to assert their primary land use rights, and from a planning perspective, the proposal is both desirable and compliant with all relevant spatial planning documents. This proposed agricultural activity is anticipated to contribute to the global effort of bee repopulation, addressing a significant environmental concern. The proposal is expected to yield positive impacts on the local economy.

The proposal is consistent with the relevant spatial planning policies and will not impede any neighbouring landowner from lawfully exercising their existing land use rights. Furthermore, it will not negatively impact the character of the area and consequently, the proposal can be regarded as both desirable and suitable for the designated location.

The above information is extracted from the Marike Vreken Urban and Environmental Planners report dated April 2020.

Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?

Electricity

There is currently no electrical infrastructure present on the farm or in the adjacent road reserve to the north. 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 adjacent outbuilding units, should there be a requirement for increased energy generation capacity. The northern-facing roof of the main residence, which has an approximate area of 46 square meters, is capable of accommodating approximately 23 solar panels, providing a total capacity of 7 kilowatts.

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.

Distribution Network

A small distribution network of underground cabling is necessary to establish connections from the main house to all units. It is standard practice to excavate a trench measuring 450 mm in width and 800 mm in depth for the burial of the cables. Alternatively, the cables may be secured to walkways utilising cable trays.

Remote equipment that requires electrical power, such as boreholes, can be effectively sustained through the use of solar pumps with dedicated photovoltaic panels. Alternatively, a cable may be installed, contingent upon the distance from the main residence and the applicable regulations governing such installations.

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.

ENVIRONMENTAL IMPACT

Impact on Existing Electricity Consumers

The development is anticipated to have a minimal impact on the quality of supply for existing customers, as it will operate independently from the grid.

Environmental impact

The internal electrical distribution network will be meticulously designed to integrate harmoniously with the development as well as the surrounding natural environment. All structures, equipment, and switchgear will be constructed in a low-profile manner, adhering to the natural contours of the landscape. The selection of colours

and shapes for these elements will be undertaken with careful consideration to ensure they blend seamlessly with the environment. To minimise any additional disturbance to vegetation, services will predominantly be located within road reserves. Additionally, the environmental management plan for the development will be integral to the specifications and requirements guiding the electrical construction activities.

Energy Efficiency and Renewable Energy

The consideration of cost-effective alternative energy sources, such as natural gas and LED lighting, will be undertaken, alongside the implementation of energy-efficient systems as stipulated by the National Building Regulations. The adoption of energy-efficient equipment will also serve to decrease energy demand and consumption, thereby allowing for the potential reduction in the size of the required solar energy system.

The above information was obtained from the BDE Consulting Engineers report dated May 2019.

Water Reticulation

The applicant proposes to supply water for the development by means of the following:

- Installing boreholes – an application for a water licence will have to be submitted to the Breede-Gouritz Catchment Management Agency.
- A substantial proportion of the water demand will be addressed through the collection of rainwater. The aggregate roof area totals 842 m² and given the average annual rainfall of 500 mm in the Knysna region, this system is estimated to supply approximately 421 kilolitres (kl) of rainwater. It is important to note that this rainwater collection will only meet around 87% of the total water demand.
- The main building will make provision for 110kl rainwater/borehole storage.

Fire

This development is categorised as low-risk and falls within Group 2: residential areas (residential zone 1). In these designated areas, the gross floor area of dwelling houses, including any associated outbuildings, is typically expected to range between 100 square meters and 200 square meters, in accordance with the "Guidelines for Human Settlement Planning and Design."

The pool, with a capacity of 160 kilolitres (kl), shall serve as the primary reservoir for fire extinguishing purposes. Should the boreholes be equipped with power supplied by on-site generators, these boreholes may be classified as supplementary on-site storage capacity.

Sewer Reticulation

At this time, municipal bulk sewer services are not available in this area. Following consultation with the Technical Department of Knysna Municipality, it has been determined that the implementation of septic tanks with soakaways is a viable option for managing effluent in this locality.

The above information was obtained from the Engeolab desktop investigation, Geophysical investigation & Feasibility Assessment into groundwater abstraction dated October 2018, and the Civil Services Report dated 2018.

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

This development operates off-grid and, as such, will not affect the infrastructure planning within the municipality.

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

This is a private development.

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 proposed development is designed to be sustainable and will effectively utilise the existing primary land use rights. This proposal will not contribute to urban sprawl.
Is the development the best practicable environmental option for this land/site?
The application area currently does not contribute to agricultural production for crop cultivation or grazing activities. Nonetheless, the preservation of natural veld and the practice of bee farming will take place on this property, both of which are recognised as agricultural activities. Bee farming may occur as a small-scale complementary use, but the farmhouse is the primary right being exercised. Consequently, it can be concluded that this property possesses low agricultural potential, and the establishment of the proposed buildings will not result in the loss of productive agricultural land. The properties in the immediate vicinity were initially designated for agricultural and conservation purposes. However, over time, agricultural utilisation in the area has declined, leading to the emergence of various alternative land uses. While some agricultural properties remain, they are predominantly employed for rural residential purposes with limited agricultural activities. Despite the diversification of land uses, the area has retained its primarily rural character. The landowners are seeking to implement their existing land use rights, as stipulated in the Section 8 Zoning Scheme Regulations of 1988, specifically for properties classified as "Agricultural Zone I." The proposed agricultural activities, as well as the buildings planned for this property, will adhere to the established guidelines for the implementation of agricultural practices, rural accommodation, and conservation within the rural area. This initiative is designed to preserve the agricultural character of the region and is consistent with the principles outlined in the Rural Development guidelines.
Will the benefits of the proposed land use/development outweigh the negative impacts of it?
The construction of the primary residential dwelling (Main dwelling) exerts a negligible impact on the surrounding environment, thereby safeguarding the natural beauty of the area and preserving vital ecological corridors.
Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?
No. The applicant possesses the legal right to construct a residential dwelling on the property.
Will any person's rights be negatively affected by the proposed activity/ies?
The proposal allows surrounding landowners to retain their existing land use rights. The introduction of a residential dwelling will enhance surveillance in the rural area, resulting in increased safety and security within the area.
What will the benefits be to society in general and to the local communities?
Employment opportunities will be generated for local communities throughout the construction phase.
Any other need and desirability considerations related to the proposed activity?
<u>Need</u> Need, as defined by DFFE refers to the timing of the proposal, as such the question 'Do we need this development now?' In answering this question, the planning and land use policy of the area must be examined. Therefore, consistency with the existing approved Spatial Development Framework (SDF), the current Integrated Development Plan (IDP) and other municipal planning policies are important in the consideration of need.

Further considerations of need include the need of the community/area of the activity & land use – is the development "a societal priority". Need for a project also relates to the service capacity and consistency with infrastructure planning.

The landowner seeks to exercise their primary agricultural zoning rights by constructing a lawful dwelling house (farmhouse) on Portion 76. The need for residential accommodation is recognised as a basic landowner right in terms of Agriculture Zone I.

Bee farming has been identified as a complementary agricultural activity on the property, consistent with the agricultural zoning, but it is not the primary driver of the development. The proposed dwelling is not dependent on the scale of the bee farming operation and has been designed to be self-sufficient in terms of services (rainwater, septic system, solar).

The proposal, therefore, represents a low-impact, biodiversity-sensitive land use, consistent with the requirements of a Critical Biodiversity Area (CBA) and is motivated primarily on the basis of the landowner's right to a farmhouse, with bee farming as an incidental activity contributing to broader ecosystem services.

There exists a distinct necessity for the proposal, which is relevant not only to the landowner but also to the wider public.

Desirability

The desirability of a proposed development also relies heavily on the consistency with policy documentation but has a distinctly spatial focus. The guideline on Need and Desirability specifically poses the question *"Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?"*

NEMA also links the desirability of development to the concept of the *"best practicable environmental option"*; this refers to the option that provides the most benefit and *causes the least damage to the environment, at a cost acceptable to society, in the long term as well as in the short term*. The consideration of alternatives is therefore closely related to this concept.

The subject property is currently zoned "Agriculture Zone I" in terms of the Section 8 Zoning Scheme Regulations (1988). The landowners intend to exercise their existing land use rights by utilising the property for agricultural activities and by constructing a dwelling house, as permitted by the specified scheme.

The entire application area is earmarked as a Critical Biodiversity Area, and therefore, the application must be made to obtain Environmental authorisation. The proposal was specifically designed for the best practicable environmental solution with the least disturbance.

The proposal is in line with the applicable policy documentation (Western Cape Provincial SDF, Western Cape Rural Development Guidelines, Eden SDF, Knysna SDF and the Knysna IDP), meaning that it is in line with the spatial proposal and vision for the area whilst complying with the development guidelines for the current proposal. Therefore, the approval of this application would not compromise the integrity of the applicable policy documents agreed to by the relevant authorities.

It can, therefore, be concluded that the proposal can be regarded as desirable.

The above boxes for need and desirability can be ticked. The proposed development will not have an insignificant impact as it is in line with all planning legislation and consistent with the applicable spatial planning policies.

The above information was extracted from the Marike Vreken Urban and Environmental Planners report dated April 2020.

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.

Section G

A motivation for the preferred site, activity and technology alternative

"Alternatives", in relation to a proposed activity, means meeting the general purpose and requirements of the activity which may include alternatives to –

(a) The property on which, or the location where, it is proposed to undertake the activity	There is only one site.
(b) The type of activity to be undertaken	**The preferred alternative**: The development proposal entails the following: (i) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (1000m²). (ii) The construction of a new internal road to provide access to the southern portion of the property. **Alternative 1**: The development proposal entails the following:

	(i) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (3000m²). (ii) The construction of a new internal road to provide access to the southern portion of the property. **Alternative 2** The development proposal entails the following: (iii) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (4000m²). (iv) The construction of one (x1) farm manager's house in the northwestern corner of the property (1200m²). (v) The construction of a new internal road to provide access to the southern portion of the property. **Alternative 3**: The main dwelling and all associated infrastructure to the northern portion of the property, adjacent to the existing public access route (Bushy Way). The development proposal entails the following: (i) The construction of one (x1) main dwelling house to be situated in the northern corner of the property (3000m²). (ii) An internal access track would connect the development directly to Bushy Way.
(c) The design or layout of the activity	**The preferred alternative**: The development proposal entails the following: (iii) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (1000m²). (iv) The construction of a new internal road to provide access to the southern portion of the property. **Alternative 1**: The development proposal entails the following: (vi) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (3000m²).

	(vii) The construction of a new internal road to provide access to the southern portion of the property. **<u>Alternative 2</u>** The development proposal entails the following: (viii) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (4000m²). (ix) The construction of one (x1) farm manager's house in the northwestern corner of the property (1200m²). (x) The construction of a new internal road to provide access to the southern portion of the property. **<u>Alternative 3</u>**: The main dwelling and all associated infrastructure to the northern portion of the property, adjacent to the existing public access route (Bushy Way). The development proposal entails the following: (iii) The construction of one (x1) main dwelling house to be situated in the northern corner of the property (3000m²). (i) An internal access track would connect the development directly to Bushy Way.
(d) The Technology to be used in the activity	N/A. The entire proposed development will be off-grid. 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. 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.
(e) The operation aspect of the activity	The agricultural practices proposed for the site will focus on bee farming. **No Go Option** – The site will remain as is.
(f) The option of not implementing the activity	This option must always be assessed and is addressed below.

The preferred Alternative

Description of the Preferred Proposed Development

The proposal is to exercise the primary land use rights of the property (i.e. construction of a primary house). The development proposal entails the following:

(i) The construction of one (1x) Main dwelling house to be situated in the south-western corner of the property.
(ii) The construction of a new internal road to provide access to the southern portion of the property.

The Main Dwelling House

The primary dwelling unit will be situated in the south-western portion of the property, consisting of the following inter-leading rooms ±1000m²:

- Bedrooms.
- Open plan living area consisting of the kitchen, lounge area, dining area, kitchen, bar, scullery, bathroom and wine cellar.
- Open deck and swimming pool.

The Internal Road

The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide, and the disturbed area for construction of the road varies between 4 to 5.5 meters wide. The internal road is to access the southwestern side of the property.

Services

Electricity

There is currently no electrical infrastructure present on the farm or in the adjacent road reserve to the north. 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 adjacent outbuilding units, should there be a requirement for increased energy generation capacity. The northern-facing roof of the main residence, which has an approximate area of 46 square meters, is capable of accommodating approximately 23 solar panels, providing a total capacity of 7 kilowatts.

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.

Distribution Network

A small distribution network of underground cabling is necessary to establish connections from the main house to all units. It is standard practice to excavate a trench measuring 450 mm in width and 800 mm in depth for the burial of the cables. Alternatively, the cables may be secured to walkways utilising cable trays.

Remote equipment that requires electrical power, such as boreholes, can be effectively sustained through the use of solar pumps with dedicated photovoltaic panels. Alternatively, a cable may be installed, contingent upon the distance from the main residence and the applicable regulations governing such installations.

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.

ENVIRONMENTAL IMPACT

Impact on Existing Electricity Consumers

The development is anticipated to have a minimal impact on the quality of supply for existing customers, as it will operate independently from the grid.

Alternative 1

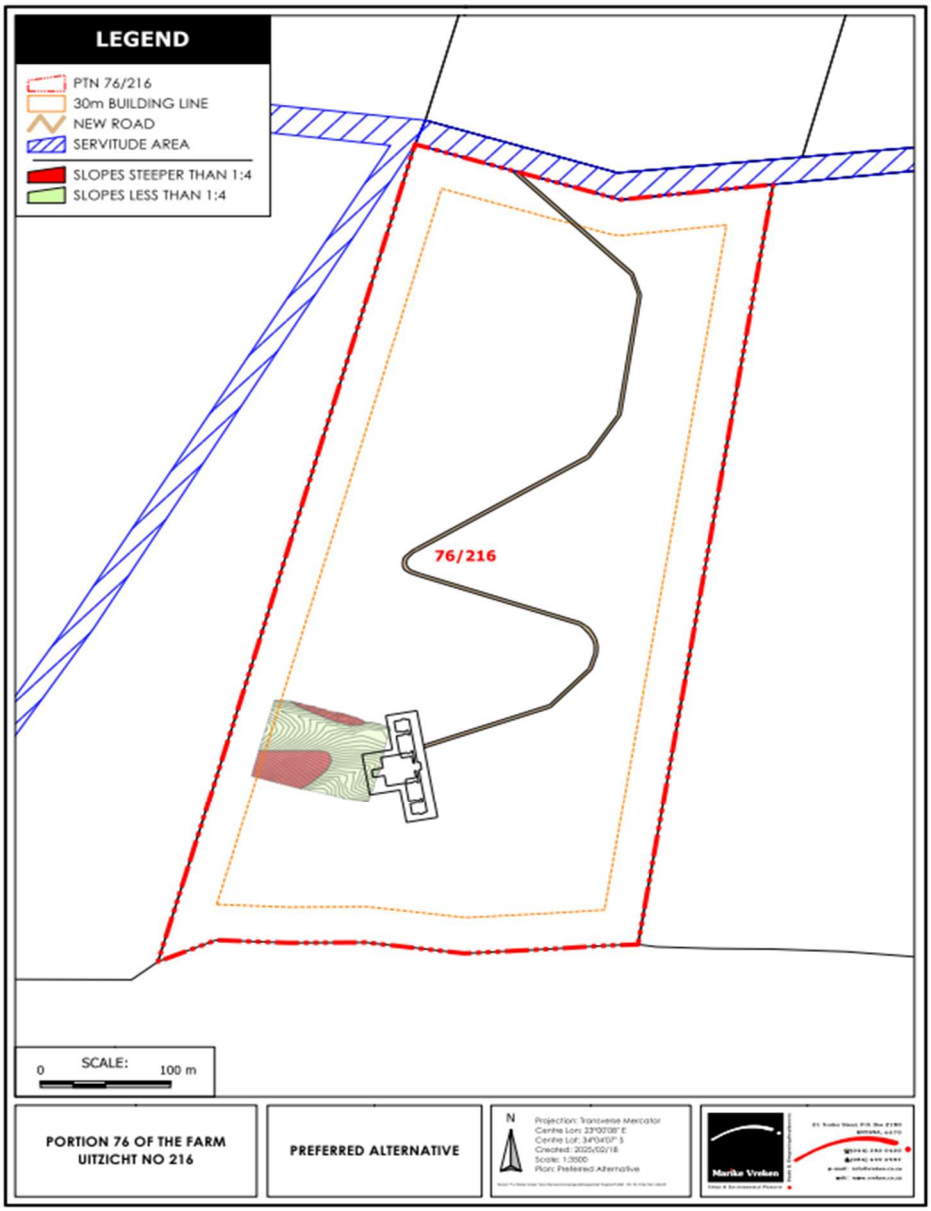
The proposal is to exercise the primary land use rights of the property (i.e. construction of a primary house). The development proposal entails the following:

(iii) The construction of one (1x) Main dwelling house to be situated in the south-western corner of the property.
(iv) The construction of a new internal road to provide access to the southern portion of the property.

The Main Dwelling House

The primary dwelling unit will be situated in the south-western portion of the property, consisting of the following inter-leading rooms ±3000m²:

- 6 Bedrooms.
- Open plan living area consisting of the kitchen, lounge area, dining area, kitchen, bar, scullery, bathroom and wine cellar.
- Open deck and swimming pool.



Alternative 2

Description of the Alternative 1 Development

The proposal is to exercise the primary land use rights of the property (i.e. construction of a main farmhouse and the farm manager's house). The development proposal entails the following:

(i) The construction of 1one (x1) main dwelling house to be situated in the south-western corner of the property (4000m²).
(ii) The construction of one (x1) farm manager's house in the north-western corner of the property (1200m²).
(iii) The construction of a new internal road to provide access to the southern portion of the property.

The Main Dwelling House

The primary dwelling unit will be situated in the south-western portion of the property, consisting of the following inter-leading rooms ±3000m²:

- 6 Bedrooms.
- Open plan living area consisting of the kitchen, lounge area, dining area, kitchen, bar, scullery, bathroom and wine cellar.

The Farm Manager's House

The Dwelling house to be situated in the north-western corner will encroach the prescribed 30m building line, and therefore, an application must be made for a permanent departure for the relaxation of the northern and western building lines.

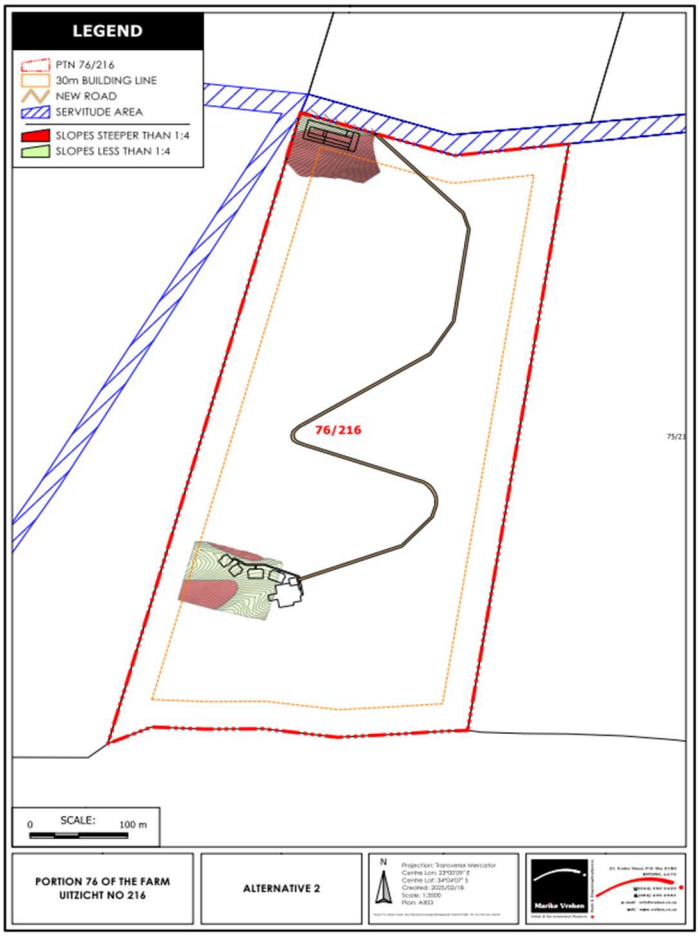
The main reason why the house encroaches on the prescribed building line is to prevent unnecessary disturbance of sensitive, pristine fynbos. The proposed footprint in the building line area is an existing transformed area, and consists of the following:

- Ground Floor: 600m²
- First Floor: 400m²
- Footprint: 600m²
- Disturbance area: 1200m²

This option would result in the direct loss of Critically Endangered Knysna Sand Fynbos (NEM:BA, 2022 list). The loss of such vegetation is considered irreplaceable and irreversible. For this reason, Alternative 1 is not viable and cannot be supported in terms of national legislation or provincial biodiversity planning frameworks (WCBSP)."

The Internal Road

The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide and the disturbed area for construction of the road varies between 4 to 5.5 meters wide. The internal road is to access the south-western side of the property.



Alternative 3

The main dwelling and all associated infrastructure to the northern portion of the property, adjacent to the existing public access route (Bushy Way).

The development proposal entails the following:

(i) The construction of one (x1) main dwelling house to be situated in the northern corner of the property (3000m²).
(ii) An internal access track would connect the development directly to Bushy Way.

This option would result in the direct loss of Critically Endangered Knysna Sand Fynbos (NEM: BA, 2022 list). The loss of such vegetation is considered irreplaceable and irreversible. For this reason, Alternative 2 is not viable and cannot be supported in terms of national legislation or provincial biodiversity planning frameworks (WCBSP).

The No Go Alternative

The proposed redevelopment of Portion 76 of the Farm Uitzicht 216 will remain unutilised and vacant, thereby restricting the landowner's ability to exercise their right to construct a residential dwelling.

CIVIL SERVICES: ROADS, STORMWATER, WATER AND SEWER

The report was prepared by Tuiniqua Consulting Engineers at their Knysna office, who have been appointed by the Developer, Mr Andre Peach, as the Civil Consultants for this project. The purpose of this report was to

provide the necessary information on the proposed civil services within the Development and the connections to the bulk infrastructure in the area.

The Knysna Municipality serves as the authority for supply in the area. A service agreement will be established to address water supply, sewage management, stormwater management, and access provisions. In the event that demand for these civil services increases, augmentation fees will be calculated and assessed according to the policies of the Council. Additionally, discussions with the Municipality have indicated that bulk water and sewage services are currently unavailable, necessitating that this development be self-sustaining.

Bulk Services

Water Reticulation

The proposed development lacks a bulk water network and will serve as holiday accommodation for a maximum of twelve people, assumed to be occupied for 200 days a year.

Water demand is 480,000 litres (480 kilolitres) annually. Rainwater collection from 842 square meters of roof space will provide about 421,000 litres (421 kilolitres), covering 87% of the demand. To make up for the shortfall, boreholes will be drilled, which can also serve as storage when powered by on-site generators. The main building will have a storage capacity of 110 kilolitres.

Fire

This development is classified as low-risk – Group 2: residential areas (zone 1), with dwelling sizes typically between 100 m² and 200 m², as per the "Guidelines for Human Settlement Planning and Design." The pool, holding 160 kL, will serve as the main fire extinguishing water source. If powered by on-site generators, the boreholes can also contribute to on-site storage capacity.

Sewer Reticulation

Currently, there are no municipal bulk sewer services available in this area. Following consultations with the Technical Department of Knysna Municipality, it has been determined that the implementation of septic tanks with soakaways is an acceptable method for managing effluent.

Roads

There is an existing road network servicing this area, all roads leading to the road reserve are tarred and of good quality. The dirt track along the road reserve will need to be upgraded.

Stormwater

No formal stormwater system exists in the immediate vicinity of the development

Internal Services

Outline Scheme

The design of the development's services will follow the principles outlined in the Guidelines for Human Settlement Planning and Design by the Department of Housing and the Council's engineering requirements. Installation will comply with SANS 1200 standards, and all materials will meet ISO standards. Internal services will be placed in a service duct, primarily located in the center of existing paved routes to minimise disruption to the root systems of indigenous vegetation.

Water Reticulation

The water demand is 2.4 kiloliters per day, assuming occupancy for 200 days a year. As there is no municipal water network available, the development will include 110 kiloliters of rainwater storage and drilled boreholes for additional supply. Water may also be purchased from the Knysna Municipality via tanker.

We recommend a water filtration system to ensure potable water and suggest a second reticulation system for toilets to reduce filtration needs. Minimum standards include:

- Collecting rainwater from roofs and storing it at the main block, with a distribution network for the four nearby units.
- Testing borehole water for safety.
- Installing spikes if needed for garden watering.

Sewer Reticulation

The development will utilise septic tanks and soakaways, due to the fact that there is no municipal sewerage network available. Care will be taken when positioning the soakaways in regard to the position of the borehole/s. Vehicle access to the septic tanks needs to be provided to allow suction of the tank, if and when required.

Internal Roads

The development will have one vehicular access on the northern boundary, from the road reserve. All roads inside the property will be private roads consisting of a 2.5m strip, reinforced concrete roads. Passing lanes will be provided at suitable intervals. The design methodology will be to have the smallest disturbance footprint possible.

Internal Stormwater

The stormwater will not be accumulated or concentrated at any point but will be allowed to drain naturally over the sandy surface. Care will be taken when designing the access road to ensure that stormwater is properly addressed, according to SUDS principles.

Waste Management

Disposal of all waste shall be undertaken by the developer to the relevant and appropriate waste sites and recycling centres. The development shall, upon completion, have a waste management facility. Any green waste as a result of the development will be chipped on-site and/or disposed of at an approved site.

Details of the alternatives considered

Preferred Alternative: Main Dwelling (1000m² in the Southwestern Section)

This option locates the main dwelling house within the south-western section of Portion 76, behind the 30 m coastal building line in accordance with municipal setback requirements. The selected area benefits from natural topographical screening, significantly reducing potential visual exposure from surrounding viewpoints, including Brenton Beach and Brenton-on-Sea. It also lies in closer proximity to existing infrastructure, limiting the need for extensive service extensions.

Although the proposed access route does traverse areas of ecologically sensitive vegetation, the overall footprint is compact, and detailed mitigation measures have been proposed. These include narrowing of the road corridor, alignment along natural contours to reduce earthworks, and a commitment to ecological rehabilitation post-construction using rescued indigenous flora.

This alternative offers the most balanced outcome in terms of environmental sensitivity, landscape integration, visual impact mitigation, regulatory compliance, and site practicality, making it the preferred option based on specialist input and the alternatives assessment.

Alternative 1: Main Dwelling (3000m² in the Southwestern Section)

This alternative proposes the construction of a 3000 m² main dwelling within the south-western portion of the site, situated behind the 30 m coastal building line, in accordance with municipal building regulations. The location benefits from natural topographical screening, reducing the potential visual impact on neighbouring areas, including Brenton Beach. The area is also proximal to existing infrastructure, limiting the need for extensive internal road development.

However, due to the larger development footprint, this alternative would result in a greater extent of vegetation clearance and potential ecological disturbance, particularly in areas mapped as Goukamma Dune Thicket (Least Threatened). The internal access road, although aligned along natural contours, will still cross areas of ecological sensitivity. Mitigation measures such as road narrowing, erosion control, and rehabilitation of disturbed areas will be required to minimise impacts.

While environmentally feasible, the increased scale of the dwelling reduces the overall environmental performance of this alternative compared to the preferred 1000 m² alternative, making it less favourable from a sustainability and biodiversity conservation perspective.

Alternative 2: Main Dwelling in the Southwestern Section & Farm Manager's House in the Northern Portion

This layout proposes the main dwelling in the southwestern corner and the farm manager's house in the northern part of the site. While this may assist with operational logistics, it introduces a second node of disturbance and increases ecological fragmentation, especially in the upper section. Furthermore, the proposed farm manager's house falls within the municipal northern building line restriction, requiring a departure application and would result in the direct loss of Critically Endangered Knysna Sand Fynbos (NEM: BA, 2022 list). The loss of such vegetation is considered irreplaceable and irreversible. For this reason, Alternative 1 is not viable and cannot be supported in terms of national legislation or provincial biodiversity planning frameworks (WCBSP).

Alternative 3: Main Dwelling in the Northern Portion

Alternative 3 shifts the main dwelling house to the northern portion of the site, near the servitude access. Although this option avoids the central dune corridor and aligns with SANParks' recommendation to maintain habitat connectivity, the proposed location overlaps with Critically Endangered Knysna Sand Fynbos. Specialist input confirms that this vegetation type is highly sensitive and irreplaceable, and development here would result in a high negative impact on biodiversity. As such, despite potential benefits in road alignment and ecological corridor protection, this alternative is not preferred due to the significant irreversible loss of endangered vegetation. This option would result in the direct loss of Critically Endangered Knysna Sand Fynbos (NEM: BA, 2022 list). The loss of such vegetation is considered irreplaceable and irreversible. For this reason, Alternative 2 is not viable and cannot be supported in terms of national legislation or provincial biodiversity planning frameworks (WCBSP).

Alternative 3: No-Go Option

This option entails no development on the property. It results in the full preservation of ecological and visual characteristics, but it also prevents the landowner from utilising lawful development rights and provides no socio-economic benefit. Therefore, while environmentally neutral, it is not considered a viable or reasonable long-term solution.

Conclusion

The preferred alternative, which proposes the development of the main dwelling house in the southwestern section of Portion 76 of the Farm Uitzicht No. 216, with a reduced footprint of approximately 1000 m², is considered the most appropriate and sustainable layout option. This alternative was selected based on its ability to balance legal compliance, environmental sensitivity, and practical development considerations.

From an ecological perspective, this layout avoids the Critically Endangered Knysna Sand Fynbos found in the northern portion of the site (as seen in Alternatives 1, 2 and 3) and is instead located within an area dominated by the Least Threatened Goukamma Dune Thicket. The smaller development footprint further limits disturbance to natural habitat and avoids overlap with key ecological corridors. Although the access route does traverse some sensitive vegetation, the impact is considered low and manageable, and will be mitigated through road narrowing, ecological rehabilitation, and strict construction footprint demarcation.

In terms of visual impact, the natural dune topography provides effective screening from the coast and neighbouring viewpoints, while the structure's reduced size and design (including earth-tone colours and low-profile form) ensures that visual intrusion is minimised. This makes the preferred alternative more compatible with the sense of place and landscape character of the Brenton area.

Alternatives 1 and 2, which proposed a 3000 m² dwelling in the same or similar location, would result in a larger disturbance footprint, higher visual impact, and greater loss of vegetation, including areas classified as Critically Endangered under the National Environmental Management: Biodiversity Act (NEM:BA, 2022). These alternatives are not considered viable or supportable under national legislation and provincial biodiversity planning frameworks (e.g., WCBSP 2017/2023).

Alternative 2, which introduced a second dwelling (farm manager's house) in the northern portion of the site, would further increase the ecological footprint and require a departure application from the Knysna Municipality to relax building line requirements—introducing regulatory complications and undermining ecological buffers.

In summary, the 1000 m² preferred alternative offers the best balance between environmental sustainability, legal compliance, visual integration, and development feasibility. It represents a significantly improved proposal over previous iterations, responding directly to the concerns raised by authorities and stakeholders, while still allowing for lawful and functional land use.

Section H

1. Details of the Public Participation Process undertaken in terms of Regulation 41 of the Regulations, including copies and 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 to adherence of 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.
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 subjected to public participation by -	
(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 – (i) The site where the activity to which the application or proposed application relates or is to be undertaken; (ii) Any alternative site	(i) A site notice will be placed on site. (ii) There is no alternative site. **See Appendix G**
(b) Giving written notice, in any of the manners provided for in section 47D of the Act, to – (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. (ii) Owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and any alternative site where the activity is to be undertaken. (iii) The municipal councillors of the ward in which the site and alternative site are situated and any organisation of ratepayers that represent the community. (iv) The Municipality which has jurisdiction in the area.	(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. (ii) The owners of the land adjacent to the site have been notified via email. There is only one site. (iii) The ward Councillor (Knysna Municipality) will be notified. The ratepayer's association will be notified (iv) Knysna Municipality has been notified

(v) Any organ of state having jurisdiction in respect of any activity; and (vi) Any other party as required by the competent authority.	(v) Please refer to **Appendix G** showing a list of organs of state notified. (vi) Please refer to **Appendix G** showing a list of all organisations, NGO's and the public that have been notified.
(c) Placing an advertisement in – (i) One Local Newspaper; or (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;	(i) CX Newspaper a local free newspaper will be advertised. Please refer to a copy of the advert in **Appendix G.**
(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	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.
(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 – (i) Illiteracy (ii) Disability; or (iii) Any other disadvantages	Should the need arise *Eco Route Environmental Consultancy* will identify the correct manner with the assistance of the competent authority to engage with such an individual.
3) A notice, notice board or advertisement referred to in sub-regulation (2) must – (a) Give details of the application or proposed application which is subjected to public participation; and (b) State – (i) Whether basic assessment or S&EIR procedures are being applied to the application; (ii) The nature and location of the activity to which the application relates; (iii) Where further information on the application or proposed application can be obtained; and	Refer to **Appendix G**.

(iv) The manner in which and the person to whom representations in respect of the application or proposed application may be made.	
4) A notice board referred to in sub regulation (2) must – (a) Be of a size of at least 60cm by 42cm; and (b) Display the required information in lettering and in a format as may be determined by the competent authority	Refer to **Appendix G.**
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 – (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 (b) Written notices are given to registered I&AP's regarding where the – (i) Revised basic assessment report or, EMPr or closure plan, as contemplated in regulation 19(1)(b); (ii) Revised environmental impact assessment report or EMPr as contemplated in regulation 23(1)(b); or (iii) Environmental impact assessment report and EMPr as contemplated in regulation 21(2)(d); (iv) 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.	Refer to **Appendix G.**
6) When complying with this regulation, the person conducting the public participation process must ensure that –	Refer to **Appendix G.**

(a) Information containing all relevant facts in respect of the application or proposed application is made available to potential interested and affected parties; and (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.	The Draft BAR will be recorded onto CDs for the relevant organs of state and will either be delivered by hand or sent via courier. Kindly refer to **Appendix G** 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&APs), and an electronic version is accessible at www.ecoroute.co.za.
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.	N/A

Registration of Key Stakeholders

As this is not the first application, the key stakeholders identified in the previous application have automatically been registered and will be allowed an opportunity to comment on the Draft Basic Assessment Report. A list of key stakeholders for this process is included in the table below:

STATE DEPARTMENTS		
Department of Agriculture, Forestry & Fisheries	Melanie Koen	P/Bag X12 Knysna 6570
Department of Economic Development & Tourism- Western Cape	Mr Mark Lakay	P.O. Box 979 Cape Town 8000
Department of Environmental Affairs - Authorisations	Mr Danie Smit	Private Bag X447 Pretoria 0001
Department of Environmental Affairs &	Mr Danie Swanepoel	P/Bag X6509 George. 6530

Development Planning		
DEA&DP – Coastal Management	Zain Jumat	P/Bag X9086 Cape Town 8000
Department of Provincial Health	Manie Abrahams	P/Bag X6592 George 6530
Department of Rural Develop. & Land Reform	Glen Smith	P.O. Box 872 George 6530
Department of Public Works	The Director-General	Private Bag X9027 Cape Town 8000
Department of Transport & Public Works	Lyle Martin	PO Box 2603 Cape Town 8000
Department of Water Affairs	John Roberts	P/Bag X16 Sanlamhof 7532
South African National Roads Agency	Colleen Runkel	P/Bag X19 Bellville 7535

ORGANS OF STATE		
Name	**Contact Person**	**Postal Address**
Cape Nature – Western Cape	Megan Simmons	P/Bag 6546, George. 6530
Heritage Western Cape	C. van Wijk	P/Bag X9067 Cape Town. 8000
Marine Coastal Management	Mervyn Arendse	P.O. Box 234 Knysna 6570
SANParks	Maretha Alant	P.O. Box 787 Pretoria 0001
Knysna Ratepayers Association	Mr Ian Uys	P.O. Box 2475, Knysna. 6570
Ward 5 Councillor Knysna Municipality		P.O. Box 21, Knysna. 6570
Western Head Conservancy	MR Gow	P.O. Box 21, Knysna. 6570

Knysna Municipality – Environmental Management	Pam Booth	P.O. Box 21 Knysna 6570
Knysna Municipality – Town Planning	Mr H. Smit	P.O. Box 21 Knysna 6570

Erf No.	Contact Person	Address To be completed
Portion 12 of Farm 216, Uitzicht	Evan Jones	ejones@biothermenergy.com
WESSA Knysna-Plett	Steve Gettliffe	stebar@barkly.co.za
	Christa le Roux and Owen Williams	christa.a.leroux@gmail.com
Portion 114 of Farm 216 Uitzicht, Brenton	John and Anne Sole	johnmsole@gmail.com
Brenton Ratepayers Association	Steve Krumm Judy Harrison	stevek@netactive.co.za
Western Heads-Goukamma Conservancy: portions 39, 40, 75, 78, 109, 112, 113, 114 and 115	Dave Edge	orachrysops@gmail.com

Availability of the Basic Assessment Report

The draft Basic Assessment Report is available on our website www.ecoroute.co.za.

Comments and Response Report (to be completed after Draft Report)

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:

Summary of comments received	**The manner in which the issues were incorporated, or the reasons for not including them.**
While the proposed power supply is off-grid solar, an alternative involves a 1665-meter overhead line along the access road. This line would significantly impact the visual landscape and pose hazards to birds like harriers, fish eagles, and herons. Therefore, this alternative is	Section D – A description of the activities to be undertaken including associated structures and infrastructure.

strongly opposed, and the off-grid solar option is preferred.	
The proposed location for the manager's house at the northwest corner needs a relaxation of the 30-meter building line, based on an inaccurate claim of mitigating the impact on the Knysna Fynbos. The ecological status map on page 57 of the BA shows that this area has already been affected by invasive pine vegetation. Likely motivations for this placement are the better gradient and improved sea view. Furthermore, there is no need to create unnecessary visual impact on the access road frequented by local residents on Kerk Street.	Section G - A motivation for the preferred site, activity and technology alternative.
The site road box cuts will be deep in some areas, requiring retaining support that could disrupt the visual integrity of the pristine coastal dune. Visual impact mitigation measures need to be added, ensuring structures can be vegetated instead of being built as concrete walls, which would harm both aesthetics and wildlife.	Section H - The impacts and risks identified for each alternative.
The internal roads feature a 2.5-meter concrete strip with passing lanes, which is sensible due to the gradients. However, paved roads can be environmentally harmful. It's better to limit paving to essential areas and avoid it in level valley sections.	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
The access road on Kerk Street is a single jeep track with minimal traffic, but it needs an upgrade according to Clause 5.3 of the Services Report. While some maintenance is necessary, extensive roadwork could disrupt daily pedestrians and dog walkers. What are the upgrade plans, and who will fund it?	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
We need to be kept updated as this is a very sensitive area, on primary dunes and could have a significant effect on the biodiversity and ecological functioning of the area.	Section H - Details of the public participation process undertaken in terms of regulation 41 of the regulations, including copies and supporting documents and inputs. 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.
Portion 76 of Farm Uitzicht 216 is situated within the buffer zone of the Garden Route National Park (GRNP) and is classified as a Priority Natural Area in the Knysna Sand Fynbos Coastal Corridor. The landowner of Portions 75 and 39 has consented to the inclusion of these	Section D – A description of the activities to be undertaken including associated structures and infrastructure.

properties in the GRNP, making long-term conservation of Portion 76 crucial for SANParks. This 21.01-hectare property features the critically endangered Knysna Sand Fynbos and Goukamma Dune Thicket ecosystems. It is zoned for Agriculture 1 and classified as a Critical Biodiversity Area (CBA) in the Western Cape Biodiversity Spatial Plan 2017. The objective of a CBA is to maintain natural habitats and rehabilitate degraded areas, allowing only low-impact, biodiversity-sensitive land uses. The proposed development plan includes: (i) a main dwelling in the southwestern corner (3,000 m^2), (ii) a farm manager's house in the northwestern corner (600 m^2), (iii) a new internal road for access to the southern portion of the property. The total development area is approximately 8,765 m^2. SANParks representatives visited the site on September 8, 2020. Items for clarification: ▪ Backwash from swimming pool was not considered in the DBAR. Fynbos is not a good receiving environment for the backwash. ▪ Access to beach – surely desirable – no boardwalk or footpath was proposed to the beach. ▪ Installation of boreholes. The impact of drilling for boreholes was not discussed in the DBAR. SANParks objects to the proposal for several reasons: 1. The site is within the GRNP potential expansion footprint and designated as a CBA in the Western Cape Biodiversity Spatial Plan 2017. They disagree with claims that the development would have minimal environmental impact. The proposed Site Development Plan (including a 6-bed dwelling, pool, and access route) would significantly harm biodiversity, alter the area's character, and fragment the Knysna Sand Fynbos Coastal Corridor. Biodiversity Stewardship and long-term conservation were not addressed in the DBAR. The property's vegetation conservation is nationally important. Without consent for the property's declaration as part of the GRNP or a Biodiversity Stewardship agreement with CapeNature, SANParks will oppose the proposed development.	Section H - The impacts and risks identified for each alternative.

SANParks acknowledges that Marike Vreken urban and environmental planners were appointed to seek land use rights from Knysna Municipality. However, there was no mention of rezoning the natural area to Open Space Zone III, which needs further discussion for long-term conservation. The relaxation of the building line adjacent to Kerk Laan could be supported. SANParks supports development near the proposed Managers Cottage adjacent to Kerk Laan, as discussed on-site on 8 September 2020. Consolidating development in this area is preferable to minimize landscape fragmentation and protect the sensitive fynbos environment. The applicant must remember that Priority Natural Areas and CBAs aim to maintain natural habitats, allowing only low-impact, biodiversity-sensitive land uses. The currently pristine property should remain undeveloped. SANParks requests a meeting with landowners to find ways to balance biodiversity conservation with low-impact development, avoiding a road over the dunes. The current proposal could set a bad precedent for future developments in the Knysna Sand Fynbos Coastal Corridor, with adjacent properties included in the GRNP per the SANParks Land Inclusion Plan 2020 to 2023.	Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative.
The proposed location for the manager's house at the northwest corner seeks a relaxation of the 30-meter building line, claiming it mitigates impact on the Knysna Fynbos, despite the area being affected by invasive pine. Potential motivations for this location include a better gradient and sea view. Additionally, visual impact on the access road frequented by local residents should be minimized. The site's road box cuts will require retaining support that could harm the coastal dune's visual integrity. Mitigation measures are essential to ensure structures can be vegetated rather than built as concrete walls, which would negatively impact aesthetics and wildlife. Internal roads consist of a 2.5-meter concrete strip, which is sensible but could be environmentally harmful; paving should be limited to essential areas. Kerk Street, a narrow jeep track with minimal traffic, needs upgrades as per the Services Report, but extensive work could	Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative.

disrupt pedestrians and dog walkers. The status of upgrade plans and funding is unclear. Large construction operations raise security concerns that need to be addressed. The expected capital value mentioned in the report needs verification as it appears to have errors. While the proposed bee farming operation is welcome, its potential is low, with less than 1 hive per hectare expected based on local conditions. Portion 76 of Farm Uitzicht 216 is within the buffer zone of the Garden Route National Park and classified as a Priority Natural Area. It features critically endangered ecosystems and is zoned for Agriculture 1, aiming to maintain habitats and allow low-impact land uses. The proposed development includes a main dwelling, a farm manager's house, and internal road access, totalling approximately 8,765 m². Concerns include lack of consideration for pool backwash, no proposed beach access, and the impact of borehole drilling. SANParks opposes the development, arguing it will significantly harm biodiversity, alter the area's character, and fragment the ecosystem. Long-term conservation efforts and biodiversity stewardship were not adequately addressed in the Development Basic Assessment Report. While SANParks acknowledges the need for development near the manager's cottage to minimize fragmentation, there should be discussions on rezoning the area for long-term conservation.	Appendix B – Town Planning Report Appendix F - Vegetation Sensitivity Analysis Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Section D – A description of the activities to be undertaken, including associated structures and infrastructure.
The unconstructed road reserve running along the northern boundary is suitably upgraded at its intersection with Divisional Road 1600 (DR 1600), for which this Branch is the Road Authority.	Section D – A description of the activities to be undertaken, including associated structures and infrastructure.
1. The draft BAR *on Page 21 incorrectly states that Portion 76 of Farm 216 was previously used for tourist facilities, like a restaurant and farm store*, and that *the developer plans to redevelop it into si*milar businesses. These claims are false and cause confusion. Is this a 'cut and paste' error or something more concerning?	Section D – A description of the activities to be undertaken including associated structures and infrastructure.

The draft BAR presents a major concern on page 4: *"Section G states the preferred alternative is a restaurant, farm stall, and residential dwelling (no rezoning needed, as consent use is already in place). Alternative 1 proposes a restaurant with 5 resort units (rezoning required)."*	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
An EIA is necessary for any development in the Coastal protection zone, contradicting other statements in the draft BAR. What is the intended development plan? Does this reflect the quality of the physical assessment of the property, possibly suggesting a 'cut and paste' approach?	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
2. We disagree with the sentiment expressed on page 42 in relation to the question "*Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?*"	Appendix B – Town Planning Report
The "main" dwelling is located within the Coastal Protection Zone, making the Integrated Coastal Management Act applicable. It is clearly within 100m of the high tide mark, which is an environmentally sensitive area. Approving construction here should be rejected to prevent setting a precedent for neighbouring properties and to avoid irreparable damage to the region.	Appendix F - Vegetation Sensitivity Analysis
3. The establishment of a walkway to the beach from the main dwelling has not been addressed. It must either be detailed for impact assessment or include a condition prohibiting its construction due to erosion and site sensitivity (Oyster Catchers et al) if this BAR recommends development.	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
4. The layout of the main dwelling suggests it may be intended as a boutique hotel or B&B. While this hasn't been officially stated, if the EIA process approves the development based on current disclosures, there should be a clear condition prohibiting its use as a boutique hotel or B&B, as the impact of such use hasn't been assessed.	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
5. Using MV supply on overhead cables on Kerk Street should be outright rejected.	Section D – A description of the activities to be undertaken including associated structures and infrastructure.

6. The information on the "managers' dwelling" is insufficient, lacking details on room count, staff provisions, vehicles, and usage impact. The proposed size of 1000 m² raises concerns about its intended use. 7. The relaxation of the building line is unjustifiable. The entire property is critical fynbos (a Critical Biodiversity Area), and if a road of over 800m x 2.5m is permissible, then an alternative site not requiring a building line relaxation must be identified. A large double-storey "manager's" house (approximately 1000sqm total) adjacent to Kerk Street, which requires permanent relaxation of the building line, should be rejected. The impacts cannot be properly assessed due to insufficient information. An alternative location for the "manager's" dwelling must be found without encroaching on the building line. 8. Kerk Street is an unmaintained sand road that cannot handle excess traffic without negative effects. Clear disclosure on expected vehicle use is essential to minimise impact. Significant road works require an environmental assessment, as rare geophytic orchids, Brunsvigia, and Haemanthus in the road reserve may be harmed. 9. Large-scale building operations raise security concerns for the general area and need to be considered and addressed. 10. Page 62 refers to the expected capital value of the activity on completion. Value ± R800,000.00. Is this correct or another error? 11. The proposed bee farming operation while desirable has a very low potential at < 1 hive per hectare based on the real experience of beekeeping in the Brenton fynbos area and would simply be incidental.	Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Appendix F – Vegetation Sensitivity Analysis Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Section D – A description of the activities to be undertaken including associated structures and infrastructure. Appendix B – Town Planning Report
Forestry studied the supporting documents for the above-mentioned application and the following points related to Forestry's mandate, i.e. the implementation of the NFA, are applicable:	Appendix B – Town Planning Report

a. The above proposal still has to undergo a land-use planning application through the Knysna Municipality: Land-use Planning Section. b. Forestry will thus formally comment on the land-use application firstly before providing further comment to the above application. c. Request that a more recent Plant Species Assessment of above property be conducted by a Specialist and that this Specialist report be forwarded to the Department for perusal with ample photo record templates of the whole study area- especially after the recent fires. d. The exact location of these protected/ forest/ thicket patches/ of protected/ indigenous trees be surveyed/ GPS'd and overlaid within any developmental proposals to determine how these vegetation areas will be impacted- this information to be compiled within a report.	Appendix B – Town Planning Report Appendix F – Vegetation Sensitivity Analysis Appendix F – Vegetation Sensitivity Analysis
A. Threatened biodiversity: Uitzicht 216 Portion 76 is located within a Critical Biodiversity Area (CBA), designated by Knysna Municipality in its Spatial Development Framework (SDF) since 2006. CBAs must be preserved in their natural state as they are vital for biodiversity conservation and ecosystem functioning. They include areas essential for national biodiversity thresholds, species existence, and significant biodiversity features. The Environmental Assessment Practitioner (EAP) acknowledges the importance of this classification but overlooks it by suggesting development could proceed despite 4.3% habitat loss. The area is primarily Knysna Sand Fynbos, classified as Critically Endangered. The Biodiversity Act aims to reduce the extinction rate of ecosystems and species, highlighting that impacts on threatened ecosystems must be avoided, minimized, or mitigated, with significant habitat loss rated as highly significant. The proposed development would destroy 1 200 m² for the farm manager's house and 3 650 m² for 80% of the 830 m access road (5.5 m wide) which is in FFd 10. This impact is not acceptable in terms of the above legislation, and less damaging alternatives need to be proposed and evaluated. A 2005 Regalis Environmental Services (RES) report identifies 16 vegetation types in the Western Heads.	Appendix F – Vegetation Sensitivity Analysis Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Appendix F – Vegetation Sensitivity Analysis

Uitzicht 216/76 features seven of these, mostly in pristine condition, including: - Moist Dune Fynbos - Goukamma Dune Thicket - Arid Dune Fynbos - Brenton Dune Fynbos - Primary Dune Slack Fynbos - Primary Dune & Cliff Fynbos - Foredune	
In the Basic Assessment Report (BAR) prepared by the EAP, the asterisked vegetation sub-types have all been classified as Southern Cape Dune Fynbos (FFd 11), and "Least Threatened", without taking into account the RES (2005) report (attached).	Appendix F – Vegetation Sensitivity Analysis
The application/BAR does not comply with the procedures for assessing and reporting environmental themes as per section 24(5)(a) and (h) of the National Environmental Management Act, 1998, specifically Protocol 3: Terrestrial animal species (Government Gazette no. 42946, 10 January 2020, Knysna Municipality, 2020b).	Appendix F – Vegetation Sensitivity Analysis Section D - All listed and specified activities triggered and being applied for and a description of the activities to be undertaken including associated structures and infrastructure.
No detailed biodiversity study has been done for rare and threatened plants and animals, as is required in the above legislation. The property lies within the expansion area of the Garden Route National Park (GRNP) and serves as a wildlife movement corridor and buffer zone. It is situated between two properties being incorporated into the GRNP, which the EAP has not addressed.	Appendix F – Vegetation Sensitivity Analysis
The primary dune is home to very special and sensitive vegetation. Removal of vegetation will cause erosion and landslides, as have been seen elsewhere along this strip of coastline.	Appendix F – Vegetation Sensitivity Analysis
Impact of development 1) Developers plan to build a large house on the primary dune, requiring substantial concrete and piles. Will the 2.5m wide road be adequate for construction vehicles? 2) The access road to the main residence over the secondary dune involves a steep climb and sharp bend, making it challenging for construction vehicles to navigate without damaging the dune further.	Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative.

3) Sewerage is proposed to be treated in septic tanks with soakaway into the sandy substrate, and water sourced from boreholes. How will contamination from sewerage be prevented? 4) A large house on the primary dune would negatively impact views for residents of Buffalo Bay, Brenton-on-Sea, and Uitzicht, defacing the natural beauty of the pristine beach and adversely affecting tourism and property values. 5) Plans include a large swimming pool (160 kl). How will the filter backwash water be disposed of environmentally? 6) Why is the main dwelling's footprint proposed to be 4,000 m² when larger houses in Brenton-on-Sea are built on 1,000 m²? 7) Water is to be sourced from roof rainwater and boreholes, but the high elevation means the water may be brackish and unsuitable for drinking. How will drilling equipment reach the site?	
Knysna Spatial Development Framework Zoning Scheme 1) The area is classified as Core1b, the second-highest conservation status after Core1a, which includes formally protected areas. 2) The property is zoned Agriculture 1, allowing only a primary dwelling and infrastructure related to farming activities (minimal here, as only beekeeping occurs). No additional unit is permitted. 3) The Zoning Scheme restricts any additional unit within 1 km of the sea's highwater mark unless it's attached to the main house and ≤60m². Since the property is within this range, the additional unit must meet these criteria. 4) The main dwelling and attached unit should be located close to the public road to minimize impact on Knysna Sand Fynbos.	Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Appendix B – Town Planning Report Appendix F – Vegetation Sensitivity Analysis
Alternatives have not been considered Only two alternatives are considered, both causing unacceptable environmental damage. An unassessed option is to locate the main dwelling and attached unit closer to the northern access road, which would impact less than 1,000 m² of sensitive vegetation instead of over 8,000 m².	Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section H - The impacts and risks identified for each alternative. Appendix B – Town Planning Report Appendix F – Vegetation Sensitivity Analysis

The Draft Basic Assessment Report (which will include the Site Development Plan with a description of the proposed activity) has been prepared.	Section D – A description of the activities to be undertaken, including associated structures and infrastructure.

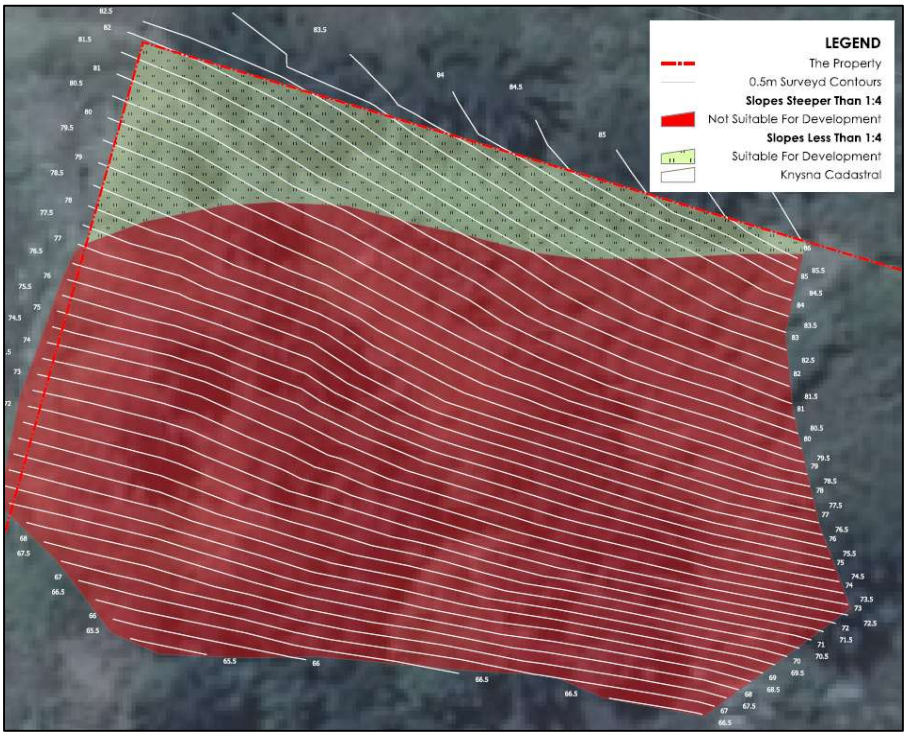
The full comments and response can be viewed under **Appendix G.**

2. Site Description and Environmental Attributes

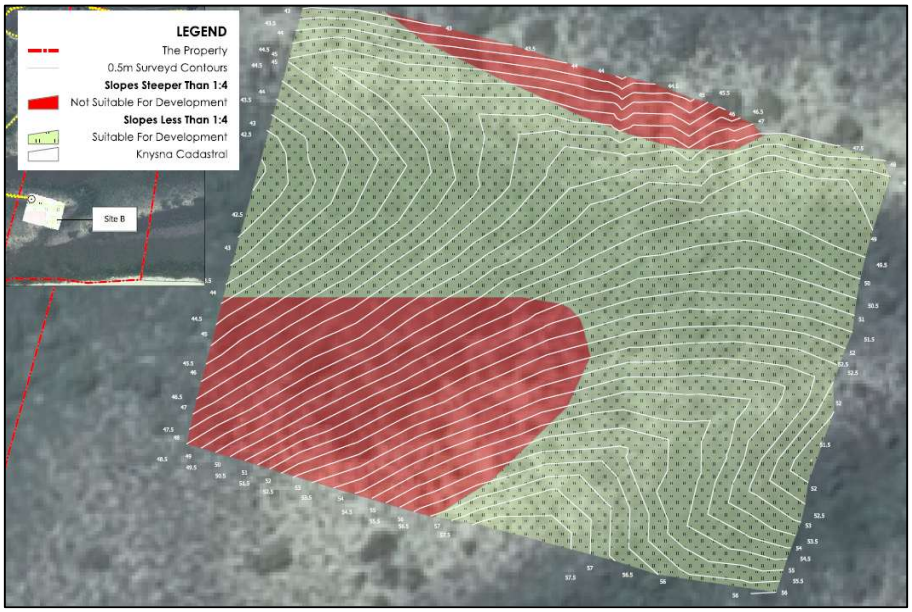
Geographical and Physical Aspects

Topography

A survey conducted by Eden Geomatics in November 2016 identified two sites deemed suitable for the proposed development, located in the northwestern and southwestern corners of the subject property.



Site: A Layout



Site: B Layout

Please refer to the Locality map below:

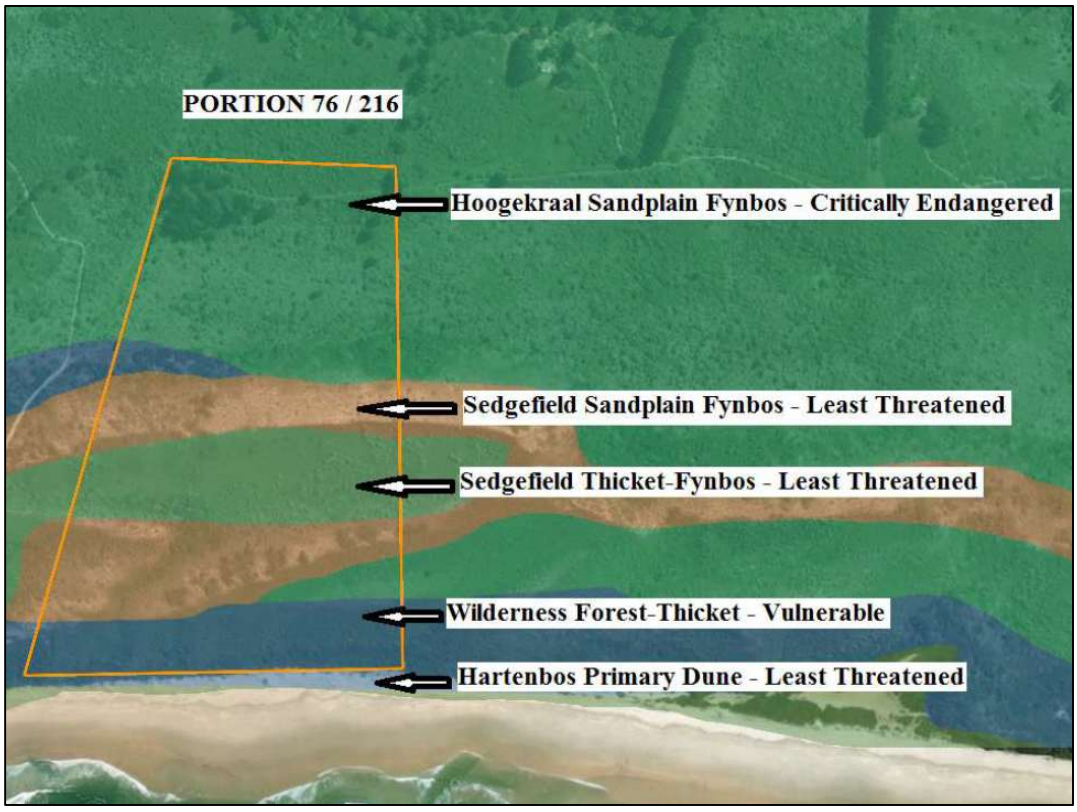
Locality Map

Biological Components

VEGETATION

According to the Vegetation Sensitivity Analysis done by 'Enviro-Prac Consultancy' based on 'Vegetation of Southern Africa, Lesotho and Swaziland (VEGMAP) (Mucina & Rutherford)' classification, the following vegetation types occur on the property:

VEGETATION TYPE	ECOLOGICAL STATUS
FFd 10 Knysna Sand Fynbos	Critically Endangered
FFd11 Southern Cape Dune Fynbos	Least Threatened
Azd3 Cape Sea Shore Vegetation	Least Threatened



GRI VEGETATION TYPES & ECOLOGICAL STATUS

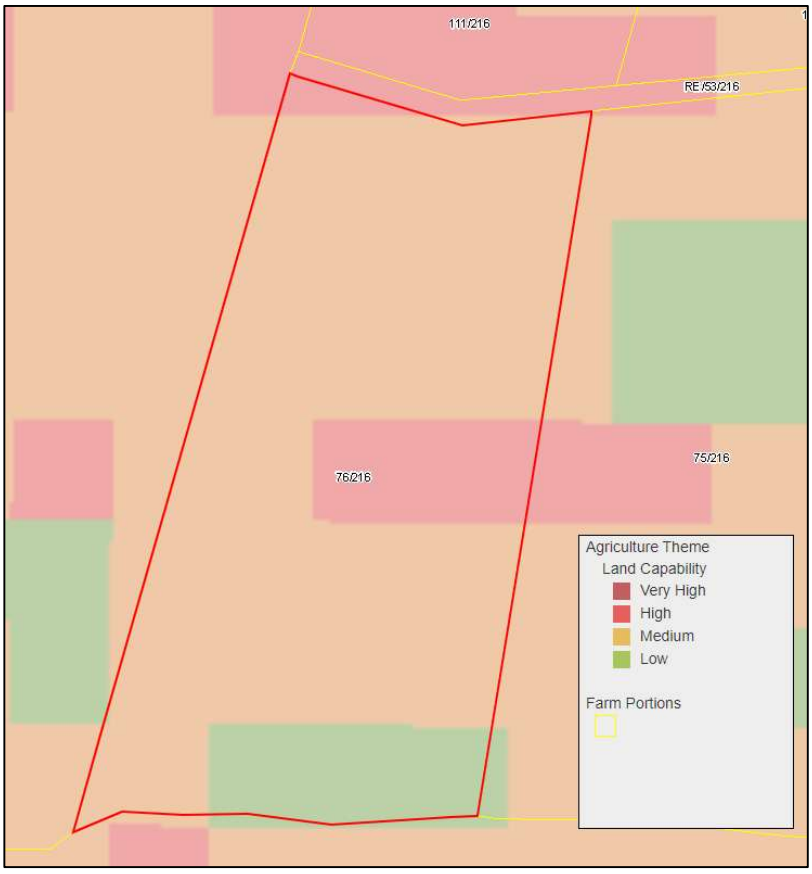
According to the Critical Biodiversity Areas of the 'Garden Route Conservation Planning Report 2010 (Holness et al) (GRI)' the following vegetation types occur on the property.

VEGETATION TYPE	ECOLOGICAL STATUS
Hoogekraal Sandplain Fynbos	Critically Endangered
Wilderness Forest Thicket	Vulnerable

Sedgefield Thicket-Fynbos	Least Threatened
Sedgefield Sandplain Fynbos	Least Threatened
Hartenbos Primary Dune	Least Threatened

Agricultural Potential

According to Cape Farm Mapper, the Dryland Potential Index is very high and in terms of land capability, the majority of the property has a low to moderate (medium) potential. A small section in the middle of the property has a moderate to high (high) potential and a small portion in the southeastern corner of the property has a low to very low potential (low).



AGRICULTURE POTENTIAL-LAND CAPABILITY

The application area makes no contribution whatsoever to agricultural production at this stage for crop and grazing purposes.

However, the preservation of natural veld and bee farming will be practised on this property, and both are seen as agriculture activities. It can, therefore, be concluded that the property has low agricultural potential and no productive agricultural land will be lost by allowing the construction of the proposed buildings.

Cognisance is taken of the following situations:

- In terms of section 52 of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004), **Knysna Sand Fynbos,** a threatened ecosystem, occurs on the site, with an ecosystem status **critically**

endangered.

- In terms of the Garden Route Initiative Fine Scale Planning Map, *"Critical Biodiversity Area"* occurs on the site.
- The size of the property is: 21,0427 (Twenty-One Thousand, Zero Four Two Seven) Hectares
- The proposed development is approximately 8 765m² in size, equating to approximately 4.3% of the property being developed and the rest of the property will remain in a natural state.

Site Sensitivity Verification

Confluent Environmental undertook a Site Sensitivity Verification Report (SSVR) for the botanical and terrestrial sensitivity of Farm 76 / 216 (called Uitzicht), located just west of Brenton on Sea. According to the Department of Forestry, Fisheries, and the Environment (DFFE) Screening Tool, the SSVR is required because the terrestrial plant species theme has been highlighted as having a Medium and High sensitivity over different areas of the site, and the terrestrial biodiversity has an overall Very High sensitivity.

The terrestrial biodiversity sensitivity of this site is classified as Very High due to a significant area of remaining natural vegetation, specifically Knysna Sand Fynbos, which is Critically Endangered (CR) and located north of the large barrier dune. This area faces threats from invasive species, particularly pines. The southern section consists of sensitive habitat, characterised by a strandveld-fynbos mosaic with thicket patches in fire refugia, including dune bases and crests.

Additionally, the site is designated as a Critical Biodiversity Area 1 (CBA1) and serves as an important ecological corridor along the coastline. It is rated as High for terrestrial plant species sensitivity, as it hosts several Species of Conservation Concern (SCC), with notable spatial variation in their distribution across the site.

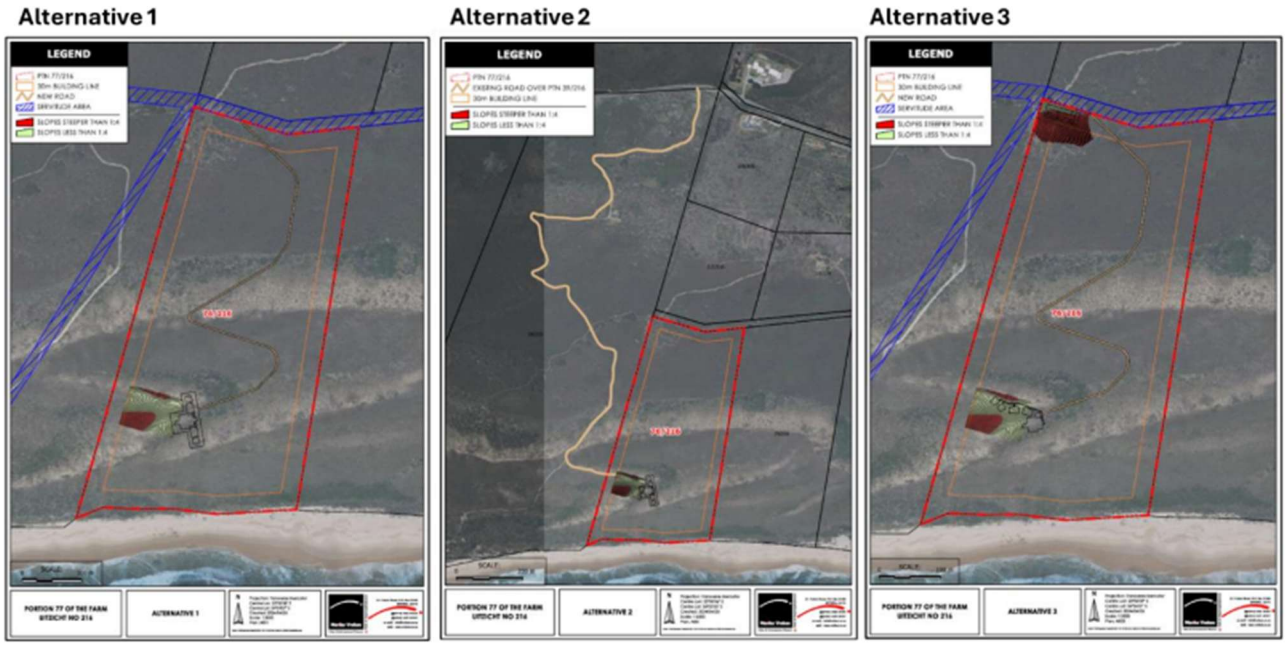
In July 2024, Confluent Environmental submitted an updated Site Sensitivity Verification Report (SSVR) assessing the botanical and terrestrial sensitivity of Farm 76/216, known as Uitzicht, located west of Brenton on Sea.

Portion 76/216 is situated south of the Knysna Lagoon and estuary, with its southern boundary bordering the coastline. Access is provided via a road on the neighbouring western farm, branching from C.R. Swart Drive. Currently, there is minimal development on adjacent properties, as this area is part of the Garden Route Biosphere Reserve and Knysna National Lake Area.

Approximately 5 kilometres from the site are several protected areas, including the Brenton Blue Butterfly Special Nature Reserve, established in July 2003 for a Critically Endangered species (CR PE). Other nearby protected areas include the Skuilte and Featherbed Private Nature Reserves, Pledge Nature Reserve, and Goukamma Provincial Nature Reserve, along with its Marine Protected Area.

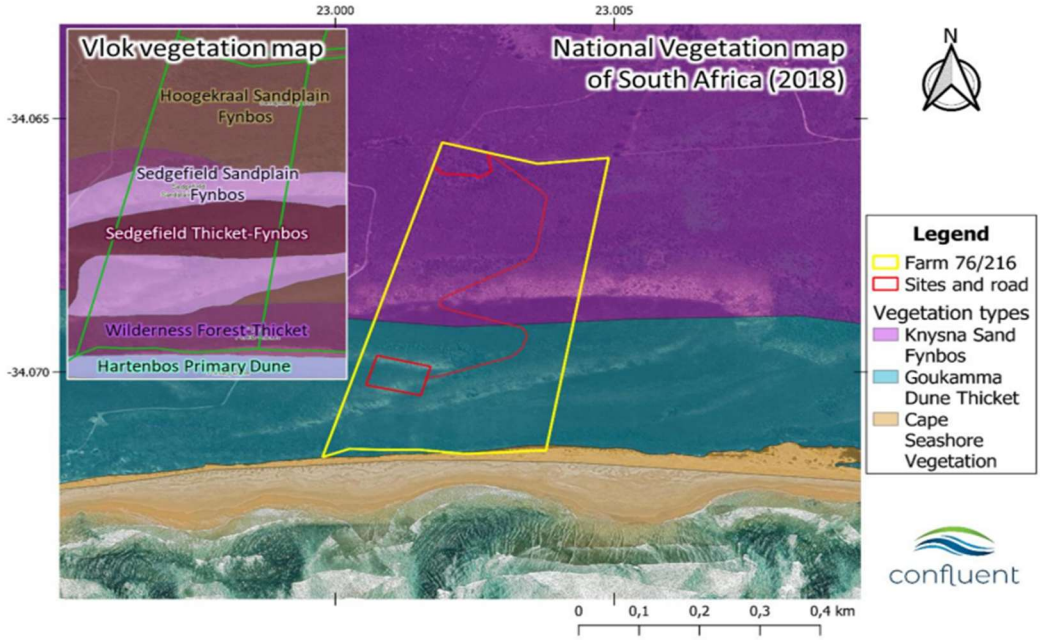
The Site Development Plans (SDP) present three alternatives. The primary proposal involves constructing a main dwelling in the southern section over the dunes, while option three includes a secondary dwelling in the northwest. Option one proposes a new road connecting the two dwellings, whereas option two recommends using the road of the adjacent property. Details on the proposed sewer and electricity systems are not provided in the SDP, but it is assumed they will not significantly impact the disturbance footprint.

The total area of Portion 76/216 is approximately 21 hectares. An overview of the disturbance footprints for each development scenario is provided below.



The National Vegetation Map of South Africa (2018; VEGMAP 2018; Dayaram et al., 2019; Grobler et al., 2018; Mucina & Rutherford, 2006) identifies two primary vegetation types on the property. The northern section, located above the prominent dune, is classified as Knysna Sand Fynbos (FFd 10), which is listed as critically endangered (CR) under the NEM:BA Act (2022). In contrast, the southern section is designated as Goukamma Dune Thicket (AT 36), which is categorized as Least Threatened (LT). The shoreline vegetation is classified as Cape Seashore Vegetation and will not be affected by the proposed development.

According to the Vlok vegetation map, the southern portion of the area designated as 76/216 includes "Sedgefield Sandplain Fynbos" and "Sedgefield Thicket Fynbos," with depressions identified as "Wilderness Forest-Thicket." Additionally, the southernmost dune is referred to as the "Hartenbos Primary Dune," while the northern section corresponds to "Hoogekraal Sandplain Fynbos."



THE MAPPED VEGETATION TYPES ACCORDING TO THE 2018 NATIONAL VEGETATION MAP OF SOUTH AFRICA (DAYARAM ET AL., 2019; MUCINA & RUTHERFORD, 2006), AND THE VLOK VEGETATION MAP CATEGORIES (INSET MAP) FOR PORTION 76/216 AND THE SURROUNDING AREA.

The site is classified as having a Very High sensitivity concerning terrestrial biodiversity due to the presence of a significant area of natural vegetation, specifically a Critically Endangered (CR) vegetation type known as Knysna Sand Fynbos, located north of the barrier dune. This area is threatened by invasive plant species, particularly pines.

The southern section features sensitive habitats, including a mosaic of strandveld and fynbos, with thicket patches serving as fire refugia. The entire site is designated as a Category 1 Critical Biodiversity Area (CBA1) and acts as a vital ecological corridor along the coastline. The sensitivity regarding terrestrial plant species is assessed as High, as the site hosts several species of conservation concern (SCC) and displays notable spatial variability in their distribution.

Site Ecological Importance

The site ecological importance (SEI) assessment is a function of biodiversity importance (BI) and receptor resilience (RR). The criteria for defining RR, CI and FI are provided in the Species Environmental Assessment Guidelines of 2022. BI can be derived from a simple matrix of CI and FI, as illustrated in the Table below.

Biodiversity Importance		Conservation Importance				
		Very High	High	Medium	Low	Very Low
Functional Integrity	Very High	Very High	Very High	High	Medium	Low
	High	Very High	High	Medium	Medium	Low
	Medium	High	Medium	Medium	Low	Very Low
	Low	Medium	Medium	Low	Low	Very Low
	Very Low	Medium	Low	Very Low	Very Low	Very Low

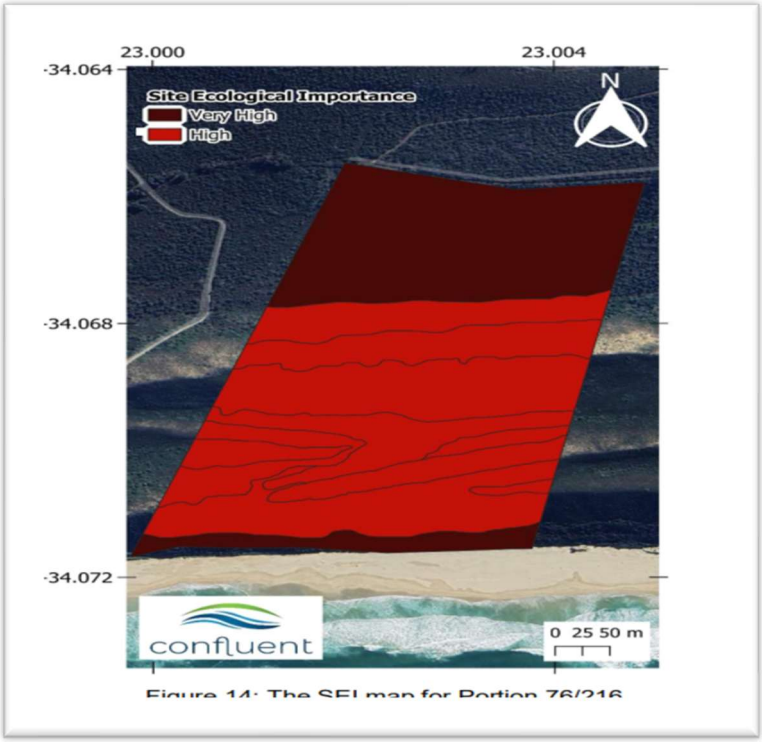
THE MATRIX THAT DEFINES THE BIODIVERSITY IMPORTANCE (BI) OF A GIVEN HABITAT TYPE, AS IDENTIFIED FROM A DESKTOP AND FIELD ASSESSMENT.

SEI can then be derived from a second matrix, as depicted in the table above. SEI is specific to the proposed development and can therefore only be compared between alternative layouts for the same proposed development, but not between developments.

Site Ecological Importance		Biodiversity Importance				
		Very High	High	Medium	Low	Very Low
Receptor Resilience	Very High	Very High	Very High	High	Medium	Low
	High	Very High	Very High	High	Medium	Very Low
	Medium	Very High	High	Medium	Low	Very Low
	Low	High	Medium	Low	Very Low	Very Low
	Very Low	Medium	Low	Very Low	Very Low	Very Low

THE MATRIX THAT DEFINES THE SITE ECOLOGICAL IMPORTANCE (SEI) OF A GIVEN HABITAT TYPE, AS IDENTIFIED FROM A DESKTOP AND FIELD ASSESSMENT.

The SEI map that was produced for Portion 76/216 reflects the sensitivity of the site



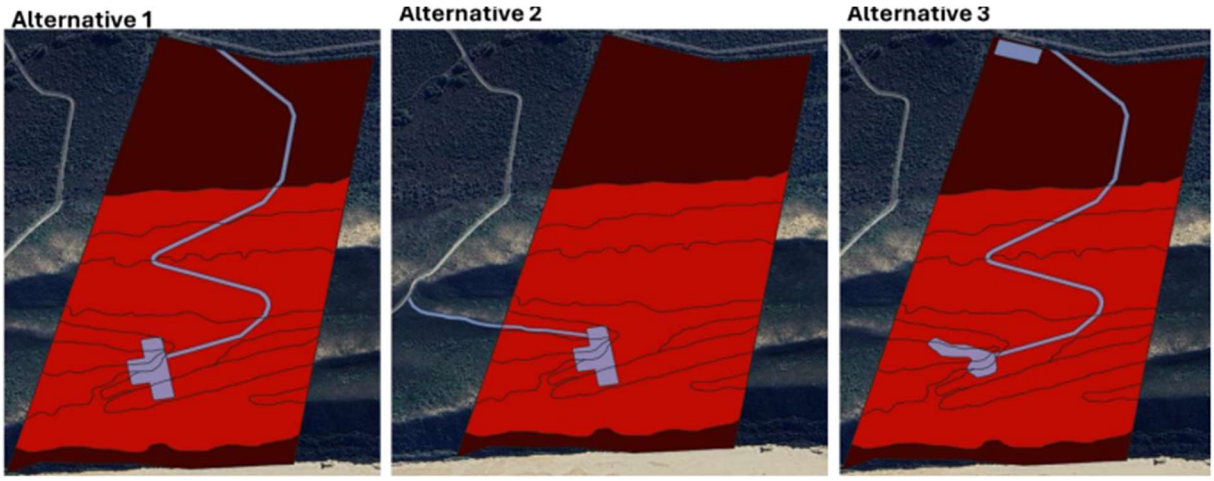
THE SEI MAP FOR PORTION 76/216

Project Area of Influence

The Project Area of Influence (PAOI) is delineated based on the ecosystem services and processes that may be impacted by the proposed development on Portion 76 of 216. The calculation of the PAOI is initially performed by the Environmental Assessment Practitioner (EAP) and subsequently validated by the specialists appointed for this purpose.

The Project Area of Impact (PAOI) is larger than the Site Development Plan (SDP), which only represents the direct disturbance footprint of the proposed project. The PAOI is defined by two principles.

First, an additional 2-meter disturbance envelope surrounds all proposed roads and dwellings, as illustrated in the three alternative layouts. Second, in the second layout of the main dwelling in Alternative Three, the edges of the buffered area were refined to improve the accuracy of edge effect assessments.



THE THREE PROPOSED ALTERNATIVE DEVELOPMENT OPTIONS FOR PORTION 76/216.

Negative impacts on the site include:

- Large stands of Rooikrans (*Acacia cyclops*) and invasive *Pinus radiata* in the north.
- Roads affecting habitat connectivity and increasing invasive plant risks.
- Development causing fire suppression in an ecosystem that needs fire. The fynbos requires a burn by 2030, but controlled burns are unlikely without environmental authorization.

Construction Phase

Construction on Portion 76 of 216 will involve activities that affect the themes assessed in this report. This phase will permanently eliminate habitat and vegetation on the site, including sensitive coastal communities (SCC). The impacts are ranked from most to least significant regarding Terrestrial Biodiversity and Plant Species. An Environmental Control Officer (ECO) should be appointed to ensure compliance with management plans and mitigation measures during construction.

During construction: New roads need to be made using the same/similar materials and methods as the neighbouring road.

The proposed development on Portion 76/216 will affect sensitive fynbos and strandveld vegetation within a Critical Biodiversity Area 1 (CBA 1). The impact assessment recommends Alternative 4 as the best layout, with Alternative 2 also being viable. Both result in Minor or Negligible impacts, while Alternatives 1 and 3 risk requiring offsets due to Moderate impacts. Alternative 4 is preferable because it minimises project footprint, reduces fire risk, limits landscape fragmentation, and results in less than 1% transformation of the property, compared to over 2% for other options.

The Vegetation Sensitivity Analysis can be found in **Appendix D.**

Veg Map 2018

Legend

Farm Portions

VEGMAP 2018 (Beta)

- Estuary
- AT 36 Goukamma Dune Thicket
- AZd 3 Cape Seashore Vegetation
- FFd 10 Knysna Sand Fynbos
- FFd 11 Southern Cape Dune Fynbos

Scale: 1:18 056

Date created: August 10, 2020

Compiled with CapeFarmMapper

Western Cape Government
Agriculture

Critical Biodiversity Area

Critical Biodiversity Areas	
Category 1:	CBA: Terrestrial
Category 2:	CBA: Terrestrial
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.

Summary of Protected Areas, Ecological Support Areas and Critical Biodiversity Areas

Selected remaining areas of natural vegetation and habitat have been designated as either: declared Protected Areas (PAs); Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs), as habitat required as part of the CBA conservation network; in addition to Other Natural Areas. Intact CBAs and ESAs are required to prevent further degradation of the landscape, and ecosystem functioning and services by maintaining ecological and hydrological corridor linkages. Degraded lands within identified sensitive areas have also been selected to maintain ecological connectivity. The entire property is within a designated sensitive area, namely a Critical Biodiversity Area selected on the basis of being:

- Habitat required as part of the CBA network.

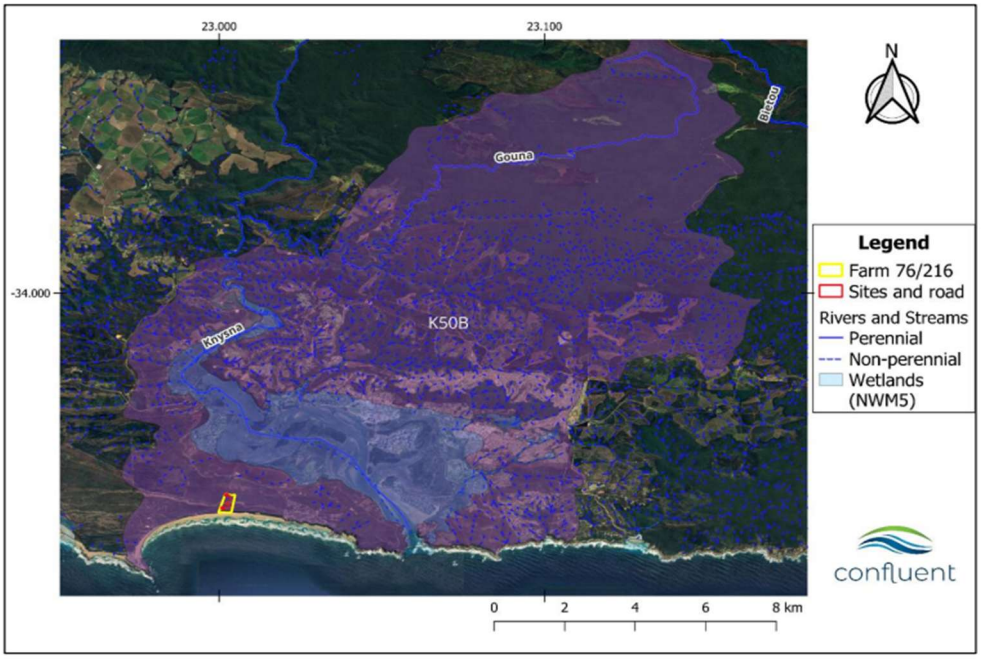
- A critical and important supporting area for maintaining corridors, linkages and ecological processes.
- A critical and important supporting area for maintaining hydrological processes.
- Areas with potential occurrence of threatened species or habitat important for supporting threatened species.
- the potential occurrence of a threatened ecosystem habitat or fine-scale habitat equivalent.
- An important area for protected habitats – like wetlands and forests.
- Critical and important supporting area for maintaining coastal processes.

The overarching management objectives for PAs / CBAs / ESAs are to maintain natural land, rehabilitate degraded land to a natural or near-natural condition and manage for no further degradation. In this regard, the area is an important critical and supporting area for corridors, linkages and ecological processes and for maintaining hydrological processes; and for conservation of threatened and protected habitats, as well as coastal processes.

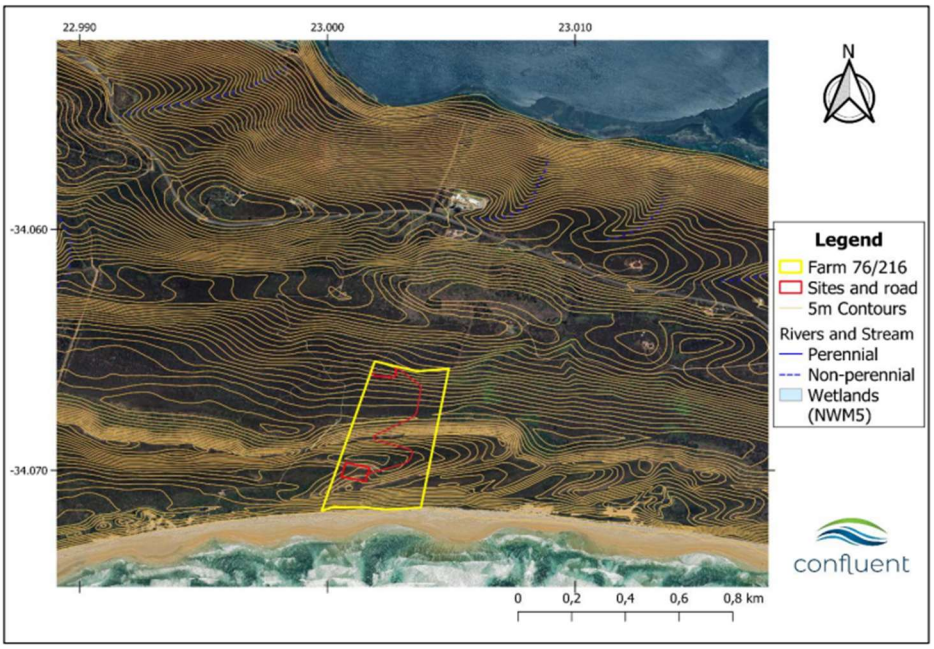
Aquatic

Confluent Environmental Pty (Ltd) was appointed by EcoRoute to provide aquatic specialist inputs for the proposed development of two residential dwellings described as a main farmhouse and farm manager's house. The site was visited on 11 October 2023 and again on 5 & 6 December 2023.

The development site (Farm 76/216) is in the quaternary catchment K50B in the catchment of the Knysna River/Estuary. However, given the site location, it cannot drain north to the Knysna Estuary due to steep slopes in that direction. Any wetlands or drainage lines would be either endorheic (inward draining) or drain to the sea. No rivers, streams, or wetlands are mapped on the property and there are no mapped streams or wetlands in the immediate vicinity of the property. As the rainfall intensity in the area is classified as Very High and the inherent erosion potential of soils is High, erosion of soils and stormwater management are factors which must be carefully considered when developing in this area. The mapped soils are very sandy and have high rates of drainage. This factor immediately limits the presence of surface water on the site.



LOCATION OF FARM 76/216 IN THE QUATERNARY CATCHMENTS K50B.



LOCATION OF THE FARM 76/216 IN RELATION TO MAPPED WATERCOURSES.

The project area is located within the southeastern coastal belt (Ecoregion Level 2:20.02). The terrain is described as closed hills of moderate and high relief and moderately undulating plains. Altitude ranges between 0 – 1 300 m.a.m.s.l.

There are no identified watercourses on the property itself, nor within the regulated areas as defined by GN 4167 of the National Water Act.

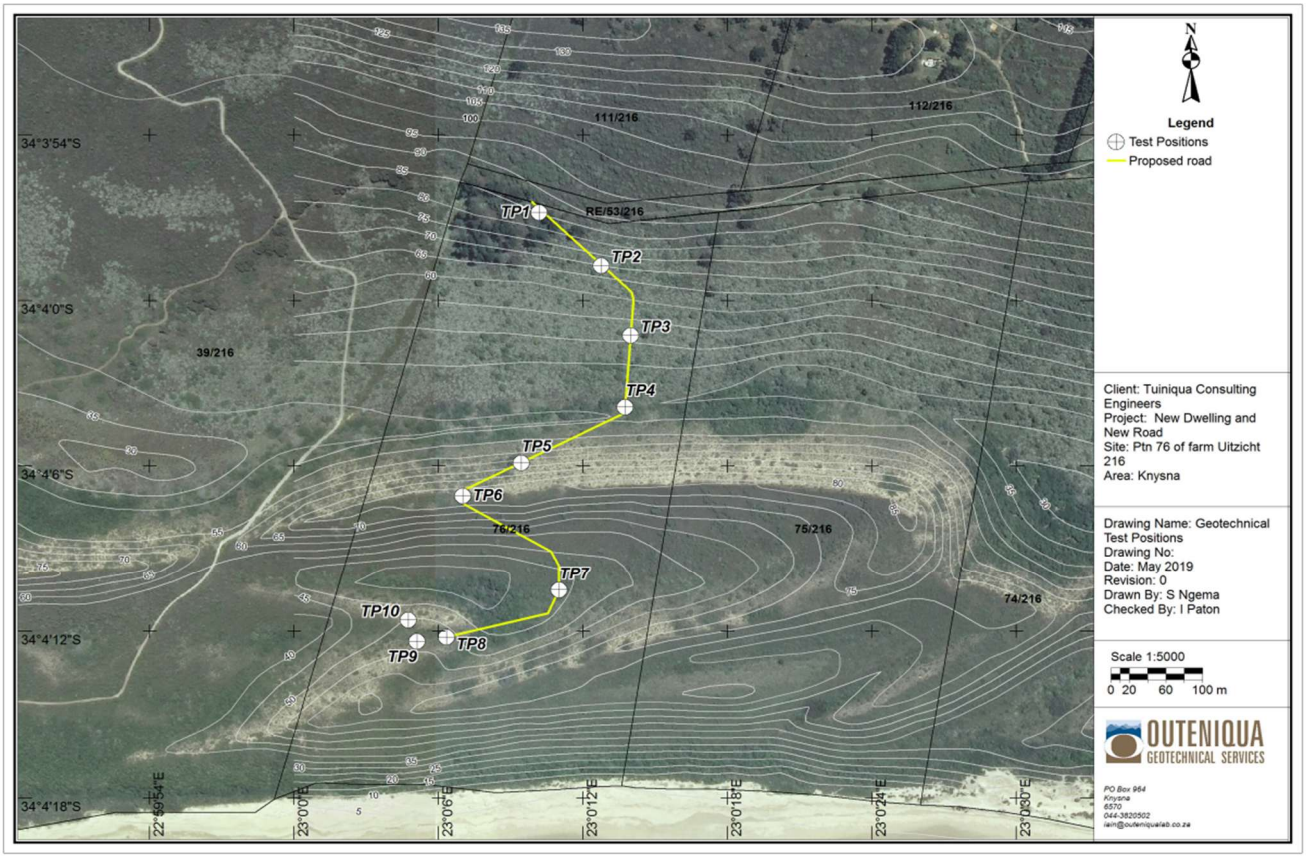
MAP INDICATING NO MAPPED WATERCOURSES WITHIN 100 M OR 500 M FROM THE PROPOSED DEVELOPMENT SITE

The development will not impact a watercourse and is not located proximal to any watercourse. The report indicates that the existing access road on the adjacent property to the west (39/216 Uitzicht) is the preferred means of access for any dwelling situated south of 76/216. However, this option is not feasible for the landowner/applicant, as access to their property is required, and the sharing of a road is not considered a viable option for the landowner.

Geotechnical Soil Test Report

Outeniqua Consulting, comprising Geotechnical Engineers and Engineering Geologists, completed a Geotechnical Soil Test Report in 2019, which resulted in the following conclusions:

Three shallow test pits were excavated by hand to a max depth of 1.5m, one test was on the proposed house footprint and two test pits along the proposed road (refer to test positions indicated on the attached plan). Ten DCP tests were conducted from natural ground level to a depth of ~2m to assess soil consistency. Samples of soil were collected for Mod.AASHTO/CBR and Foundation Indicator tests.



MAP INDICATING TEST PIT LOCATIONS

Geology and Soil Profile

The site is underlain by unconsolidated aeolian sand with Quaternary shell inclusions, forming stable coastal dunes. The soil consists of an 800 mm dark brown silty fine sand topsoil over light brown cohesionless fine sand. DCP tests indicate the upper layer is very loose (40-75 mm/blow), becoming medium dense below 1 meter. Test pits showed wall collapses due to sandy conditions, with no bedrock expected for several meters below.

Lab results indicate that the soils are non-plastic and mostly consist of fine sand, with 99% passing through a 0.425 mm sieve. They are classified as either SP (poorly graded sand with little to no fines) or SM (silty sand with non-plastic fines). No heaving is expected due to the lack of plastic fines.

None of the test pits found groundwater, and there were no signs of poorly drained areas. The highly permeable sands will generally drain well, though seasonal seepage may occur along natural drainage lines on the site.

Recommendations

Earthworks

Excavations up to 3 meters deep are classified as "Soft" per SABS1200D. Sidewalls become unstable at angles over 30 degrees, so they should be battered or supported with retaining walls. The soil beneath the topsoil is generally suitable for backfilling in various applications, but must be approved by the engineer before use.

The proposed dwelling site has a moderate slope of about 1:5 and will require significant earthworks for level platforms. The access road also has steep terrain, necessitating earthworks and retaining walls for the box cut.

Foundations and floor

For single and double-storey masonry and timber structures, use lightly reinforced concrete strips or pads at 0.6 meters depth on well-compacted sand or controlled fill (max bearing pressure: 100 kPa). Excavate foundation trenches to 1.2 meters, compact with a trench rammer, and backfill with 0.6 meters of moist sand in 0.15-meter layers. Test compaction with a Dynamic Cone Penetrometer (DCP) to ensure a maximum penetration of 20 mm/blow to at least 1 meter below the foundation level.

Avoid foundations on slopes (1:8 to 1:4) due to risks and costs. Consider deep foundations for steep slopes. Ensure an engineer inspects the site, and compact fill under reinforced concrete to 100% Mod AASHTO density.

Roads

The road layout should consider the site's natural contours and drainage to minimise earthworks. Deep box cuts should be retained, as they typically do not encounter rock. Fill can be used in-situ soil (excluding topsoil). The in-situ subgrade material varies from G7 to G9, so it’s advised to import at least one G7 subgrade layer in addition to standard layer works for lightly trafficked internal roads and parking areas.

Drainage

The soil is highly permeable, and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads but are recommended behind retaining walls as standard.

Conclusions

The site has been assessed as appropriate for the proposed development, subject to careful consideration of anticipated geotechnical constraints. Conventional construction methods are recommended, and a set of practical recommendations has been provided for the engineer's consideration to enhance the founding conditions on compressible soils.

The geotechnical investigation confirmed that the northern portion of the site is underlain by loose to medium-dense aeolian sands, with poor natural bearing capacity (G7–G9). This would require substantial soil import and compaction. By contrast, the south-western portion is more stable and less constrained. This supports the selection of the south-western alternative as the most feasible location

Heritage Statement

The applicant, Midnight Storm Investments 180 (Pty) Ltd, proposes to exercise the primary land use rights of the property, which, for Agriculture Zone I, implies the construction of a primary dwelling and a secondary dwelling.

The proposed development site encompasses an area exceeding 5,000 m² and the length of the projected road footprint surpasses 300 m. Consequently, Sections 38(1)(c)(i) and 38(1)(a) of the National Heritage Resources Act (Act 25 of 1999, NHRA) come into effect, necessitating the submission of a Notification of Intent to Develop (NID) application to Heritage Western Cape (HWC). The applicant has engaged my services through Eco Route to facilitate the heritage process and to assist with the NID application directed to HWC.

The document should be regarded not as a Heritage Impact Assessment but as a scoping report that offers supplementary information in support of the NID application and articulates the rationale behind the recommendations provided herein.

The Heritage Statement, along with the accompanying NID application form, is designed to inform the Heritage Western Cape (HWC) about the proposed development activities while making recommendations concerning the potential impact on heritage resources. Furthermore, it addresses the necessity for any additional specialist investigations.

It is essential to consider the report, the NID application form, and the accompanying documentation in conjunction, as not all information is reiterated within each document.

The objective of this Heritage Statement is to articulate the findings derived from a site inspection, accompanied by a comprehensive review of relevant background information and preceding heritage-related studies. This statement aims to:

1) Support the Heritage Western Cape (HWC) in their decision-making process by ensuring that potentially significant heritage resources are thoroughly investigated and not disregarded, while also preventing the initiation of unnecessary heritage studies; and
2) Facilitate the applicant's navigation of the heritage application process, thereby mitigating costs associated with superfluous specialist studies and minimising potential delays and expenses resulting from the unforeseen discovery of significant heritage resources that have not been previously identified.

Study Area

The southern boundary of 76/212 aligns with the high-water mark of the Indian Ocean, while the northern boundary is approximately 650 m north of it. The main dwelling is proposed to be about 120 m from the shoreline, just inland of a steep 60 m high coastal dune. A second dune, around 70 m high, runs east-west through the property, with the site for the second house positioned about 80 m above mean sea level. The dunes are composed of Holocene sands, accumulated over the last 6,000 years, resting on aeolianites from the Waenhuiskrans Formation, which formed 80,000 to 130,000 years ago. No hard rock geological sediments or rock shelters are present on the property, and the nearest rocky intertidal zones are over 1.5 km east and 3 km west. There are modern structures on surrounding properties, but no built environment exists on 76/216.

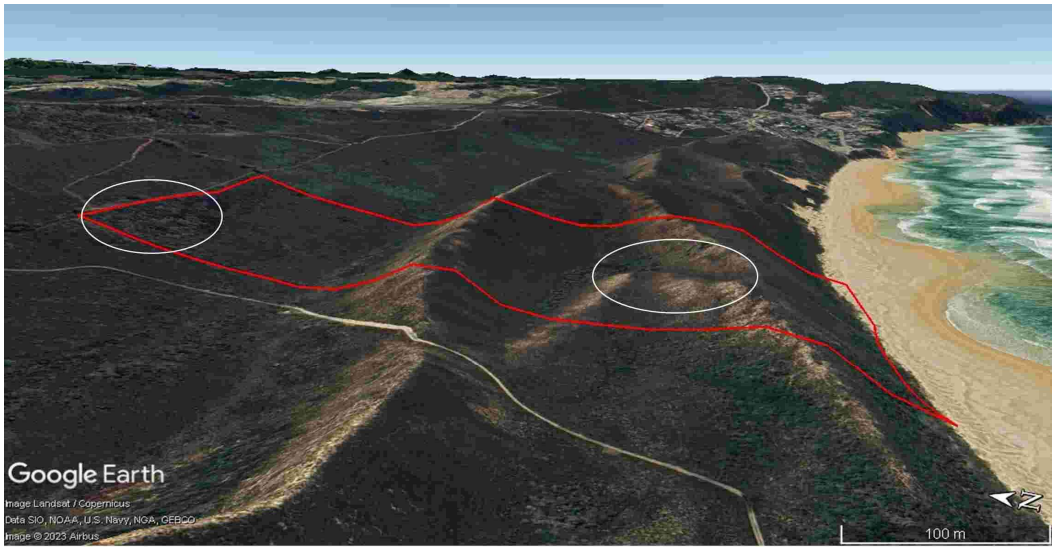
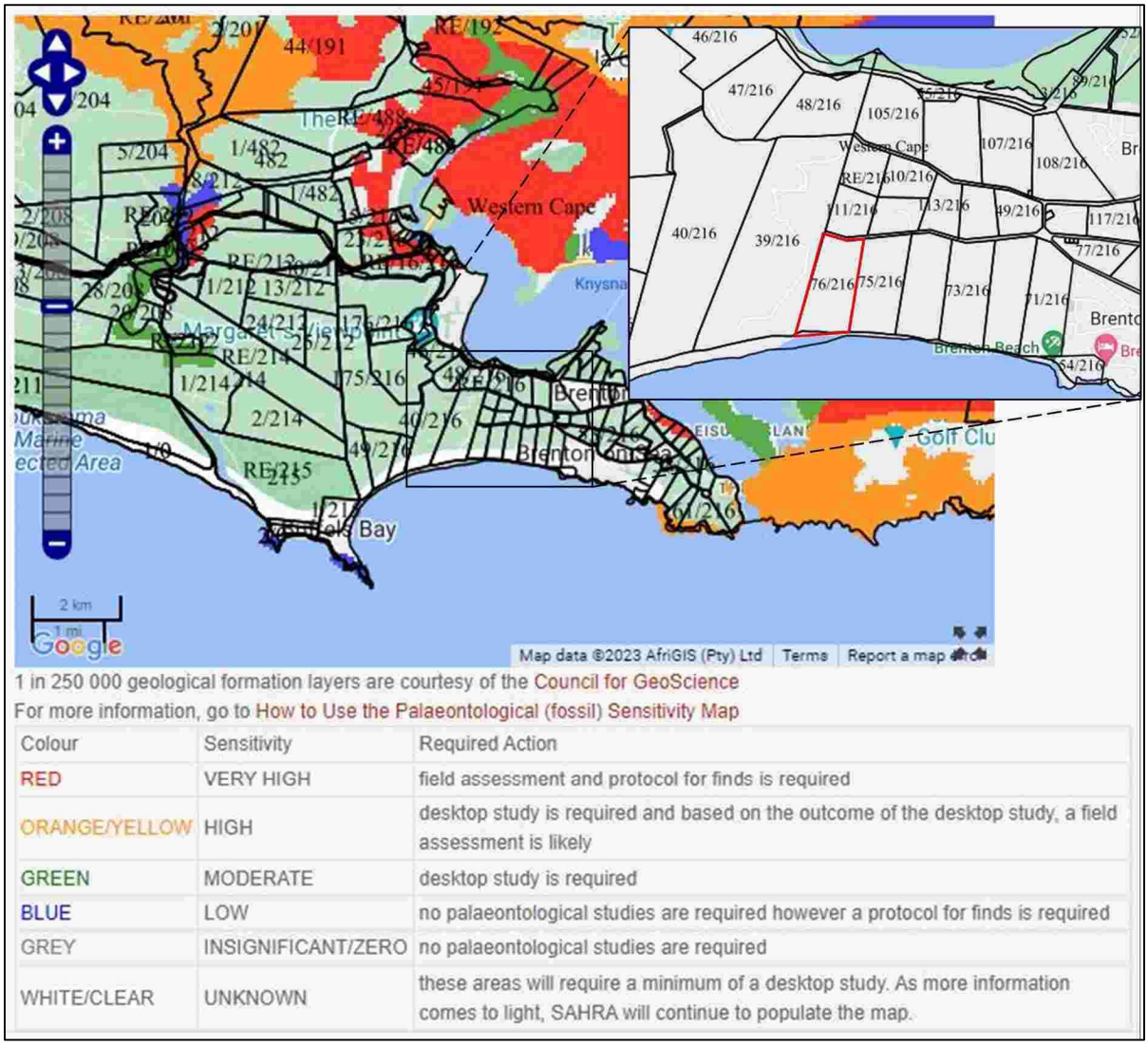


FIGURE 5. OBLIQUE EASTERLY VIEW OF 76/216 (RED POLYGON) SHOWING THE TWO SITES FOR HOUSES (WHITE ELLIPSES), STEEP PARABOLIC COASTAL DUNES, AND BRENTON-ON-SEA IN THE BACKGROUND TO THE RIGHT. COURTESY OF GOOGLE EARTH 2023.

The northern section of the property is characterized by dense vegetation that has been significantly altered and contains a variety of exotic species, including black wattle, pine, blue gum, and rooikrans trees. Conversely, the remainder of the property is less modified, although exotic species are still present in the lower-lying thicket areas. Many sections of the property remain inaccessible for archaeological inspection due to the dense vegetation and ground cover. However, the presence of tracks, exposed surfaces, and widespread mole activity provided sufficient opportunities for observation pertinent to this baseline investigation.

The SAHRIS PalaeoSensitivity map shows that the study area is white/clear/unshaded, meaning that palaeontological sensitivity is UNKNOWN and that “these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map” (Figure below). Due to the UNKNOWN palaeontological sensitivity attributed to the study area a professional palaeontologist, Prof John Pether, was consulted for inputs.



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

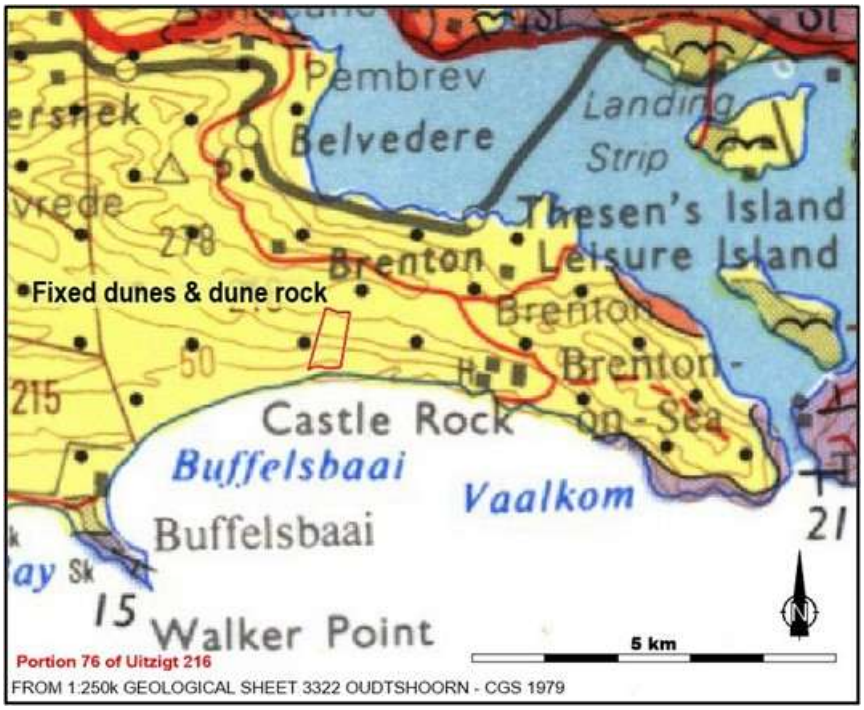
FIGURE 20. SAHRIS PALAEOSENSITIVITY MAP SHOWS THAT THE STUDY AREA (RED POLYGON IN INSET) IS WHITE/CLEAR/UNSHADED (HTTP://WWW.SAHRA.ORG.ZA/).

The following includes key sections and full recommendations given in Prof Pether's report.

Geological Context

The Knysna property is situated on fixed dunes and dune rock, underlain by the Waenhuiskrans Formation of the Bredasdorp Group. This formation is classified as Very High/Red in the Worcester and Riversdale geological maps but is unclassified in Oudtshoorn

The area include**s** aeolianite formed during Marine Isotope Stage 5 (130,000 to 80,000 years ago) and older mid-Quaternary ridges. The seaward section features stacked parabolic dunes formed during the Holocene (past 6,000 years) and is covered by windblown grey coversands that support Knysna Sand Fynbos, with occasional buried palaeosols.

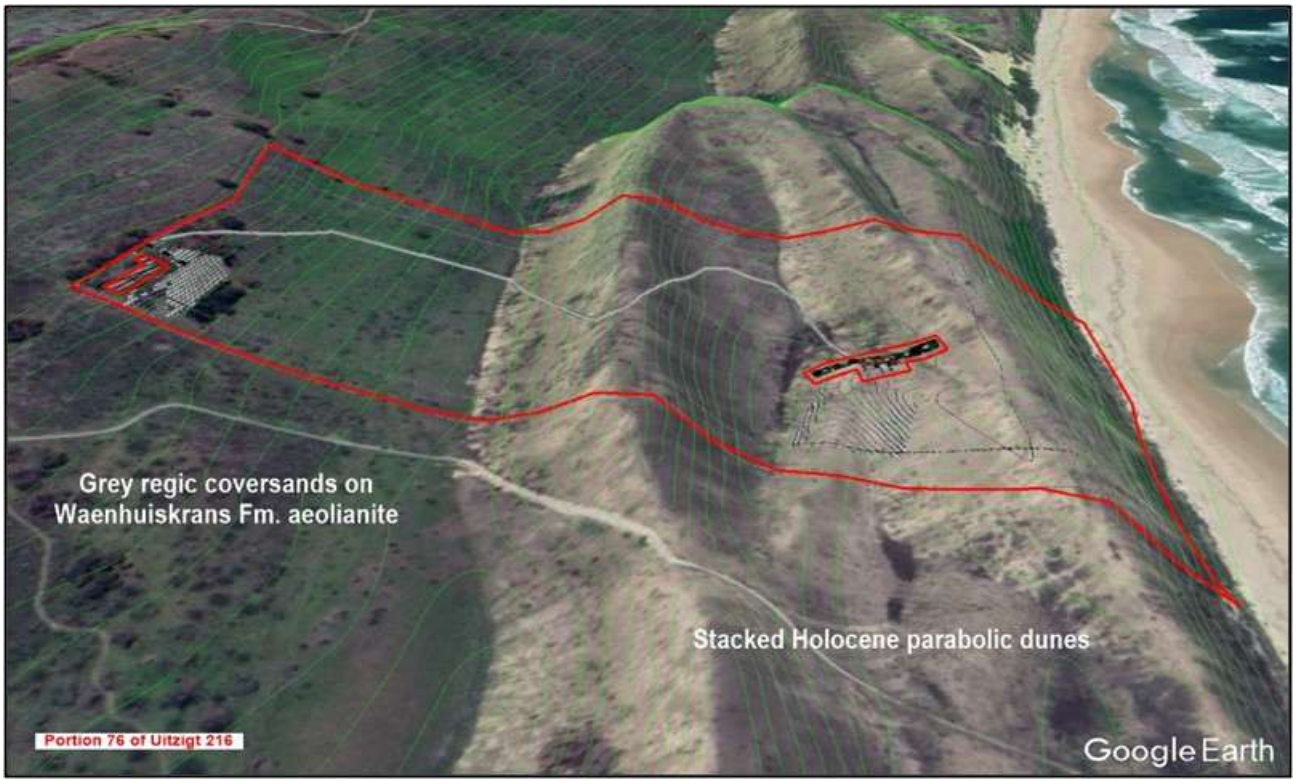


SURFACE GEOLOGY OF THE BRENTON AREA AND LOCATION OF PORTION 76 OF UITZICHT 216.

THE LANDSCAPE SETTING OF PORTION 76 OF UITZIGT 216

Anticipated Impacts

It is expected that the excavations for foundations and infrastructure will follow typical practices for conventional developments, generally reaching depths of 0.5 to 0.8 meters. However, deeper excavations, around 2 meters, will be required for septic tanks and swimming pools. The earthworks for the farm buildings in the northwest corner of the property will primarily impact the coversands but may also intersect the underlying palaeosurface and the buried soil that caps the Waenhuiskrans Formation aeolianite.



PROPOSED DEVELOPMENT AREAS, LOOKING EAST. IMAGE DATE 11/17.

Fossil bones in the Waenhuiskrans Formation are likely from the later Quaternary (160 to 80 ka) and mainly consist of extant species, with some potentially extinct. These finds hold moderate scientific importance, but significant discoveries are unlikely due to limited subsurface impact

In the Strandveld Formation dunes, rare bones of elephants, rhinos, and hippos are found, dating to less than 6,000 years old, reflecting modern fauna. Analyses of these subfossils provide ecological insights, with little impact expected from excavations.

Recommendations

The proposed developments are not expected to impact fossil heritage resources in the subsurface disturbance areas. However, if fossil bones, archaeological material, or unmarked graves are unexpectedly uncovered, it is recommended to include a Fossil Finds Procedure (FFP) in the Environmental Management Plan (EMP) for construction.

No archaeological studies have been done on 76/216, but previous work was conducted on nearby sites (Nilssen 2017). There are no National or Provincial Heritage Sites or graded archaeological resources in the immediate vicinity that would be affected by the development.

SG Diagrams, Historic Aerial Photographs and Results of Site Inspection

The property was examined for its potential impact on heritage resources of colonial and pre-colonial origin. Only heritage resources relevant to the immediate vicinity of the property are considered. Previous heritage studies and monitoring of geotechnical test excavations in the surrounding area have provided sufficient observations and information for the HWC NID application process.

The approach to the fieldwork was:

- to walk and inspect the development footprint to gain an understanding of its archaeological content and context by accessing a representative portion of the affected area,

- and the site inspection was completed with an evaluation of the visual/aesthetic sensitivity of 76/216 from the unnamed road leading to and from Brenton-on-Sea.

A few fragments of white mussel shell were seen among numerous modern land snail shells atop the apex of the southernmost coastal dune. The shells appear modern and are not associated with any anthropogenic materials. They are likely recent bird or fisherman droppings and are not archaeological in origin. The observation is of no heritage value.

No archaeological or heritage resources of colonial or pre-colonial origin were identified on 76/216 or in its immediate vicinity.

Palaeontological and heritage studies indicate that the proposed development will not impact significant archaeological resources and will have negligible visual effects. The area, already transformed into a holiday and residential landscape, will remain unchanged in terms of heritage value.

Conclusions and Recommendations

The following conclusions and recommendations are arrived at after reviewing the information obtained through:

- previous heritage studies and HWC applications in the vicinity of the 76/216,
- SAHRIS PalaeoSensitivity map,
- Palaeontological Impact Statements (Pether 2023)
- previous archaeological and heritage-related studies in the surrounding area,
- SG Diagrams,
- historic and Google Earth aerial photographs, and
- a site inspection (archaeological walk-through).

The SAHRIS PalaeoSensitivity map shows that the study area has UNKNOWN palaeontological sensitivity, requiring a desktop study. Palaeontologist Prof John Pether concluded that the proposed development is unlikely to impact fossil resources, but recommended a Fossil Finds Procedure (FFP) in the Environmental Management Plan. No significant heritage resources were identified, and any potential Stone Age tools would have low significance. The area has a negligible visual impact and does not contribute to the cultural landscape. Overall, the socio-economic benefits, including job creation, outweigh any minor impacts. Therefore, the proposed activity should be approved without a Heritage Impact Assessment.

Nevertheless, it is recommended that Heritage Western Cape consider and/or require that the following be included in the Environmental Authorisation / Environmental Management Program, if the project is approved:

- ✓ Although not requiring further Palaeontological investigation, Prof Pether recommends that the Fossil Finds Procedure (FFP – see links above), should be included in the Environmental Authorisation / Environmental Management Program (EMPr) for the construction phase of the project.
- ✓ due to the findings of this, geotechnical test excavations, and previous archaeological studies, archaeological monitoring is NOT recommended, but
- ✓ if any human remains or significant archaeological materials are exposed during mining activities, then the find should be protected from further disturbance and work in the immediate area should be halted and Heritage Western Cape must be notified immediately. These heritage resources are protected by Section 36(3)(a) and Section 35(4) of the NHRA (Act 25 of 1999), respectively and may not be damaged or disturbed in any way without a permit from the heritage authorities. Any work in mitigation, if deemed appropriate, should be commissioned and completed before construction continues in the affected area and will be at the expense of the developer.

Heritage

A Notice of Intent to Develop has been submitted to the Department of Heritage Western Cape. The Department stated the following in a letter dated 13 February 2024:

You are hereby notified that, since there is no reason to believe that the proposed development on Portion 76 of Farm Uitzicht 216 has impacted heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required. HWC Chance finds the procedure to be included in the Environmental Authorisation.

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	
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%	

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 lager event
- Multiple interrelated events
- Sudden or catastrophic events
- Incremental change

Definition of key terminology:

Nature of the Impact – A description of the 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 historic 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 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 each alternative

Impact assessment in terms of Regulation 22(2)(i) of GN R.543

Preferred Alternative

The Main Dwelling House

The primary dwelling unit will be situated in the south-western portion of the property, consisting of the following inter-leading rooms ±1000m²:

- Bedrooms.
- Open plan living area consisting of the kitchen, lounge area, dining area, kitchen, bar, scullery, bathroom and wine cellar.
- Open deck and swimming pool.

Internal Road

The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide and the disturbed area for construction of the road varies between 4 to 5.5 meters wide. The internal road is to access the southwestern side of the property.

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.

Planning, Design and Construction Phase

Potential impacts on geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**
Nature of impact:	Compaction of soil for the internal road and the main dwelling house. Groundwater may be impacted during construction if substances, such as fuels and oils associated with the usage of machinery and equipment, are allowed to leak onto soil and potentially leach into the groundwater. <u>Soil</u> Mixing cement directly on the ground could also result in contamination. Contaminated soil will have to be rehabilitated or disposed of, depending on the level and nature of the contamination. Soil erosion and topsoil loss are not expected during construction as activities will be limited to the development footprint. <u>Air pollution</u> Dust will be generated during the construction activities, particularly during excavations. During the construction phase of the associated infrastructure, dust will be generated. The effect on air quality is expected to be minor and localised, as well as of short-term duration, as the construction phase is temporary. The contribution of exhaust fumes from the associated construction equipment and vehicles will be negligible. The construction of the smaller 1000m² main dwelling and associated internal access road will still lead to soil compaction, potential groundwater contamination from leaks or spills (fuels, oils), and dust emissions during excavation and earthworks. However, the reduced footprint means that the volume of soil disturbed, the amount of building material used, and the area exposed to wind erosion will be significantly smaller compared to a 3000m² dwelling. The risk of stormwater pollution and air pollution remains but is proportionally less intense.
Extent and duration of impact:	Neighbouring properties during the construction phase.
Probability of occurrence:	Probable
Degree to which the impact can be mitigated:	This impact can be mitigated.

Degree to which the impact may cause irreplaceable loss of resources:	Partial irreplaceable loss.
Cumulative impact prior to mitigation:	Reduced risk of soil erosion and pollution due to smaller development area; however, potential contamination of stormwater run-off, soil, and groundwater still remains a concern.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium, negative (retained, due to similar nature of activities, though intensity is reduced)
Degree to which the impact can be mitigated:	The impact cannot be avoided as earthworks will be required for the building of the main dwelling and the internal road.
Proposed mitigation:	<u>As per the Geotechnical Report:</u> The road layout must take into account the natural contours and drainage lines present on the site to minimise the extent of earthworks required. It is essential that deep box cuts are properly retained. Typically, box cuts will not encounter rock, and excavated soil can be utilized for filling, excluding the organic-rich topsoil. The in-situ subgrade material varies in quality, generally ranging from G7 to G9. Consequently, it is advisable to provide for the importation of at least one selected subgrade layer of G7 quality, in addition to the standard layer works, which include subbase, base materials, pavers, and cement slabs, for lightly trafficked internal roads and parking areas. <u>Drainage:</u> The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads but are recommended behind retaining walls as standard. Rainwater tanks will be placed around the main dwelling to collect rainwater for reuse from roofs. Stockpiles of excavated materials or spoils during the construction phase should be strategically positioned to mitigate wind erosion and avoid adverse impacts on drainage lines. Dust suppression measures should be implemented in accordance with specific site conditions. Vehicles transporting materials prone to being displaced by wind must be securely covered. Ingress and egress points onto public roads must be cleared of any dust or mud. To minimise emissions resulting from exhaust fumes, regular maintenance of vehicles and equipment is essential to ensure optimal working conditions.

	• Blanket clearing of the site. • It is proposed that steel or concrete piling be utilised for the building structures, thereby limiting the exposure of bare soils and wind-blown dust. • Erosion protection measures must be implemented in disturbed areas. • Topsoil and soil stockpiles should be covered, wetted or otherwise stabilised to prevent wind erosion and dust generation. • A water cart must be employed on windy days to wet soils that would be prone to wind erosion to limit dust generation. • Disturbed areas should be rehabilitated in parallel with construction completion. • Compile and implement an Environmental Management Programme and audit reporting by an ECO during construction. • During construction: New roads need to be made using the same/similar materials and methods as the neighbouring road. <u>Construction activities</u> Storage of potential pollutants such as fuel, oil, cement, etc. should be confined to a sealed surface with a bund wall to prevent soil contamination from accidental leaks and spills. Only the volume of fuel required for the day should be stored. The use of potentially polluting substances should be strictly controlled and handled in designated areas under the supervision of competent and trained personnel as stipulated in the EMPr. No vehicle or equipment will be serviced on-site. Appropriately sized drip trays must always be used in emergency situations. Approved absorbent material must be kept on-site in sufficient quantities to deal with small spills. Absorbent material and contaminated soil should be disposed of at a registered hazardous waste site. No cement mixing is to occur directly on the ground and any cement or hydrocarbon spills should be cleared away immediately. The generation of dust during the construction phase is expected to be minimal. Stockpiles of fine construction materials should be positioned such that they are not exposed to wind erosion or drainage lines. Dust suppression should be implemented according to the prevailing site-specific conditions. Construction vehicles transporting construction materials must be suitably covered to prevent

	materials from being blown off. Vehicles and machinery will be kept in good working order to avoid excess emissions. All development activities must remain within the demarcated construction area. Chemical toilets should be provided for construction workers if the on-site ablution facilities are not adequate (1 toilet per 30 workers). Their use should be enforced. Chemical toilets will be serviced by an appropriate service provider, provided with toilet paper and cleaned regularly. Servicing will include emptying without spills and appropriate disposal by the service provider. It is essential to maintain an on-site nursery, and the search-and-rescue plants should be repurposed for the rehabilitation of the site following construction activities. The Preferred Alternative, which entails the development of a 1000 m² main dwelling in the southwestern portion of Portion 76, is identified as the most appropriate and sustainable option. It offers a significantly reduced development footprint compared to Alternative 1, which originally proposed a 3000 m² structure in the same location. While both alternatives benefit from natural dune screening, lower visual exposure, and avoidance of steep slopes, the Preferred Alternative further reduces potential impacts on soil, groundwater, and vegetation, while maintaining all practical and servicing advantages. The scaled-down design also results in reduced fire risk and construction-related disturbance. Alternative 1 remains environmentally and technically viable but carries a larger transformation footprint and slightly higher risk of cumulative impacts. In contrast, Alternative 2 introduces an additional development node in the sensitive northern section for a farm manager's house, increasing the likelihood of ecological fragmentation and regulatory complications. Alternative 3, which shifts the main dwelling to the northern portion, is excluded due to its high impact on Critically Endangered Knysna Sand Fynbos. The No-Go Alternative, while avoiding all impacts, does not support the lawful land use rights or intended residential function of the property.
Cumulative impact post mitigation:	Lower risk of stormwater/soil/groundwater pollution due to smaller construction area; dust and nuisance impacts are significantly reduced compared to the original proposal.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Habitat and biodiversity loss**
Nature of impact:	The proposed 1000 m² main dwelling will result in the loss of a smaller area of Goukamma Dune Thicket, which is classified as Least Threatened. The reduced footprint means less vegetation will be cleared, and disturbance to surrounding biodiversity will be lower than in the original 3000 m² proposal. However, some localised habitat fragmentation remains inevitable.
Extent and duration of impact:	Limited to the development site, during the construction phase.
Probability of occurrence:	Low
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	With correct management, in all probability, the degree to which the impact may cause irreplaceable loss of resources is low.
Cumulative impact prior to mitigation:	Reduced loss of ecological corridors and plant diversity due to the smaller footprint, but the impact remains relevant as the site contains indigenous vegetation.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High - positive
Proposed mitigation:	It is imperative that impacts on the continuity of ecological processes and corridors must be taken into consideration, irrespective of the type of land use proposed or envisaged in the region as a whole. 1. Removal of Alien Invasive Species during the construction phase. 2. An on-site nursery must be created, and a search and rescue of all plants needs to be conducted prior to construction occurring on site. The plants rescued are to be reused in the rehabilitation of the site after construction. 3. Appointment of an Environmental Control Officer. 4. During construction: New roads need to be made using the same/similar materials and methods as the neighbouring road.

	The development will not have an unnecessarily significant negative impact on biodiversity conservation, the sense of place of the area and transform and fragment the Knysna Sand Fynbos Coastal Corridor.
Cumulative impact post mitigation:	With mitigation, no significant cumulative impact is anticipated. The smaller scale enhances the effectiveness of restoration and containment measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	The construction of the 1000 m² main dwelling will result in temporary job creation, primarily for general labour and local construction roles. While the number of jobs may be slightly fewer than the 3000 m² scenario, the overall positive impact on socio-economic conditions remains significant. No negative impacts on social rights, land use access, or community livelihoods are foreseen. The development will support short- to medium-term employment, and opportunities for skills transfer may also be created.
Extent and duration of impact:	The surrounding neighbourhoods or town during the construction phase. During the construction phase.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities created for people from the local community. The impact remains highly positive, although slightly smaller in scale than for a 3000 m² build.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	It can be enhanced by targeted local employment, especially of previously disadvantaged individuals with appropriate or trainable skills.
Proposed mitigation:	The contractor should employ people from the local community where possible and ensure that skill transfer and training are provided where feasible.

Cumulative impact post mitigation:	Continued provision of employment and upskilling benefits for local communities; no negative cumulative effects anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	Impacts associated with general building construction noise. The construction phase will result in a temporary increase in ambient noise levels from moving machinery, equipment and additional people on site.
Extent and duration of impact:	Site only during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Increased ambient noise levels due to vehicles, equipment and workers on site.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	Low. The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Construction work will take place during the daytime. No construction activities must occur on Sundays or public holidays. The equipment and machinery used must be regularly maintained to reduce the potential noise disturbance.
Cumulative impact post mitigation:	Reduced noise levels during the construction phase.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	The site is currently vacant and natural in character. Construction activities (site clearance, equipment, structures, and worker presence) will introduce a temporary visual intrusion, particularly for neighbouring properties and

	visitors to the area. The reduced bulk of the 1000 m² dwelling, compared to the originally proposed 3000 m² structure, means the visual impact during construction will be less intense.
Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources
Cumulative impact prior to mitigation:	The construction site may appear aesthetically unpleasant, particularly from Brenton Beach and higher surrounding viewpoints. However, the smaller building footprint and reduced construction intensity decrease the likelihood of significant cumulative visual disturbance.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium. The impact can be managed by implementing mitigatory measures.
Proposed mitigation:	The construction site should be fenced and screened off from the surrounding areas, including chemical toilets (if required). Good housekeeping must be implemented at all times, and the site must be kept tidy and clean (no litter, etc.). Indigenous vegetation must be used for landscaping. During the construction phase, the proposed development will be effectively screened from the N2 motorway using green shade cloth.
Cumulative impact post mitigation:	The site will be less visually intrusive during the construction phase. With proper mitigation, the site will be significantly less visually intrusive during the construction phase. Given that Portion 76/216 is only barely visible from the Brenton-on-Sea access road, and that natural dunes offer screening from inland, the residual visual effect will be minimal. Consequently, the proposed development will have no visual impact on the aesthetic value of the affected area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. Natural dune screening + design mitigation reduces significance to Low.

	Although the dwelling may be partially visible from Brenton Beach, dune screening, earth-tone finishes, and indigenous landscaping will reduce its significance to Low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low (with greater confidence due to reduced structure size and enhanced screening potential)
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	Heritage resources may be encountered during excavation activities on-site. A NID was submitted to Heritage Western Cape. A Heritage Impact Statement was prepared by Dr Peter Nilssen and stated the following: The SAHRIS PalaeoSensitivity map shows that the study area is white/clear meaning that palaeontological sensitivity is UNKNOWN and that "these areas will require a minimum of a desktop study.
Extent and duration of impact:	Only during the construction phase.
Probability of occurrence:	Improbable
Degree to which the impact can be reversed:	Irreversible, should culture or historical resources be encountered, but this is not expected.
Degree to which the impact may cause irreplaceable loss of resources:	Full loss of irreplaceable resources, should cultural or historical resources be encountered on-site, but this is not expected.
Cumulative impact prior to mitigation:	Potential loss of cultural or historical resources, should it be encountered during construction activities. However, this is not expected.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	It is not expected that cultural or historical resources will be encountered as the site. The impact cannot be avoided during the construction phase as excavation activities are required for the development. Prof Pether concluded as follows: "The proposed developments are not anticipated to have impacts on fossil heritage resources of the coversands and dune sands in the footprints of subsurface disturbance. No colonial or pre-colonial heritage resources of significance were identified in the study area. If present on or in aeolian dune sands, then Stone Age implements are expected to be

	of low significance and Not Conservation Worthy. No caves or rock shelters occur on 76/216 and there are no known or declared Heritage Sites nor other significant heritage resources in the surroundings that will be impacted by the proposed activity.
Proposed mitigation:	There are no cultural or historical features on-site. However, the provisions of the National Heritage Resources Act will apply. Environmental awareness training should be presented to all employees at the site. Such training should include the identification of potential heritage resources and how to react if the presence of heritage resources is suspected. If any sign of a heritage or cultural site is unearthed during excavations, then all activities must cease until a heritage specialist has been consulted and had the opportunity to investigate the findings. In case of the unexpected uncovering of fossil bones in the surficial coversands and soil, or buried archaeological material, or unmarked graves, it is recommended that a protocol for finds of potential fossil material (and buried artefacts), the Fossil Finds Procedure (FFP), is included in the Environmental Management Plan (EMP) for the Construction Phase of the project. Adjustments to the development plan are not expected to change this recommendation"
Cumulative impact post mitigation:	Potential loss of cultural or historical resources should they be encountered during construction activities, but this is not expected. Due to the absence of significant heritage resources linked to the property, it does not substantially contribute to the already modified cultural landscape of the region. Consequently, there will be minimal to no cumulative impact on the heritage value of the area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. Although the dwelling may be partially visible from Brenton Beach, dune screening, earth-tone finishes, and indigenous landscaping will reduce its significance to Low. The positive socio-economic impact, including a few short, medium, and long-term jobs, outweighs the negligible to zero negative impacts this project may have on heritage resources.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	It is essential to consider and mitigate occupational exposure, the risks of fires and explosions, as well as health hazards during the construction phase.
Extent and duration of impact:	The site only, the duration of the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Potential injury of workers.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low - positive
Proposed mitigation:	Adequate measures must be in place to ensure the safety of staff on-site, such as proper training of operators, first aid treatment, medical assistance, emergency treatment, prevention of inhalation of dust, protective clothing, footwear and gloves. Manuals and training regarding the correct handling of materials and operation of equipment should be in place and updated as new or updated material safety data sheets become available; and monitoring should be carried out on a regular basis, including accident reports. All employees are to be managed in strict accordance with the OH&S Act. Sufficient water must be available for firefighting purposes. All personnel must be trained in responsible fire protection measures. Regular inspections should be carried out to inspect and test fire-fighting equipment and pollution control measures. Relevant SANS Standards shall be implemented at the facility.
Cumulative impact post mitigation:	Workers are aware of safety risks and consequences and relevant procedures. Mitigatory measures will reduce the chance of an incident occurring.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Waste**
Nature of impact:	Waste generated through construction activities (general and hazardous) that is not correctly managed may result in pollution of water, air and soil resources.
Extent and duration of impact:	Neighbouring properties during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Pollution from waste generation (general and hazardous waste) through construction activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Appropriate containers for different types of waste should be provided throughout the site. The containers must have sufficient capacity and be removed frequently. Environmental awareness training should include a section on the impacts of waste generation and improper waste management. Ensure that rubble and construction waste are sorted on site and that recyclable material is separated from disposable waste. The contractor should keep safe disposal certificates for record purposes.
Cumulative impact post mitigation:	Litter/contamination of potential soil, water or air pollution
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(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 run-off/groundwater/soil, air quality**
Nature of impact:	The internal road and the main dwelling house. Surface water run-off Inadequate waste management, specifically in the form of litter, can result in surface water pollution. Soil erosion and topsoil loss are not expected during operation and will be limited to the development footprint. The operational phase of the 1000 m² dwelling will have a limited impact on soil, air, or water systems. The internal road and smaller building footprint will generate less surface runoff than the original 3000 m² proposal. If household waste is not properly managed, surface water pollution through litter or siltation remains a potential risk. However, soil erosion and topsoil loss are unlikely, and air quality will not be significantly affected under normal residential use.
Extent and duration of impact:	Sit only during the operational phase.
Probability of occurrence:	Unlikely
Degree to which the impact can be mitigated:	This impact can be mitigated.
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater and soil erosion.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low (retained, and likely further reduced due to scale)
Proposed mitigation:	Drainage: The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads but are recommended behind retaining walls as standard. The stormwater drainage system must be adhered to, and the system should lead runoff water away to prevent soil erosion.

	• Use rainwater collection tanks to serve as a retention vessel in downpours. • Driveways must also be utilised for rainwater harvesting. • Stormwater management should encourage the collection and infiltration of water into the soil profile.
Cumulative impact post mitigation:	After mitigation, the potential for pollution and erosion is minimal due to the smaller dwelling size, highly permeable soil, and active drainage controls.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low (reduced scale and ease of implementing controls)
Potential impact on biological aspects:	**Habitat and biodiversity loss**
Nature of impact:	The operational presence of the 1000 m² main dwelling will result in the long-term loss of a portion of Goukamma Dune Thicket, a vegetation type classified as Least Threatened. Although this loss is permanent, the reduced development footprint results in a smaller area of cleared vegetation compared to the originally proposed 3000 m² dwelling, thereby lowering the scale of biodiversity disturbance.
Extent and duration of impact:	The site. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Irreversible
Degree to which the impact may cause irreplaceable loss of resources:	With correct management, in all probability, the degree to which the impact may cause irreplaceable loss of resources is low.
Cumulative impact prior to mitigation:	Although the dwelling contributes to vegetation loss and habitat modification, the impact on ecological corridors is limited, and the overall biodiversity footprint is smaller and more contained than in the previous 3000 m² proposal.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	It is essential to maintain an on-site nursery, and the search-and-rescue plants should be repurposed for the rehabilitation of the site following construction activities.

	The impact assessment identifies the preferred Alternative as the optimal layout, while Alternative 1 and 2 is deemed less favourable. The Preferred Alternative (1000 m² dwelling) is more favourable than Alternatives 1 and 2, both of which result in greater landscape transformation. While the development introduces permanent change, it does not significantly disrupt biodiversity conservation objectives, sense of place, or continuity of the Knysna Sand Fynbos Coastal Corridor.
Cumulative impact post mitigation:	No significant cumulative impacts are anticipated following full implementation of mitigation measures. The smaller scale, combined with rehabilitation and appropriate vegetation management, will maintain ecological integrity across the broader landscape.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low (retained, with stronger assurance due to improved footprint management and mitigation feasibility)
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socioeconomic aspects are foreseen as the proposed construction will not negatively impact any person's social rights. The operational phase of the proposed development will provide approximately 1-5 long-term employment opportunities.
Extent and duration of impact:	The surrounding neighbourhoods or town. Throughout the lifespan of the project.
Probability of occurrence:	Highly Probably
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.

Proposed mitigation:	People from the local community where possible and ensure that skill transfer and training are provided where feasible.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	The proposed activity is unlikely to contribute in any significant manner to noise impacts.
Extent and duration of impact:	Neighbouring properties for the life of the operation.
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation is required for the one dwelling unit.
Cumulative impact post mitigation:	No cumulative impacts are anticipated following the implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	The proposed dwelling will remain visible from select viewpoints, most notably from Brenton Beach. However, due to the smaller built form (1000 m² vs. previously proposed 3000 m²), the visual massing and scale of the structure will be significantly reduced, improving its ability to blend with the natural dune landscape. While the character of the site will change, the visual intrusion is expected to be minor if mitigated correctly.

Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources
Cumulative impact prior to mitigation:	The character of the site will be altered by the presence of the structure. However, due to the smaller size, this change will be less pronounced than in the previous proposal. The site remains largely obscured from inland routes, with the primary viewshed from Brenton Beach, partially screened by dunes.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium (unchanged, but with reduced severity due to scaled-down form)
Degree to which the impact can be mitigated:	Medium. The smaller scale enhances the effectiveness of visual mitigation measures.
Proposed mitigation:	The design of the proposed development must take into account the visual impacts. It is essential for the buildings to integrate seamlessly with the natural environment. Employing down lighting, utilising earthy colours, and strategically positioning satellite dishes are recommended measures to achieve effective mitigation of visual disturbances. As is evident, portion 76/216 is only barely visible in the distance from the road leading to and from Brenton-on-Sea. Consequently, the proposed development will have no visual impact on the aesthetic value of the affected area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area.
Cumulative impact post mitigation:	After mitigation, the visual prominence of the dwelling will be significantly reduced. Although a portion may remain visible from Brenton Beach, the combined use of dune screening, sympathetic design, and natural materials will ensure the development does not detract from the broader aesthetic character of the area.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low (retained, with greater confidence due to reduced structure size and improved integration potential).

Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	It is not expected that any cultural-historical aspects will be impacted as a result of operational activities.
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	Occupational exposure, fires, explosion, health.
Extent and duration of impact:	The owner of the property will be residing in the main dwelling.
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A

Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Waste**
Nature of impact:	Normal household waste will be generated.
Extent and duration of impact:	Site only.
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Alternative 1

The Main Dwelling House

The primary dwelling unit will be situated in the south-western portion of the property, consisting of the following inter-leading rooms ±3000m²:

- 6 Bedrooms.
- Open plan living area consisting of the kitchen, lounge area, dining area, kitchen, bar, scullery, bathroom and wine cellar.
- Open deck and swimming pool.

Internal Road

The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide and the disturbed area for construction of the road varies between 4 to 5.5 meters wide. The internal road is to access the southwestern side of the property.

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.

Planning, Design and Construction Phase

Potential impacts on geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**
Nature of impact:	Compaction of soil for the internal road and the main dwelling house. Groundwater may be impacted during construction if substances, such as fuels and oils associated with the usage of machinery and equipment, are allowed to leak onto soil and potentially leach into the groundwater. Soil Mixing cement directly on the ground could also result in contamination. Contaminated soil will have to be rehabilitated or disposed of, depending on the level and nature of the contamination. Soil erosion and topsoil loss are not expected during construction as activities will be limited to the development footprint. Air pollution Dust will be generated during the construction activities, particularly during excavations. During the construction phase of the associated infrastructure, dust will be generated. The effect on air quality is expected to be minor and localised, as well as of short-term duration, as the construction phase is temporary. The contribution of exhaust fumes from the associated construction equipment and vehicles will be negligible.
Extent and duration of impact:	Neighbouring properties during the construction phase.
Probability of occurrence:	Probable
Degree to which the impact can be mitigated:	This impact can be mitigated.

Degree to which the impact may cause irreplaceable loss of resources:	Partial irreplaceable loss.
Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater, dust generation and soil erosion.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium, negative
Degree to which the impact can be mitigated:	The impact cannot be avoided as earthworks will be required for the building of the main dwelling and the internal road.
Proposed mitigation:	As per the Geotechnical Report: The road layout must take into account the natural contours and drainage lines present on the site to minimise the extent of earthworks required. It is essential that deep box cuts are properly retained. Typically, box cuts will not encounter rock, and excavated soil can be utilized for filling, excluding the organic-rich topsoil. The in-situ subgrade material varies in quality, generally ranging from G7 to G9. Consequently, it is advisable to provide for the importation of at least one selected subgrade layer of G7 quality, in addition to the standard layer works, which include subbase, base materials, pavers, and cement slabs, for lightly trafficked internal roads and parking areas. **Drainage:** The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads but are recommended behind retaining walls as standard. Rainwater tanks will be placed around the main dwelling to collect rainwater for reuse from roofs. Stockpiles of excavated materials or spoils during the construction phase should be strategically positioned to mitigate wind erosion and avoid adverse impacts on drainage lines. Dust suppression measures should be implemented in accordance with specific site conditions. Vehicles transporting materials prone to being displaced by wind must be securely covered. Ingress and egress points onto public roads must be cleared of any dust or mud. To minimise emissions resulting from exhaust fumes, regular maintenance of vehicles and equipment is essential to ensure optimal working conditions. • Blanket clearing of the site.

	• It is proposed that steel or concrete piling be utilised for the building structures, thereby limiting the exposure of bare soils and wind-blown dust. • Erosion protection measures must be implemented in disturbed areas. • Topsoil and soil stockpiles should be covered, wetted or otherwise stabilised to prevent wind erosion and dust generation. • A water cart must be employed on windy days to wet soils that would be prone to wind erosion to limit dust generation. • Disturbed areas should be rehabilitated in parallel with construction completion. • Compile and implement an Environmental Management Programme, and audit reporting by an ECO during construction. • During construction: New roads need to be made using the same/similar materials and methods as the neighbouring road. <u>Construction activities</u> Storage of potential pollutants such as fuel, oil, cement, etc. should be confined to a sealed surface with a bund wall to prevent soil contamination from accidental leaks and spills. Only the volume of fuel required for the day should be stored. The use of potentially polluting substances should be strictly controlled and handled in designated areas under the supervision of competent and trained personnel as stipulated in the EMPr. No vehicle or equipment will be serviced on-site. Appropriately sized drip trays must always be used in emergency situations. Approved absorbent material must be kept on-site in sufficient quantities to deal with small spills. Absorbent material and contaminated soil should be disposed of at a registered hazardous waste site. No cement mixing is to occur directly on the ground and any cement or hydrocarbon spills should be cleared away immediately. The generation of dust during the construction phase is expected to be minimal. Stockpiles of fine construction materials should be positioned such that they are not exposed to wind erosion or drainage lines. Dust suppression should be implemented according to the prevailing site-specific conditions. Construction vehicles transporting construction materials must be suitably covered to prevent

	materials from being blown off. Vehicles and machinery will be kept in good working order to avoid excess emissions. All development activities must remain within the demarcated construction area. Chemical toilets should be provided for construction workers if the on-site ablution facilities are not adequate (1 toilet per 30 workers). Their use should be enforced. Chemical toilets will be serviced by an appropriate service provider, provided with toilet paper and cleaned regularly. Servicing will include emptying without spills and appropriate disposal by the service provider. It is essential to maintain an onsite nursery, and the search-and-rescue plants should be repurposed for the rehabilitation of the site following construction activities. The impact assessment identifies Alternative 1 as the optimal layout, while Alternative 2 is deemed less favourable. The removal of the farm manager's house will prevent adverse effects on the sensitive vegetation in this area, which will significantly mitigate the overall impact on the surrounding flora. Alternative 1 is preferable because it minimizes project footprint, reduces fire risk, limits landscape fragmentation, and results in less than 1% transformation of the property, compared to over 2% for other options.
Cumulative impact post mitigation:	Potential contamination of stormwater run-off, soil, groundwater, and nuisance as a result of dust generation will be minimised by implementing mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Habitat and biodiversity loss**
Nature of impact:	The loss of Goukamma Dune Thicket (southern section), which is categorised as Least Threatened.
Extent and duration of impact:	The site only, the duration of the construction phase
Probability of occurrence:	Low
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	With correct management, in all probability, the degree to which the impact may cause irreplaceable loss of resources is low.

Cumulative impact prior to mitigation:	Loss of ecological corridors: The southern section is categorised as Least Threatened, featuring Goukamma Dune Thicket.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High - positive
Proposed mitigation:	It is imperative that impacts on the continuity of ecological processes and corridors must be taken into consideration, irrespective of the type of land use proposed or envisaged in the region as a whole. 5. Removal of Alien Invasive Species during the construction phase. 6. An on-site nursery must be created, and a search and rescue of all plants needs to be conducted prior to construction occurring on site. The plants rescued are to be reused in the rehabilitation of the site after construction. 7. Appointment of an Environmental Control Officer. 8. During construction: New roads need to be made using the same/similar materials and methods as the neighbouring road. The development will not have an unnecessarily significant negative impact on biodiversity conservation, the sense of place of the area and transform and fragment the Knysna Sand Fynbos Coastal Corridor.
Cumulative impact post mitigation:	No cumulative impacts are anticipated following the implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socioeconomic aspects are foreseen as the proposed construction will not negatively impact on any person's social rights. Employment opportunities (temporary) will be generated during the construction phase. The positive socio-economic impact, including a few short-, medium- and long-term jobs outweigh the negligible to zero negative impacts this project may have on heritage resources.

Extent and duration of impact:	The surrounding neighbourhoods or town during the construction phase. During the construction phase.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.
Proposed mitigation:	The contractor should employ people from the local community where possible and ensure that skill transfer and training are provided where feasible.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	Impacts associated with general building construction noise. The construction phase will result in a temporary increase in ambient noise levels from moving machinery, equipment and additional people on site.
Extent and duration of impact:	Site only during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Increased ambient noise levels due to vehicles, equipment and workers on site.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	Low. The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Construction work will take place during the daytime. No construction activities must occur on Sundays or public holidays. The equipment and machinery used must be regularly maintained to reduce the potential noise disturbance.
Cumulative impact post mitigation:	Reduced noise levels during the construction phase.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	At present, the site is vacant and devoid of any existing structures. Construction activities may have a visual impact on neighbouring properties and commuters in the area. The proposed development will be visible from Brenton Beach.
Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources
Cumulative impact prior to mitigation:	The site may be aesthetically unpleasant.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium. The impact can be managed by implementing mitigatory measures.
Proposed mitigation:	The construction site should be fenced and screened off from the surrounding areas, including chemical toilets (if required). Good housekeeping must be implemented at all times, and the site must be kept tidy and clean (no litter, etc.). Indigenous vegetation must be used for landscaping.

	During the construction phase, the proposed development will be effectively screened from the N2 motorway using green shade cloth.
Cumulative impact post mitigation:	The site will be less visually intrusive during the construction phase. As is evident, portion 76/216 is only barely visible in the distance from the road leading to and from Brenton-on-Sea. Consequently, the proposed development will have no visual impact on the aesthetic value of the affected area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. Natural dune screening + design mitigation reduces significance to Low. Although the dwelling may be partially visible from Brenton Beach, dune screening, earth-tone finishes, and indigenous landscaping will reduce significance to Low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	Heritage resources may be encountered during excavation activities on-site. A NID was submitted to Heritage Western Cape. A Heritage Impact Statement was prepared by Dr Peter Nilssen and stated the following: The SAHRIS PalaeoSensitivity map shows that the study area is white/clear meaning that palaeontological sensitivity is UNKNOWN and that "these areas will require a minimum of a desktop study.
Extent and duration of impact:	Only during the construction phase.
Probability of occurrence:	Improbable
Degree to which the impact can be reversed:	Irreversible, should culture or historical resources be encountered, but this is not expected.
Degree to which the impact may cause irreplaceable loss of resources:	Full loss of irreplaceable resources, should cultural or historical resources be encountered on-site, but this is not expected.
Cumulative impact prior to mitigation:	Potential loss of cultural or historical resources, should it be encountered during construction activities. However, this is not expected.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	It is not expected that cultural or historical resources will be encountered as the site. The impact cannot be avoided during the construction phase as excavation activities are required for the development. Prof Pether concluded as follows: "The proposed developments are not anticipated to have impacts on fossil heritage resources of the coversands and dune sands in the footprints of subsurface disturbance. No colonial or pre-colonial heritage resources of significance were identified in the study area. If present on or in aeolian dune sands, then Stone Age implements are expected to be of low significance and Not Conservation Worthy. No caves or rock shelters occur on 76/216 and there are no known or declared Heritage Sites nor other significant heritage resources in the surroundings that will be impacted by the proposed activity.
Proposed mitigation:	There are no cultural or historical features on-site. However, the provisions of the National Heritage Resources Act will apply. Environmental awareness training should be presented to all employees at the site. Such training should include the identification of potential heritage resources and how to react if the presence of heritage resources is suspected. If any sign of a heritage or cultural site is unearthed during excavations, then all activities must cease until a heritage specialist has been consulted and had the opportunity to investigate the findings. In case of the unexpected uncovering of fossil bones in the surficial coversands and soil, or buried archaeological material, or unmarked graves, it is recommended that a protocol for finds of potential fossil material (and buried artefacts), the Fossil Finds Procedure (FFP), is included in the Environmental Management Plan (EMP) for the Construction Phase of the project. Adjustments to the development plan are not expected to change this recommendation"
Cumulative impact post mitigation:	Potential loss of cultural or historical resources should they be encountered during construction activities, but this is not expected. Because there are no significant heritage resources associated with the property, it does not meaningfully contribute to the already altered cultural landscape of the area. For the same reason, there will be negligible to no

	cumulative impact on the heritage value of the area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. Although the dwelling may be partially visible from Brenton Beach, dune screening, earth-tone finishes, and indigenous landscaping will reduce significance to Low. The positive socio-economic impact, including a few short, medium, and long-term jobs, outweighs the negligible to zero negative impacts this project may have on heritage resources.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	It is essential to consider and mitigate occupational exposure, the risks of fires and explosions, as well as health hazards during the construction phase.
Extent and duration of impact:	The site only, the duration of the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Potential injury of workers.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low - positive
Proposed mitigation:	Adequate measures must be in place to ensure the safety of staff on-site, such as proper training of operators, first aid treatment, medical assistance, emergency treatment, prevention of inhalation of dust, protective clothing, footwear and gloves. Manuals and training regarding the correct handling of materials and operation of equipment should be in place and updates as new or updated material safety data sheets become available; and monitoring should be carried out on a regular basis, including accident reports.

	All employees are to be managed in strict accordance with the OH&S Act. Sufficient water must be available for firefighting purposes. All personnel must be trained in responsible fire protection measures. Regular inspections should be carried out to inspect and test fire-fighting equipment and pollution control measures. Relevant SANS Standards shall be implemented at the facility.
Cumulative impact post mitigation:	Workers are aware of safety risks and consequences and relevant procedures. Mitigatory measures will reduce the chance of an incident occurring.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Waste**
Nature of impact:	Waste generated through construction activities (general and hazardous) that is not correctly managed may result in pollution of water, air and soil resources.
Extent and duration of impact:	Neighbouring properties during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Pollution from waste generation (general and hazardous waste) through construction activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Appropriate containers for different types of waste should be provided throughout the site. The containers must have sufficient capacity and be removed frequently. Environmental awareness training should include a section on the impacts of waste generation and improper waste management. Ensure that rubble and construction waste are sorted on site and that recyclable material is separated

	from disposable waste. The contractor should keep safe disposal certificates for record purposes.
Cumulative impact post mitigation:	Litter/contamination of potential soil, water or air pollution
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	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

Potential impacts on geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**
Nature of impact:	The internal road and the main dwelling house. Surface water run-off Inadequate waste management, specifically in the form of litter, can result in surface water pollution. Soil erosion and topsoil loss are not expected during operation and will be limited to the development footprint.
Extent and duration of impact:	Sit only during the operational phase.
Probability of occurrence:	Unlikely
Degree to which the impact can be mitigated:	This impact can be mitigated.
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater and soil erosion.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	**Drainage:** The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads but are recommended behind retaining walls as standard.

	The stormwater drainage system must be adhered to, and the system should lead runoff water away to prevent soil erosion. • Use rainwater collection tanks to serve as a retention vessel in downpours. • Driveways must also be utilised for rainwater harvesting. • Stormwater management should encourage the collection and infiltration of water into the soil profile.
Cumulative impact post mitigation:	Potential contamination of stormwater run-off, soil, and groundwater, will be minimised by implementing mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Habitat and biodiversity loss**
Nature of impact:	The loss of Goukamma Dune Thicket (southern section), which is categorised as Least Threatened.
Extent and duration of impact:	The site. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Irreversible
Degree to which the impact may cause irreplaceable loss of resources:	With correct management in all probability, the degree to which the impact may cause irreplaceable loss of resources is low.
Cumulative impact prior to mitigation:	Loss of ecological corridors: The southern section is categorised as Least Threatened, featuring Goukamma Dune Thicket.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	It is essential to maintain an on-site nursery, and the search-and-rescue plants should be repurposed for the rehabilitation of the site following construction activities.

	The impact assessment identifies the preferred Alternative as the optimal layout, while Alternative 1 and 2 is deemed less favourable. Alternative 1 is preferable because it minimises project footprint, reduces fire risk, limits landscape fragmentation, and results in less than 1% transformation of the property, compared to over 2% for other options. The development of the Main dwelling will not have an unnecessarily significant negative impact on biodiversity conservation, the sense of place of the area and transform and fragment the Knysna Sand Fynbos Coastal Corridor.
Cumulative impact post mitigation:	No cumulative impacts are anticipated following the implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socioeconomic aspects are foreseen as the proposed construction will not negatively impact on any person's social rights. The operational phase of the proposed development will provide approximately 1-5 long-term employment opportunities.
Extent and duration of impact:	The surrounding neighbourhoods or town. Throughout the lifespan of the project.
Probability of occurrence:	Highly Probably
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.

Proposed mitigation:	People from the local community where possible and ensure that skill transfer and training are provided where feasible.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	The proposed activity is unlikely to contribute in any significant manner to noise impacts.
Extent and duration of impact:	Neighbouring properties for the life of the operation.
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation is required for the one dwelling unit.
Cumulative impact post mitigation:	No cumulative impacts are anticipated following the implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	The proposed development will be visible from Brenton Beach.
Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible

Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources
Cumulative impact prior to mitigation:	The character of the portion of the site is changed.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium. The impact can be managed by implementing mitigatory measures.
Proposed mitigation:	The design of the proposed development must take into account the visual impacts. It is essential for the buildings to integrate seamlessly with the natural environment. Employing down lighting, utilising earthy colours, and strategically positioning satellite dishes are recommended measures to achieve effective mitigation of visual disturbances. As is evident portion 76/216 is only barely visible in the distance from the road leading to and from Brenton-on-Sea. Consequently, the proposed development will have no visual impact on the aesthetic value of the affected area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area.
Cumulative impact post mitigation:	The character of the portion of the site is changed. Although the dwelling may be partially visible from Brenton Beach, dune screening, earth-tone finishes, and indigenous landscaping will reduce significance to Low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	It is not expected that any cultural-historical aspects will be impacted as a result of operational activities.
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A

Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	Occupational exposure, fires, explosion, health.
Extent and duration of impact:	The owner of the property will be residing in the main dwelling.
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Waste**
Nature of impact:	Normal household waste will be generated.
Extent and duration of impact:	Site only.
Probability of occurrence:	N/A

Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Alternative 2

The development proposal entails the following:

(i) The construction of one (x1) main dwelling house to be situated in the southwestern corner of the property (3000m²).
(ii) The construction of one (x1) farm manager's house in the northwestern corner of the property (1200m²).
(iii) The construction of a new internal road to provide access to the southern portion of the property.

The internal road will be 830 meters in length. The road surface area will be 2.5 meters wide and the disturbed area for construction of the road varies between 4 to 5.5 meters wide. The internal road is to access the southwestern side of the property.

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.

Planning, Design and Construction Phase

Potential impacts on geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**

Nature of impact:	Compaction of soil for the internal road, the main dwelling house and the farmhouse. Groundwater may be impacted on during construction if substances, such as fuels and oils associated with the usage of machinery and equipment, are allowed to leak onto soil and potentially leach into the groundwater. <u>Soil</u> Mixing cement directly on the ground could also result in contamination. Contaminated soil will have to be rehabilitated or disposed of, depending on the level and nature of the contamination. Soil erosion and topsoil loss are not expected during construction as activities will be limited to the development footprint. <u>Air pollution</u> Dust will be generated during the construction activities, particularly during excavations. During the construction phase of the associated infrastructure dust will be generated. The effect on air quality is expected to be minor and localised, as well as of short-term duration as the construction phase is temporary. The contribution of exhaust fumes from the associated construction equipment and vehicles will be negligible.
Extent and duration of impact:	Neighbouring properties during the construction phase.
Probability of occurrence:	Probable
Degree to which the impact can be mitigated:	This impact can be mitigated.
Degree to which the impact may cause irreplaceable loss of resources:	Partial irreplaceable loss.
Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater, dust generation and soil erosion.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium, negative
Degree to which the impact can be mitigated:	The impact cannot be avoided as earthworks will be required for the building of the main dwelling and the internal road.
Proposed mitigation:	As per the Geotechnical Report: The road layout must take into account the natural contours and drainage lines present on the site to minimise the extent of earthworks required. It is essential that deep box cuts are properly retained. Typically, box cuts will not encounter rock,

	and excavated soil can be utilized for filling, excluding the organic-rich topsoil. The in-situ subgrade material varies in quality, generally ranging from G7 to G9. Consequently, it is advisable to provide for the importation of at least one selected subgrade layer of G7 quality, in addition to the standard layer works, which include subbase, base materials, pavers, and cement slabs, for lightly trafficked internal roads and parking areas. **Drainage:** The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads but are recommended behind retaining walls as standard. Rainwater tanks will be placed around the main dwelling to collect rainwater for reuse from roofs. Stockpiles of excavated materials or spoils during the construction phase should be strategically positioned to mitigate wind erosion and avoid adverse impacts on drainage lines. Dust suppression measures should be implemented in accordance with specific site conditions. Vehicles transporting materials prone to being displaced by wind must be securely covered. Ingress and egress points onto public roads must be cleared of any dust or mud. To minimise emissions resulting from exhaust fumes, regular maintenance of vehicles and equipment is essential to ensure optimal working conditions. • Blanket clearing of the site. • It is proposed that steel or concrete piling be utilised for the building structures, thereby limiting the exposure of bare soils and wind-blown dust. • Erosion protection measures must be implemented in disturbed areas. • Topsoil and soil stockpiles should be covered, wetted or otherwise stabilised to prevent wind erosion and dust generation. • A water cart must be employed on windy days to wet soils that would be prone to wind erosion to limit dust generation. • Disturbed areas should be rehabilitated in parallel with construction completion. • Compile and implement an Environmental Management Programme; and audit reporting by an ECO during construction.

	• During construction: New roads need to be made using the same / similar materials and methods as the neighbouring road. <u>Construction activities</u> Storage of potential pollutants such as fuel, oil, cement, etc. should be confined to a sealed surface with a bund wall to prevent soil contamination from accidental leaks and spills. Only the volume of fuel required for the day should be stored. The use of potentially polluting substances should be strictly controlled and handled in designated areas under the supervision of competent and trained personnel as stipulated in the EMPr. No vehicle or equipment will be serviced on-site. Appropriately sized drip trays must always be used in emergency situations. Approved absorbent material must be kept on-site in sufficient quantities to deal with small spills. Absorbent material and contaminated soil should be disposed of at a registered hazardous waste site. No cement mixing is to occur directly on the ground and any cement or hydrocarbon spills should be cleared away immediately. The generation of dust during the construction phase is expected to be minimal. Stockpiles of fine construction materials should be positioned such that they are not exposed to wind erosion or drainage lines. Dust suppression should be implemented according to the prevailing site-specific conditions. Construction vehicles transporting construction materials must be suitably covered to prevent materials from being blown off. Vehicles and machinery will be kept in good working order to avoid excess emissions. All development activities must remain within the demarcated construction area. Chemical toilets should be provided for construction workers if the on-site ablution facilities are not adequate (1 toilet per 30 workers). Their use should be enforced. Chemical toilets will be serviced by an appropriate service provider, provided with toilet paper and cleaned regularly. Servicing will include emptying without spills and appropriate disposal by the service provider. It is essential to maintain an onsite nursery, and the search-and-rescue plants should be repurposed for the rehabilitation of the site following construction activities. The impact assessment identifies Alternative 1 as the optimal layout, while Alternative 2 is deemed less

	favourable. The removal of the farm manager's house will prevent adverse effects on the sensitive vegetation in this area, which will significantly mitigate the overall impact on the surrounding flora. Alternative 1 is preferable because it minimizes project footprint, reduces fire risk, limits landscape fragmentation, and results in less than 1% transformation of the property, compared to over 2% for other options.
Cumulative impact post mitigation:	Potential contamination of stormwater run-off, soil, groundwater, and nuisance as a result of dust generation will be minimised by implementing mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on geographical and physical aspects:	**Habitat and biodiversity loss**
Nature of impact:	The loss of Knysna Sand Fynbos (northern portion), which is listed as critically endangered (CR) under the NEM:BA Act (2022 and Goukamma Dune Thicket (southern section), which is categorised as Least Threatened. The development will have an unnecessarily significant negative impact on biodiversity conservation, the sense of place of the area and transform and fragment the Knysna Sand Fynbos Coastal Corridor.
Extent and duration of impact:	Local during the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be mitigated:	Low
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Loss of ecological corridors. The construction of the main house (southern portion) and the farm manager's house (northern portion) will impact the critically endangered Knysna fynbos identified as per the GIS maps, and the internal road will also impact the northern side of the CR Knysna Sand Fynbos.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High, negatively
Degree to which the impact can be mitigated:	Low, negatively

Proposed mitigation:	It is imperative that impacts on the continuity of ecological processes and corridors must be taken into consideration, irrespective of the type of land use proposed or envisaged in the region as a whole. 9. Removal of Alien Invasive Species during the construction phase. 10. An on-site nursery must be created, and a search and rescue of all plants needs to be conducted prior to construction occurring on site. The plants rescued are to be reused in the rehabilitation of the site after construction. 11. Appointment of an Environmental Control Officer. During construction: New roads need to be made using the same/similar materials and methods as the neighbouring road. CR vegetation is irreversible and high in line with NEM: BA 2022 and WCBSP.
Cumulative impact post mitigation:	CR vegetation is irreversible and high in line with NEM: BA 2022 and WCBSP.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socio-economic aspects are foreseen as the proposed construction will not negatively impact on any person's social rights.
Extent and duration of impact:	The surrounding neighbourhoods or town during the construction phase. During the construction phase.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive

Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.
Proposed mitigation:	The contractor should employ people from the local community where possible and ensure that skill transfer and training are provided where feasible. The positive socio-economic impact, including a few short-, medium- and long-term jobs outweigh the negligible to zero negative impacts this project may have on heritage resources.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	Impacts associated with general building construction noise. The construction phase will result in a temporary increase in ambient noise levels from moving machinery, equipment and additional people on site.
Extent and duration of impact:	Site only during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Increased ambient noise levels due to vehicles, equipment and workers on site.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	Low. The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Construction work will take place during the daytime. No construction activities must occur on Sundays or public holidays. The equipment and machinery used must be regularly maintained to reduce the potential noise disturbance.

Cumulative impact post mitigation:	Reduced noise levels during the construction phase.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	Heritage resources may be encountered during excavation activities on-site. A NID was submitted to Heritage Western Cape. A Heritage Impact Statement was prepared by Dr Peter Nilssen and stated the following: The SAHRIS PalaeoSensitivity map shows that the study area is white/clear, meaning that palaeontological sensitivity is UNKNOWN and that "these areas will require a minimum of a desktop study.
Extent and duration of impact:	Only during the construction phase.
Probability of occurrence:	Improbable
Degree to which the impact can be reversed:	Irreversible, should culture or historical resources be encountered, but this is not expected.
Degree to which the impact may cause irreplaceable loss of resources:	Full loss of irreplaceable resources, should cultural or historical resources be encountered on-site, but this is not expected.
Cumulative impact prior to mitigation:	Potential loss of cultural or historical resources, should it be encountered during construction activities. However, this is not expected.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	It is not expected that cultural or historical resources will be encountered as the site. The impact cannot be avoided during the construction phase as excavation activities are required for the development. Prof Pether concluded as follows: "The proposed developments are not anticipated to have impacts on fossil heritage resources of the coversands and dune sands in the footprints of subsurface disturbance. No colonial or pre-colonial heritage resources of significance were identified in the study area. If present on or in aeolian dune sands, then Stone Age implements are expected to be of low significance and Not Conservation Worthy. No caves or rock shelters occur on 76/216 and there are no known or

	declared Heritage Sites nor other significant heritage resources in the surroundings that will be impacted by the proposed activity.
Proposed mitigation:	There are no cultural or historical features on-site. However, the provisions of the National Heritage Resources Act will apply. Environmental awareness training should be presented to all employees at the site. Such training should include the identification of potential heritage resources and how to react if the presence of heritage resources is suspected. If any sign of a heritage or cultural site is unearthed during excavations, then all activities must cease until a heritage specialist has been consulted and had the opportunity to investigate the findings. In case of the unexpected uncovering of fossil bones in the surficial coversands and soil, or buried archaeological material, or unmarked graves, it is recommended that a protocol for finds of potential fossil material (and buried artefacts), the Fossil Finds Procedure (FFP), is included in the Environmental Management Plan (EMP) for the Construction Phase of the project. Adjustments to the development plan are not expected to change this recommendation"
Cumulative impact post mitigation:	Potential loss of cultural or historical resources should they be encountered during construction activities, but this is not expected. Because there are no significant heritage resources associated with the property, it does not meaningfully contribute to the already altered cultural landscape of the area. For the same reason, there will be negligible to no cumulative impact on the heritage value of the area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. The positive socio-economic impact, including a few short-, medium, and long-term jobs outweigh the negligible to zero negative impacts this project may have on heritage resources.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**

Nature of impact:	Heritage resources may be encountered during excavation activities on-site. A NID was submitted to Heritage Western Cape.
Extent and duration of impact:	Only during the construction phase.
Probability of occurrence:	Improbable
Degree to which the impact can be reversed:	Irreversible, should culture or historical resources be encountered, but this is not expected.
Degree to which the impact may cause irreplaceable loss of resources:	Full loss of irreplaceable resources, should cultural or historical resources be encountered on-site, but this is not expected.
Cumulative impact prior to mitigation:	Potential loss of cultural or historical resources, should it be encountered during construction activities. However, this is not expected as the site.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	It is not expected that cultural or historical resources will be encountered. The impact cannot be avoided during the construction phase as excavation activities are required for the development.
Proposed mitigation:	There are no cultural or historical features on-site. However, the provisions of the National Heritage Resources Act will apply. Environmental awareness training should be presented to all employees at the site. Such training should include the identification of potential heritage resources and how to react if the presence of heritage resources is suspected. If any sign of a heritage or cultural site is unearthed during excavations, then all activities must cease until a heritage specialist has been consulted and had the opportunity to investigate the findings.
Cumulative impact post mitigation:	Potential loss of cultural or historical resources should they be encountered during construction activities, but this is not expected.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	Occupational exposure, fires, explosions and health

Extent and duration of impact:	The site only, the duration of the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Potential injury of workers.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low - positive
Proposed mitigation:	Adequate measures must be in place to ensure the safety of staff on-site, such as proper training of operators, first aid treatment, medical assistance, emergency treatment, prevention of inhalation of dust, protective clothing, footwear and gloves. Manuals and training regarding the correct handling of materials and operation of equipment should be in place and updates as new or updated material safety data sheets become available; and monitoring should be carried out on a regular basis, including accident reports. All employees are to be managed in strict accordance with the OH&S Act. Sufficient water must be available for firefighting purposes. All personnel must be trained in responsible fire protection measures. Regular inspections should be carried out to inspect and test fire-fighting equipment and pollution control measures. Relevant SANS Standards shall be implemented at the facility.
Cumulative impact post mitigation:	Workers are aware of safety risks and consequences and relevant procedures. Mitigatory measures will reduce the chance of an incident occurring.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Waste**
Nature of impact:	Waste generated through construction activities (general and hazardous) that is not correctly managed may result in pollution of water, air and soil resources.
Extent and duration of impact:	Neighbouring properties during the construction phase

Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Pollution from waste generation (general and hazardous waste) through construction activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Appropriate containers for different types of waste should be provided throughout the site. The containers must have sufficient capacity and be removed frequently. Environmental awareness training should include a section on the impacts of waste generation and improper waste management. Ensure that rubble and construction waste is sorted on site and that recyclable material is separated from disposable waste. The contractor should keep safe disposal certificates for record purposes.
Cumulative impact post mitigation:	Little / no potential soil, water or air pollution
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(d) **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 the geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**
Nature of impact:	The internal road, the farm manager's house and the main dwelling house. Surface water run-off Inadequate waste management, specifically in the form of litter, can result in surface water pollution.

	Soil erosion and topsoil loss are not expected during the operational phase and will be limited to the development footprint.
Extent and duration of impact:	Site only during the operational phase.
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	This impact can be mitigated.
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater and soil erosion.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	**Drainage:** The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads, but are recommended behind retaining walls as standard. The stormwater drainage system must be adhered to, and the system should lead runoff water away to prevent soil erosion. • Use rainwater collection tanks to serve as a retention vessel in downpours. • Driveways must also be utilised for rainwater harvesting. Stormwater management should encourage the collection and infiltration of water into the soil profile.
Cumulative impact post mitigation:	Potential contamination of stormwater run-off, soil, and groundwater will be minimised by implementing mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact biological aspects:	**Habitat and biodiversity loss**

Nature of impact:	The loss of Knysna Sand Fynbos (northern portion), which is listed as critically endangered (CR) under the NEM:BA Act (2022 and Goukamma Dune Thicket (southern section), which is categorised as Least Threatened. The development will have an unnecessarily significant negative impact on biodiversity conservation, the sense of place of the area and transform and fragment the Knysna Sand Fynbos Coastal Corridor.
Extent and duration of impact:	The site. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Irreversible
Degree to which the impact may cause irreplaceable loss of resources:	With correct management in all probability, the degree to which the impact may cause irreplaceable loss of resources is low.
Cumulative impact prior to mitigation:	Loss of ecological corridors: The southern section is categorised as Least Threatened, featuring Goukamma Dune Thicket. The northern section of the property is classified as Critically Endangered.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	It is essential to maintain an on-site nursery, and the search-and-rescue plants should be repurposed for the rehabilitation of the site following construction activities. The impact assessment identifies Preferred Alternative as the optimal layout, while Alternative 1 and 2 is deemed less favourable. The removal of the farm manager's house will prevent adverse effects on the sensitive vegetation in this area, which will significantly mitigate the overall impact on the surrounding flora. Alternative 1 is preferable because it minimises project footprint, reduces fire risk, limits landscape fragmentation, and results in less than 1% transformation of the property, compared to over 2% for other options. CR vegetation is irreversible and high in line with NEM: BA 2022 and WCBSP.
Cumulative impact post mitigation:	CR vegetation is irreversible and high in line with NEM: BA 2022 and WCBSP.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socioeconomic aspects are foreseen as the proposed construction will not negatively impact any person's social rights. The operational phase of the proposed development will provide approximately 1-5 long-term employment opportunities.
Extent and duration of impact:	The surrounding neighbourhoods or town. Throughout the lifespan of the project.
Probability of occurrence:	Highly Probably
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.
Proposed mitigation:	People from the local community where possible and ensure that skill transfer and training are provided where feasible.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	The proposed activity is unlikely to contribute in any significant manner to noise impacts.
Extent and duration of impact:	Neighbouring properties for the life of the operation.
Probability of occurrence:	Unlikely

Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation is required for the one dwelling unit.
Cumulative impact post mitigation:	No cumulative impacts are anticipated following the implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	The proposed development will be visible from Brenton Beach.
Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources
Cumulative impact prior to mitigation:	The character of the portion of the site is changed.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium. The impact can be managed by implementing mitigatory measures.
Proposed mitigation:	The design of the proposed development must take into account the visual impacts. It is essential for the buildings to integrate seamlessly with the natural environment. Employing down lighting, utilising earthy colours, and strategically positioning satellite dishes are recommended measures to achieve effective mitigation of visual disturbances.

Cumulative impact post mitigation:	The character of the portion of the site is changed.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	It is not expected that any cultural-historical aspects will be impacted as a result of operational activities.
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	Occupational exposure, fires, explosion, health.
Extent and duration of impact:	The owner of the property will be residing in the main dwelling.
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Waste**
Nature of impact:	Normal household waste will be generated.
Extent and duration of impact:	Site only.
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Alternative 3

The main dwelling and all associated infrastructure to the northern portion of the property, adjacent to the existing public access route (Bushy Way).

The development proposal entails the following:

(i) The construction of one (x1) main dwelling house to be situated in the northern corner of the property (3000m²).
(ii) An internal access track would connect the development directly to Bushy Way.

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.

Planning, Design and Construction Phase

Potential impacts on geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**
Nature of impact:	Compaction of soil for the internal road and the main dwelling house. Groundwater may be impacted on during construction if substances, such as fuels and oils associated with the usage of machinery and equipment, are allowed to leak onto soil and potentially leach into the groundwater. Soil Mixing cement directly on the ground could also result in contamination. Contaminated soil will have to be rehabilitated or disposed of, depending on the level and nature of the contamination. Soil erosion and topsoil loss are not expected during construction as activities will be limited to the development footprint. Air pollution Dust will be generated during the construction activities, particularly during excavations. During the construction phase of the associated infrastructure dust will be generated. The effect on air quality is expected to be minor and localised, as well as of short-term duration as the construction phase is temporary. The contribution of exhaust fumes from the associated construction equipment and vehicles will be negligible.
Extent and duration of impact:	Neighbouring properties during the construction phase.
Probability of occurrence:	Probable
Degree to which the impact can be mitigated:	This impact can be mitigated.
Degree to which the impact may cause irreplaceable loss of resources:	Partial irreplaceable loss.

Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater, dust generation and soil erosion. 1. <u>Soil Quality & Bearing Capacity</u> • The northern section consists predominantly of loose to medium-dense aeolian sands with variable compaction. • These sands have low bearing capacity in their natural state, which can result in differential settlement if foundations are not placed at sufficient depth and properly compacted. • Additional foundation design measures (e.g., deeper footings or compaction replacement) would be required, increasing construction complexity and cost. 2. <u>Subgrade Requirements for Access Road</u> • The in-situ subgrade in this section generally ranges from G7 to G9 quality, with G9 being inadequate for even light traffic without improvement. • This would require importation of selected G7-quality material for the access road and parking areas, adding cost and requiring additional material transport to site. 3. <u>Erosion & Wind-Blown Sand Risk</u> • The northern soils are highly permeable but also highly erodible, especially when vegetation cover is removed. • Exposure during construction could lead to wind erosion, loss of fine particles, and sand drift onto Kerk Laan and neighbouring properties. • These risks would demand more intensive erosion control measures and constant site management during construction. 4. <u>Excavation Stability</u> • Loose sands have poor sidewall stability during excavations. This means any service trenches or footing excavations in the north would require temporary shoring or battering to avoid collapse. • This is less of a concern in the preferred footprint, where some compaction and minor cementation layers improve stability. 5. <u>Stormwater & Drainage Management</u>

	• While permeability is generally positive for infiltration, the sandy nature of the soils means stormwater could rapidly infiltrate without filtration, potentially affecting groundwater quality if not managed carefully. • The proximity to Kerk Laan and any roadside drainage infrastructure would require careful runoff control to avoid sedimentation.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium, negative
Degree to which the impact can be mitigated:	The impact cannot be avoided as earthworks will be required for the building of the main dwelling and the internal road.
Proposed mitigation:	• Road layout must follow natural contours and avoid drainage lines to limit earthworks. • Deep box cuts must be retained. • Import one layer of G7 subgrade for road stability. • No subsoil drains required along roads; standard drains behind retaining walls. • Install rainwater harvesting tanks for all roof areas. • Position stockpiles to prevent wind erosion and avoid drainage lines. • Implement dust suppression during dry/windy periods. • Cover vehicles transporting loose materials. • Use steel/concrete piling to limit exposure of bare soils. • Apply erosion protection measures in disturbed areas. • Rehabilitate disturbed areas in parallel with construction. • Store fuels/oils/cement on a bunded, sealed surface; only daily-use volumes stored. • No on-site servicing of vehicles/machinery; use drip trays in emergencies. • Clean up spills immediately and dispose at a licensed hazardous waste site. • No cement mixing directly on bare ground. • Maintain an on-site nursery for rescued plants to be reused in rehabilitation. • Implement dust suppression measures (wetting exposed soil, covering stockpiles). • Cover vehicles transporting fine materials. • Maintain vehicles and equipment to reduce emissions. • Limit construction activities to daylight hours.
Cumulative impact post mitigation:	Potential contamination of stormwater run-off, soil, groundwater, and nuisance as a result of dust generation will be minimised by implementing mitigation measures.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Habitat and biodiversity loss**
Nature of impact:	Loss of Knysna Sand Fynbos (northern portion), which is listed as Critically Endangered (CR) under the NEM:BA Act (2022), Development in the northern footprint would result in direct transformation of the Knysna Sand Fynbos coastal corridor, affecting ecological connectivity.
Extent and duration of impact:	Localised to the site; duration permanent for transformed areas (construction impact phase is temporary, but vegetation loss is irreversible).
Probability of occurrence:	Low (construction is a once-off event)
Degree to which the impact can be reversed:	Medium (while rehabilitation is possible, full restoration of CR vegetation type is effectively irreversible within a human timeframe.
Degree to which the impact may cause irreplaceable loss of resources:	High - loss of Critically Endangered vegetation type (Knysna Sand Fynbos) is considered irreplaceable under the NEM: BA Act, even in small areas, due to its restricted distribution and national conservation importance.
Cumulative impact prior to mitigation:	High – contributes to national and regional decline of CR vegetation types, further fragments ecological corridors linking coastal and inland habitats, and undermines objectives of the Western Cape Biodiversity Spatial Plan (WCBSP).
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium–High
Degree to which the impact can be mitigated:	Limited – mitigation will reduce secondary impacts but cannot reverse or offset the irreversible loss of CR vegetation.
Proposed mitigation:	1. Remove alien invasive species during the construction phase to improve remaining habitat quality. 2. Establish an on-site nursery and conduct search-and-rescue of all plant species prior to construction; rescued plants to be used in the rehabilitation of disturbed areas, although this will not replace the original CR habitat. 3. Appoint an Environmental Control Officer (ECO) for the duration of construction. 4. Construct new roads using the same/similar materials and methods as neighbouring Kerk Laan.

	5. Minimise footprint and design layout to maintain the maximum possible ecological corridor width. 6. Implement long-term management and monitoring plans to protect remaining intact habitat.
Cumulative impact post mitigation:	High mitigation will reduce fragmentation, but the legislative and ecological loss of CR vegetation remains irreversible.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socioeconomic aspects are foreseen as the proposed construction will not negatively impact on any person's social rights. Employment opportunities (temporary) will be generated during the construction phase. The positive socio-economic impact, including a few short-, medium- and long-term jobs outweigh the negligible to zero negative impacts this project may have on heritage resources.
Extent and duration of impact:	The surrounding neighbourhoods or town during the construction phase. During the construction phase.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.
Proposed mitigation:	The contractor should employ people from the local community where possible and ensure that skill transfer and training are provided where feasible.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	Impacts associated with general building construction noise. The construction phase will result in a temporary increase in ambient noise levels from moving machinery, equipment and additional people on site.
Extent and duration of impact:	Site only during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Increased ambient noise levels due to vehicles, equipment and workers on site.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	Low. The impacts can be managed by implementing mitigatory measures.
Proposed mitigation:	Construction work will take place during the daytime. No construction activities must occur on Sundays or public holidays. The equipment and machinery used must be regularly maintained to reduce the potential noise disturbance.
Cumulative impact post mitigation:	Reduced noise levels during the construction phase.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	At present, the site is vacant and devoid of any existing structures. Construction activities may have a visual impact on neighbouring properties and commuters in the area.
Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite

Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources
Cumulative impact prior to mitigation:	The site may be aesthetically unpleasant.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium. The impact can be managed by implementing mitigatory measures.
Proposed mitigation:	The construction site should be fenced and screened off from the surrounding areas, including chemical toilets (if required). Good housekeeping must be implemented at all times, and the site must be kept tidy and clean (no litter, etc.). Indigenous vegetation must be used for landscaping. During the construction phase, the proposed development will be effectively screened from the N2 motorway using green shade cloth.
Cumulative impact post mitigation:	The site will be less visually intrusive during the construction phase. As is evident portion 76/216 is only barely visible in the distance from the road leading to and from Brenton-on-Sea. Consequently, the proposed development will have no visual impact on the aesthetic value of the affected area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	Heritage resources may be encountered during excavation activities on-site. A NID was submitted to Heritage Western Cape. A Heritage Impact Statement was prepared by Dr Peter Nilssen and stated the following: The SAHRIS PalaeoSensitivity map shows that the study area is white/clear, meaning that palaeontological sensitivity is UNKNOWN and that “these areas will require a minimum of a desktop study.

Extent and duration of impact:	Only during the construction phase.
Probability of occurrence:	Improbable
Degree to which the impact can be reversed:	Irreversible, should culture or historical resources be encountered, but this is not expected.
Degree to which the impact may cause irreplaceable loss of resources:	Full loss of irreplaceable resources should cultural or historical resources be encountered on-site, but this is not expected.
Cumulative impact prior to mitigation:	Potential loss of cultural or historical resources should it be encountered during construction activities. However, this is not expected.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	It is not expected that cultural or historical resources will be encountered as the site. The impact cannot be avoided during the construction phase as excavation activities are required for the development. Prof Pether concluded as follows: "The proposed developments are not anticipated to have impacts on fossil heritage resources of the coversands and dune sands in the footprints of subsurface disturbance. No colonial or pre-colonial heritage resources of significance were identified in the study area. If present on or in aeolian dune sands, then Stone Age implements are expected to be of low significance and Not Conservation Worthy. No caves or rock shelters occur on 76/216 and there are no known or declared Heritage Sites nor other significant heritage resources in the surroundings that will be impacted by the proposed activity.
Proposed mitigation:	There are no cultural or historical features on-site. However, the provisions of the National Heritage Resources Act will apply. Environmental awareness training should be presented to all employees at the site. Such training should include the identification of potential heritage resources and how to react if the presence of heritage resources is suspected. If any sign of a heritage or cultural site is unearthed during excavations, then all activities must cease until a heritage specialist has been consulted and had the opportunity to investigate the findings. In case of the unexpected uncovering of fossil bones in the surficial coversands and soil, or buried archaeological material, or unmarked graves, it is recommended that a

	protocol for finds of potential fossil material (and buried artefacts), the Fossil Finds Procedure (FFP), is included in the Environmental Management Plan (EMP) for the Construction Phase of the project. Adjustments to the development plan are not expected to change this recommendation"
Cumulative impact post mitigation:	Potential loss of cultural or historical resources should they be encountered during construction activities, but this is not expected. Because there are no significant heritage resources associated with the property, it does not meaningfully contribute to the already altered cultural landscape of the area. For the same reason, there will be negligible to no cumulative impact on the heritage value of the area. On heritage grounds, due to the entire absence of heritage resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. The positive socio-economic impact, including a few short-, medium- and long-term jobs outweigh the negligible to zero negative impacts this project may have on heritage resources.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	It is essential to consider and mitigate occupational exposure, the risks of fires and explosions, as well as health hazards during the construction phase.
Extent and duration of impact:	The site only, the duration of the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	Potential injury of workers.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low - positive

Proposed mitigation:	Adequate measures must be in place to ensure the safety of staff on-site, such as proper training of operators, first aid treatment, medical assistance, emergency treatment, prevention of inhalation of dust, protective clothing, footwear and gloves. Manuals and training regarding the correct handling of materials and operation of equipment should be in place and updates as new or updated material safety data sheets become available; and monitoring should be carried out on a regular basis, including accident reports. All employees are to be managed in strict accordance with the OH&S Act. Sufficient water must be available for firefighting purposes. All personnel must be trained in responsible fire protection measures. Regular inspections should be carried out to inspect and test fire-fighting equipment and pollution control measures. Relevant SANS Standards shall be implemented at the facility.
Cumulative impact post mitigation:	Workers are aware of safety risks and consequences and relevant procedures. Mitigatory measures will reduce the chance of an incident occurring.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Waste**
Nature of impact:	Waste generated through construction activities (general and hazardous) that is not correctly managed may result in pollution of water, air and soil resources.
Extent and duration of impact:	Neighbouring properties during the construction phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Pollution from waste generation (general and hazardous waste) through construction activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	The impacts can be managed by implementing mitigatory measures.

Proposed mitigation:	Appropriate containers for different types of waste should be provided throughout the site. The containers must have sufficient capacity and be removed frequently. Environmental awareness training should include a section on the impacts of waste generation and improper waste management. Ensure that rubble and construction waste is sorted on site and that recyclable material is separated from disposable waste. The contractor should keep safe disposal certificates for record purposes.
Cumulative impact post mitigation:	Litter/contamination of potential soil, water or air pollution
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(e) **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 run-off/groundwater/soil, air quality**
Nature of impact:	The internal road and the main dwelling house. Surface water run-off Inadequate waste management, specifically in the form of litter, can result in surface water pollution. Soil erosion and topsoil loss are not expected during operation and will be limited to the development footprint.
Extent and duration of impact:	Sit only during the operational phase.
Probability of occurrence:	Unlikely
Degree to which the impact can be mitigated:	This impact can be mitigated.
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss.
Cumulative impact prior to mitigation:	Potential contamination of stormwater run-off, soil, and groundwater and soil erosion.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Drainage**:** The soil is highly permeable and site drainage is not envisaged to be a problem. No subsoil drains are deemed necessary along roads, but are recommended behind retaining walls as standard. The stormwater drainage system must be adhered to, and the system should lead runoff water away to prevent soil erosion. • Use rainwater collection tanks to serve as a retention vessel in downpours. • Driveways must also be utilised for rainwater harvesting. • Stormwater management should encourage the collection and infiltration of water into the soil profile.
Cumulative impact post mitigation:	Potential contamination of stormwater run-off, soil, and groundwater will be minimised by implementing mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	**Habitat and biodiversity loss: Permanent loss of Knysna Sand Fynbos**
Nature of impact:	Permanent loss of Knysna Sand Fynbos within the northern footprint. This vegetation type is listed as Critically Endangered (CR) under the NEM: BA Act (2022). Development will directly transform and fragment this habitat, which has a very limited extent of occurrence in the region.
Extent and duration of impact:	Localised to the development footprint, permanent and irreversible throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Irreversible – once lost to infrastructure, CR vegetation cannot be restored to its original ecological condition.

Degree to which the impact may cause irreplaceable loss of resources:	High – the loss of a Critically Endangered vegetation type is considered irreplaceable under the NEM:BA Act, regardless of footprint size.
Cumulative impact prior to mitigation:	High – contributes to further fragmentation and decline of Knysna Sand Fynbos at a regional and national scale.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Very limited – mitigation can manage secondary impacts (alien species, edge effects), but cannot offset the irreversible loss of CR vegetation.
Proposed mitigation:	• Pre-construction search-and-rescue of individual plants, with rescued flora used in rehabilitation, though this does not replace habitat function. • Establish an on-site nursery for propagation and restoration of disturbed buffers. • Strictly limit disturbance to the demarcated footprint. • Ongoing invasive alien control to improve resilience of remaining vegetation. Note: Despite these measures, the loss of Knysna Sand Fynbos is permanent and irreplaceable.
Cumulative impact post mitigation:	High – primary vegetation loss remains, though secondary impacts are reduced.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Potential impacts on socio-economic aspects:	**Socio-economic**
Nature of impact:	Job creation- Positive Impact. No negative impacts on the socioeconomic aspects are foreseen as the proposed construction will not negatively impact on any person's social rights. The operational phase of the proposed development will provide approximately 1-5 long-term employment opportunities.
Extent and duration of impact:	The surrounding neighbourhoods or town. Throughout the lifespan of the project.
Probability of occurrence:	Highly Probably
Degree to which the impact can be reversed:	Positive impact on socio-economic aspects.

Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Employment opportunities for people from the local community.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Degree to which the impact can be mitigated:	Managing the number of previously disadvantaged/unemployed persons selected for this phase with the relevant skills.
Proposed mitigation:	People from the local community where possible and ensure that skill transfer and training are provided where feasible.
Cumulative impact post mitigation:	Employment opportunities for people from the local community.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High - Positive
Potential noise impacts:	**Noise disturbance**
Nature of impact:	The proposed activity is unlikely to contribute in any significant manner to noise impacts.
Extent and duration of impact:	Neighbouring properties for the life of the operation.
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation is required for the one dwelling unit.
Cumulative impact post mitigation:	No cumulative impacts are anticipated following the implementation of mitigation measures.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential visual impacts:	**Aesthetic impact**
Nature of impact:	The establishment of a permanent structure (main dwelling and associated infrastructure) in the northern footprint alters the current character of the vacant, undeveloped site. The development will be visible to neighbouring properties and partially from Brenton Beach, changing the natural appearance of the area.
Extent and duration of impact:	Surrounding area. Throughout the lifespan of the project.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible – structures could be removed and the site rehabilitated, although this is unlikely in practice.
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of resources – visual impacts do not remove ecological or heritage resources.
Cumulative impact prior to mitigation:	The character of the portion of the site is permanently changed from a natural to a developed landscape.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium – careful design can reduce visibility and integrate the dwelling into the environment, but the change in character cannot be fully avoided.
Proposed mitigation:	• Building design must take visual sensitivity into account, ensuring the dwelling integrates seamlessly with the natural environment. • Use muted, earthy colours and natural materials to reduce visual contrast. • Employ downward-facing lighting to reduce night-time glare. • Position and screen satellite dishes, solar panels, and other equipment to reduce visual clutter. • Restrict landscaping to indigenous vegetation to blend the footprint with the surrounding fynbos and thicket. As is evident, portion 76/216 is only barely visible in the distance from the road leading to and from Brenton-on-Sea. Consequently, the proposed development will have no visual impact on the aesthetic value of the affected area. On heritage grounds, due to the entire absence of heritage

	resources or themes in and around 76/216, the proposed development will have negligible to no impact on the visual or aesthetic heritage value of the area. The dwelling will be partially visible from Brenton Beach, but dune screening, earthy tones, downlighting and indigenous landscaping reduce significance to Low.
Cumulative impact post mitigation:	The character of the portion of the site is changed. The dwelling will be partially visible from Brenton Beach, but dune screening, earthy tones, downlighting and indigenous landscaping reduce significance to Low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	It is not expected that any cultural-historical aspects will be impacted as a result of operational activities.
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Safety on site**
Nature of impact:	Occupational exposure, fires, explosion, health.
Extent and duration of impact:	The owner of the property will be residing in the main dwelling.

Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Potential impact on biological aspects:	**Waste**
Nature of impact:	Normal household waste will be generated.
Extent and duration of impact:	Site only.
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

The No-Go Alternative

The proposed redevelopment of Portion 76 of the Farm Uitzicht 216 will remain unutilised and vacant, thereby restricting the landowner's ability to exercise their right to construct a residential dwelling.

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.

Planning, Design and Construction Phase

Potential impacts on geographical and physical aspects:	**Surface water run-off/groundwater/soil, air quality**
Nature of impact:	Compaction of soil for the internal road, the main dwelling house and the farm manager house.
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 biological aspects:	**Habitat and biodiversity loss**

Nature of impact:	The loss of Knysna Sand Fynbos (northern portion), which is listed as critically endangered (CR) under the NEM:BA Act (2022 and Goukamma Dune Thicket (southern section), which is categorized as Least Threatened.
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
Potential impacts on socio-economic aspects:	**Socio-economic**
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
Potential noise impacts:	**Noise disturbance**
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
Potential visual impacts:	**Aesthetic impact**
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
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
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
Potential impact on biological aspects:	**Safety on site**
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
Potential impact on biological aspects:	**Waste**
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
Potential impacts on the cultural-historical aspects:	**Cultural-historical**
Nature of impact:	It is not expected that any cultural-historical aspects will be impacted as a result of no construction activities.
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

1. Conclusion and Recommendations

- Based on the findings of the specialist studies and the alternatives analysis, the preferred alternative is the siting of one main dwelling in the south-western portion of Portion 76. This location avoids the transformation of Critically Endangered Knysna Sand Fynbos, limits visual exposure, and aligns with the less sensitive Goukamma Dune Thicket vegetation type.
- Alternative 2 (farm manager's house included) was rejected as it expands the footprint unnecessarily and infringes on sensitive areas.
- Alternative 3 (northern location, as per SANParks' suggestion) was found to be not viable due to the permanent and irreplaceable loss of Critically Endangered vegetation, contravening national legislation (NEM: BA, 2022 list) and WCBSP objectives.
- The No-Go Alternative does not meet the landowner's basic residential needs and does not provide a reasonable and balanced outcome.
- Accordingly, the south-western siting is recommended as the only defensible option."

2. Recommended Mitigation and Conditions of Authorisation

Cross-cutting management (applies to all phases)

- Appoint an Environmental Control Officer (ECO) to monitor compliance with all specialist measures and the EMPr; use the ECO checklists where provided.
- Mitigation hierarchy: prioritise *avoidance* and *minimisation* in layout and methods; use restoration/offsets only if residual impacts remain.

Pre-construction

- Timing window: No construction between 01 June –30 November (faunal sensitivity).
- Demarcation: Peg and fence the exact disturbance footprint with a 2 m maximum disturbance envelope; install shade-cloth "no-go" fencing and signage.
- Search-and-rescue (flora & SCC): Botanical specialist to sweep the demarcated footprint for SCC, including butterfly host plants; establish an on-site nursery to hold translocated material for later rehabilitation.
- Fauna pre-clearance: Before each phase starts, a fauna specialist must walk the footprint and confirm that low-mobility fauna/SCC have been removed.
- Phasing plan: Build in discrete phases with active and off-limits zones communicated to all staff.
- Alien invasive plan: Prepare and implement an Alien & Invasive Plant Management Plan in line with NEM:BA/CARA.

Construction phase

Site works, earthworks & foundations

- Platforming & slopes: Significant earthworks expected on ~1:5 slopes; bench fills, compact at optimum moisture; support cut/fill edges with engineer-designed retaining walls; avoid developing on >1:4 slopes (or consider piles).
- Excavation safety: Unstable sandy sidewalls >30°—batter or shore excavations; excavations ≤3 m is "Soft" per SABS 1200D.
- Foundations: Lightly reinforced strip/pad footings at ~0.6 m on compacted sand/controlled fill, with DCP acceptance ≤20 mm/blow to ≥1 m below invert; fill below slabs to 100% Mod AASHTO.

Roads & stormwater

- Road alignment: Follow natural contours and avoid drainage lines; where box cuts are needed, retain them.
- Subgrade improvement: In-situ subgrade varies G7–G9; import at least one G7 layer under the standard layer works for lightly-trafficked internal roads/parking.
- Drainage: Highly permeable sands; no subsoil drains along roads, but weeps/subsoil drains behind retaining walls; manage outlets to prevent erosion/sedimentation.
- Rainwater harvesting: Fit roof tanks; consider open-cell pavers at downpipes/overflow and on light-duty parking to reduce runoff and erosion.

Erosion, dust & materials handling

- Stockpiles: Place away from drainage lines; cover/wet/bundle fine materials to prevent wind erosion.
- Dust control: Wet exposed soils (water cart on windy days); cover loose loads; keep access clean.
- Topsoil: Strip, store carefully for later rehabilitation.
- Cement & hydrocarbons: No mixing on bare ground; create lined, bunded mixing/cleaning areas; bund all fuel/oil/chemicals; keep spill-kit/absorbents and dispose contaminated material at a licensed facility.
- Vehicles & plant: Daily leak checks; keep equipment well-maintained to minimise emissions.

Biodiversity & fauna

- Habitat protection: Keep all work inside the demarcated footprint; avoid blanket clearing; rehabilitate disturbed areas in parallel with construction.
- Fauna welfare & housekeeping:
    - Provide and maintain adequate ablutions (min. 1:10–15 staff), serviced regularly.
    - Secure waste in lidded bins; remove food waste daily; no littering/burning.
    - Store small/portable items to avoid baboon interference; cover/bundle stockpiles.
    - Daylight-only working hours to reduce lighting disturbance.

- Alien clearing & fire risk: Implement alien eradication; prepare a Fire Management Plan, use non-flammable materials and plant fire-resistant indigenous hedges around the dwelling.

Visual & heritage safeguards

- Visual: Use earthy colours, down-lighting, and screen construction areas; keep good housekeeping to reduce visual clutter. (Matches the BA's visual mitigation.)
- Fossil/archaeological chance finds: Include a Fossil Finds Procedure (FFP) in the EMPr; stop-work and notify specialists if finds occur.

Stormwater, groundwater & services

- Hydrology context: No mapped rivers/wetlands on the property or within the NWA-regulated areas; however, rainfall intensity is very high, and soils are highly erodible, so stormwater and erosion control are critical.
- Stormwater approach: Encourage infiltration on site; use rainwater tanks and permeable surfaces; direct runoff to stable outlets to prevent gullying/sedimentation.
- Water supply: Largely off-grid via rainwater harvesting (±421 kL/yr from ~842 m² roof area) plus boreholes with on-site storage (~110 kL). Test borehole water and filter potable supplies.
- Sewage: No bulk sewer—use septic tanks with soakaways as accepted by Knysna Municipality; site/construct to avoid seepage and protect groundwater.

Operations phase (key ongoing measures)

- Alien management & rehabilitation: Continue invasive control and maintain indigenous, locally appropriate landscaping (or rehabilitate fully without gardens in sensitive areas).
- Waste, lighting & noise: Keep strict waste discipline; avoid insect zappers and broad insecticide use; use down-lighting to limit faunal disturbance.
- Fire readiness: Keep emergency supplies accessible; maintain rainwater storage for firefighting support; join local FPA.