



FINAL 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:	14/12/16/3/3/1/3292
AUTHOR:	BIANCA GILFILLAN (EAPASA REG 2023/7929)
DATE:	JULY 2026

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. Gilfillan

Contents

Site Sensitivity Verification Table	8
Introduction	9
Scope of assessment and contents of basic assessment reports.....	10
Section A	12
Details of the EAP that prepared the draft Basic Assessment Report	12
Expertise of the EAP, including a Curriculum Vitae	12
Section B	16
Location Information	16
Property Information	16
Property Description	16
Section C - Locality Map	18
Aerial Plan of the proposed activity (1000m²)	19
Section D	21
Description of the scope of the proposed activity	21
Main Dwelling (Preferred Alternative).....	21
Services	22
Development Footprint	23
Description of the NEMA-listed activities associated with the project.....	23
Section E.....	28
Description of the policy and legislative context within which the development is proposed:	28
Section F.....	31
Need and Desirability for the proposed development	31
Identification of plans, guidelines, spatial tools, municipal development frameworks and instruments that are applicable to the proposed activity.....	32
Knysna Integrated Development Plan (2017–2022)	36
Desirability	40
Planning Evaluation.....	41
Section G	46
A motivation for the preferred site, activity and technology alternative	46
Description of the Preferred Proposed Development.....	47
Alternative 1: Earlier Southern Development Layout (Single 3 000 m ² Main Dwelling)	50
Alternative 2: Southern Main Dwelling with Northern Farm Manager's House (Dual Development Node)	51
Alternative 3:Northern Development Layout Adjacent to Kerk Laan (Single 3 000 m ² Main Dwelling)	52

The No Go Alternative.....	53
CIVIL SERVICES: ROADS, STORMWATER, WATER AND SEWER	54
Bulk Services	54
Water Reticulation	54
Fire	54
Sewer Reticulation	54
Details of the alternatives considered.....	56
Section H	59
1. Details of the Public Participation Process undertaken in terms of Regulation 41 of the Regulations, including copies and supporting documents and inputs.	59
Registration of Key Stakeholders	61
Availability of the Basic Assessment Report	63
Comments and Response Report	63
2. Site Description and Environmental Attributes.....	75
Geographical and Physical Aspects	75
Topography	75
Locality Map	76
Biological Components.....	77
VEGETATION.....	77
Agricultural Potential	78
Cognisance is taken of the following situations:.....	79
Site Sensitivity Verification	79
Site Ecological Importance.....	81
Project Area of Influence	82
Construction Phase	83
Critical Biodiversity Area	84
Summary of Protected Areas, Ecological Support Areas and Critical Biodiversity Areas	85
Aquatic.....	85
Geotechnical Soil Test Report.....	87
Geology and Soil Profile	88
Recommendations	88
Earthworks	88
Foundations and floor.....	89
Roads.....	89
Drainage	89
Conclusions	89
Heritage Statement.....	89

Study Area.....	90
Geological Context.....	91
Anticipated Impacts	92
Recommendations	93
SG Diagrams, Historic Aerial Photographs and Results of Site Inspection.....	93
Conclusions and Recommendations	94
Heritage	95
Social Economic Value of the Activity	95
3. Methodology for Assessment of Impacts	96
4. The impacts and risks identified for each alternative	97
Impact assessment in terms of Regulation 22(2)(i) of GN R.543	97
Preferred Alternative: Refined Southern Development Layout (Single 1 000 m ² Main Dwelling)	97
Planning, Design and Construction Phase.....	99
Operational Phase.....	108
Alternative 1: Earlier Southern Development Layout (Single 3 000 m ² Main Dwelling)	118
Planning, Design and Construction Phase.....	118
Operational Phase.....	122
Alternative 2: Southern Main Dwelling with Northern Farm Manager's House (Dual Development Node)	127
Planning, Design and Construction Phase.....	128
Operational Phase.....	135
Alternative 3: Northern Development Layout Adjacent to Kerk Laan (3 000 m ² Main Dwelling)	142
Planning, Design and Construction Phase.....	143
Operational Phase.....	149
The No-Go Alternative	154
Planning, Design and Construction Phase.....	154
Section I	159
Cross-cutting Management Measures (Applicable to All Phases)	160
Pre-construction Phase	160
Timing of Construction.....	160
Site Demarcation.....	160
Botanical Search-and-Rescue.....	160
Fauna Protection.....	161
Alien Invasive Species	161
Construction Phase	161
Site Establishment and Earthworks	161
Foundations and Earthworks	161
Roads and Stormwater	161

Soil, Erosion and Pollution Control	161
Biodiversity Protection.....	161
Waste Management	162
Heritage.....	162
Visual Management	162
Water Supply, Wastewater and Services.....	162
Operational Phase.....	162
Biodiversity Management.....	162
Waste Management	162
Lighting.....	163
Fire Management.....	163
Monitoring	163

Appendix A1 Locality Map

Appendix B1 Alternative Layout 1

Appendix B1 Alternative Layout 2

Appendix B1 Preferred Layout

Appendix B2 Environmental Sensitivity Mapping

Appendix B3 - Plans, Sections & Contours

Appendix B4 - Preferred Alternative Sensitivity Map Labelled

Appendix B5 - Alternative 2 Sensitivity Map Labelled

Appendix C - Site Photographs

Appendix D1 Heritage Impact Statement

Appendix D2 Geotechnical Test Report

Appendix D3 Knysna Feasibility Geophysical Assessment

Appendix D4 Vegetation Sensitivity Analysis

Appendix D5 Terrestrial Biodiversity SSV

Appendix D6 Terrestrial Animal Species Specialist Assessment

Appendix D7 Specialist Plant Species and Terrestrial Biodiversity Assessment

Appendix D8 Aquatic Compliance Statement

Appendix D9 Town Planning Report

Appendix D10 Geotechnical Report

Appendix D11 Electrical Report

Appendix D12 Civil Services Report

Appendix E1 HWC Final Comments

Appendix E2 - Comments Received

Appendix E3 - Response Letter

Appendix E4 - Advert Placed 28 May 2026

Appendix E5 - Comments and Response Report

Appendix E6 - Proof of Notification of Draft BAR

Appendix G Draft EMPr

Appendix H - Impact Assessment and Scoring Matrix

Appendix I - Screening Tool Report

Appendix J1 - EAP Declaration

Appendix J2 - Applicant Declaration

Appendix J3 - Specialist Declaration

Appendix K - Need and Desirability

Appendix H = Draft EMPr

Site Sensitivity Verification Table

The following table is suitable for inclusion in the Final BAR under the Site Sensitivity Verification section.

Environmental Theme	Screening Tool Sensitivity	Verified Site Sensitivity (SSVR)	Specialist Assessment / Compliance Statement
Agriculture	High	High	Agriculture Compliance Statement / Motivation provided. No specialist assessment required.
Landscape / Visual	Not assigned (Specialist identified by Screening Tool)	Low	Heritage Statement addresses visual impacts. No separate Landscape/Visual Impact Assessment is required.
Archaeological & Cultural Heritage	Low	Low	Heritage Statement compiled. Heritage Western Cape confirmed that no further studies are required.
Palaeontology	Medium	Medium	Heritage Statement includes palaeontological assessment and Fossil Finds Procedure. No further specialist assessment required.
Civil Aviation	Medium	Low	Motivation provided. No specialist assessment required.
Defence	Low	Low	No specialist assessment required.
Aquatic Biodiversity	Very High	Low	Aquatic Biodiversity Compliance Statement submitted.
Socio-economic	Specialist identified by Screening Tool	Low	Socio-economic impacts addressed in the BAR and Town Planning Report. No separate specialist assessment required.
Plant Species	High	High	Plant Species Assessment undertaken and included in the Terrestrial Biodiversity Impact Assessment.
Animal Species	High	Very High	Animal Species Assessment undertaken.
Terrestrial Biodiversity	Very High	Very High	Terrestrial Biodiversity Impact Assessment undertaken.

Introduction

Portion 76 of Farm Uitzicht No. 216 is situated approximately 1.5 km north of Brenton-on-Sea within the jurisdiction of the Knysna Local Municipality, Western Cape Province. The southern boundary of the property abuts Brenton Beach, and the property has an approximate extent of 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 preferred development alternative following consideration of specialist studies, environmental constraints, engineering inputs and the comparative alternatives assessment. The development remains intentionally limited in extent and is proposed as a single residential development node with associated access and services, while the majority of the property remains undeveloped and in a natural state.

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 an internal access road linking the servitude to the dwelling footprint.
- 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.
- Rainwater harvesting and on-site storage will be provided as part of the development. The final tank configuration and associated footprint form part of the total assessed development footprint and will be confirmed in the detailed civil and services design.
- Borehole abstraction, if required, will only be utilised as a supplementary water source and will be subject to all applicable authorisations.

Wastewater Management

- On-site sanitation will be provided by means of an engineered on-site wastewater solution. The final position, design and footprint of the septic tank and soakaway system, will be informed by the detailed civil design and geotechnical input and will form part of the total development footprint assessed in this BAR.

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 principal development footprint comprises an approximately 1 000 m² dwelling. The total temporary construction disturbance area, including the dwelling platform, internal access road, service infrastructure and associated construction activities, will be confined to the approved disturbance footprint illustrated on the final approved site layout plan. No disturbance shall occur outside the authorised footprint.
- The layout was selected to avoid sensitive vegetation types and reduce fragmentation of natural habitats.

The preferred development layout has been refined through the Basic Assessment process in response to specialist input, public participation and authority comments. The refined layout reduces the overall development footprint while maintaining the Applicant's primary residential land use rights. Eco Route Environmental Consultancy was appointed by the Applicant as the independent Environmental Assessment Practitioner (EAP) 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.

Marika Vreken, an urban and environmental planner, was 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	Section C of this Report

(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.	(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.	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.

(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 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 (ix) The outcome of the site selection matrix (x) If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and (xi) A concluding statement indicating the preferred alternatives, including the preferred location of the activity.	Section H (5) of this report. Section I of this report. Section G of this report. Section I of this report.
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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:	079 189 5060
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 Authorisation was obtained.

<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of resorts, tourist facilities, golf courses and residential accommodation at Quaggaskloof, Worcester.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Applications for equestrian Estate in the West Coast and Boland areas.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Upgrade of the Water Treatment Works in Vanryhnsdorp.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Optimisation of existing Radnor Compost Facility, Parow and establishment of a Materials Recovery Facility (MRF), a Refuse Transfer Station (RTS) and a Composting Facility - i.e. an Integrated Waste Management Facility (IWMF).	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Rezoning and construction of an incinerator at Swartklip Products, Khayelitsha.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Extension of the Khayelitsha Railway Line, Cape Town.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development and upgrading of various service stations, convenience stores and car wash facilities for ENGEN Petroleum Ltd.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Construction of a pipeline from the Potsdam Wastewater Treatment Works (WWTW) to a reservoir, Durbanville.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Relocation of a golf course and development of tourist facilities and residential accommodation at Clanwilliam Dam, Clanwilliam.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of chicken farms and upgrading of abattoirs, Cape Town.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Wind farm development in Hopefield and Beaufort West.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Rerouting and establishment of a new pipeline at Lebanon mountain area.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of housing units at Royal Palms, Paarl.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner.	Development of a waste disposal site in Murraysburg, Beaufort West.	Environmental Authorisation was obtained.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> Environmental Assessment Practitioner – Environmental Control Officer	• 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.
<u>Name:</u> Bianca Gilfillan <u>Role:</u> 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 -2026	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)

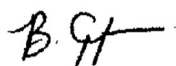
Language Skills:

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



13 July 2026

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 Farm Uitzicht No. 216 is situated within the Knysna Local Municipality, 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 (CBA1) in terms of the Western Cape Biodiversity Spatial Plan (WCBSP, 2017; 2023 Update). Critical Biodiversity Areas are natural or near-natural areas required to meet biodiversity targets for species, ecosystems, ecological processes and ecological infrastructure.

The management objective for Critical Biodiversity Areas is to maintain these areas in a natural or near-natural condition, minimise further habitat transformation and promote ecological connectivity. Where disturbance has occurred, rehabilitation is encouraged and only biodiversity-sensitive, low-impact land uses are considered appropriate.

According to the botanical specialist's assessment:

- The northern portion of the property supports Knysna Sand Fynbos, which is classified as Critically Endangered under the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), as amended.
- The southern portion of the property supports Goukamma Dune Thicket, which is classified as Least Threatened.

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

Portion 76 also falls within the coastal zone regulated by the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) (NEM:ICMA) and is informed by the Garden Route District Municipality Integrated Coastal Management Plan (ICMP). The southern boundary of the property forms part of a sensitive primary dune system, which is recognised as being vulnerable to erosion and dynamic coastal processes.

Following the specialist investigations, alternatives assessment and public participation process, the preferred development footprint has been refined and positioned approximately 120–140 m landward of the High-Water Mark (HWM). The preferred layout avoids direct development within the primary dune system and substantially reduces potential impacts on coastal processes, dune stability, sensitive vegetation and the surrounding coastal landscape, while remaining consistent with the objectives of the ICMP and the Coastal Protection Zone established under NEM:ICMA.

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

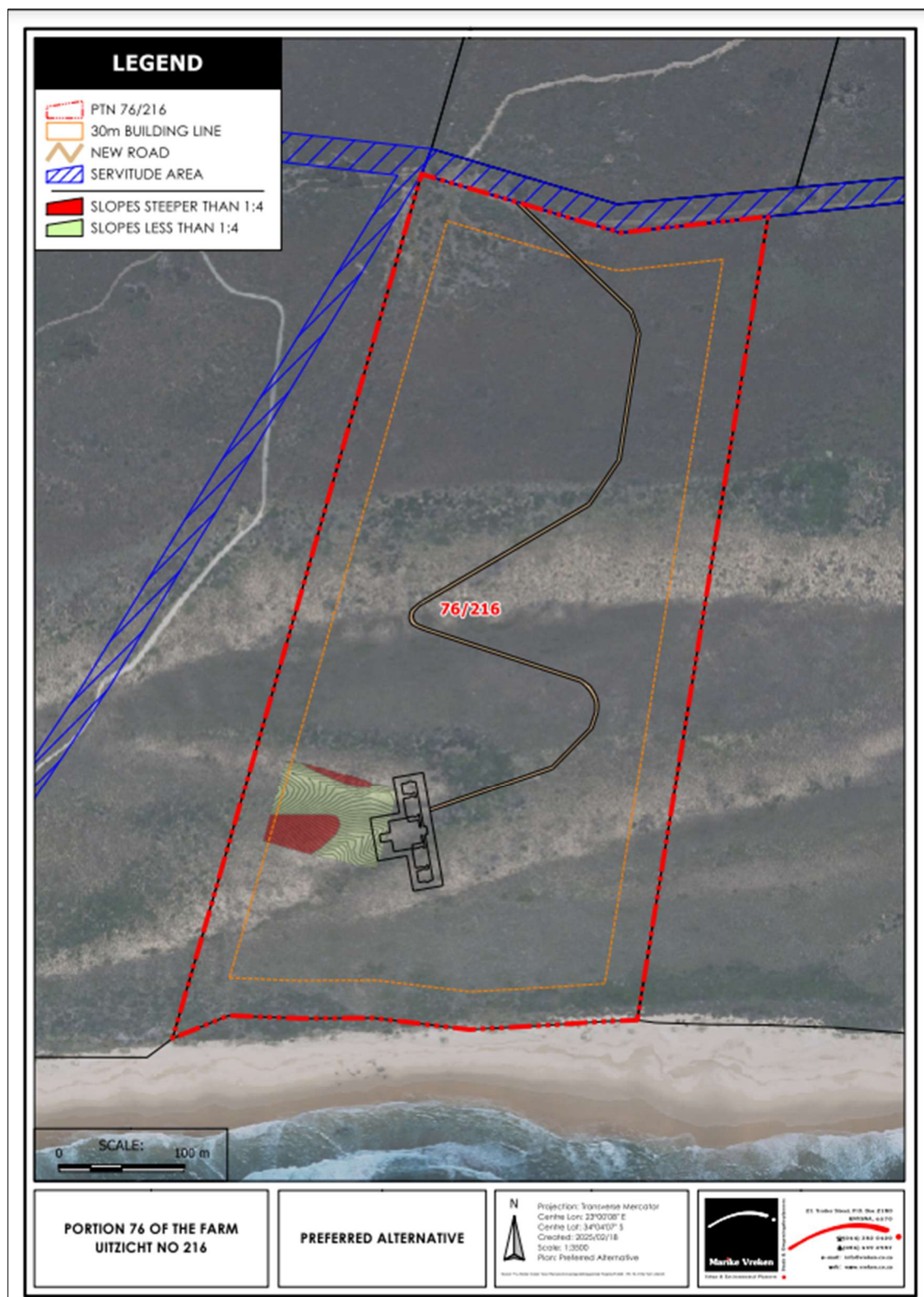
Scale: 1:36 112
Date created: August 10, 2020

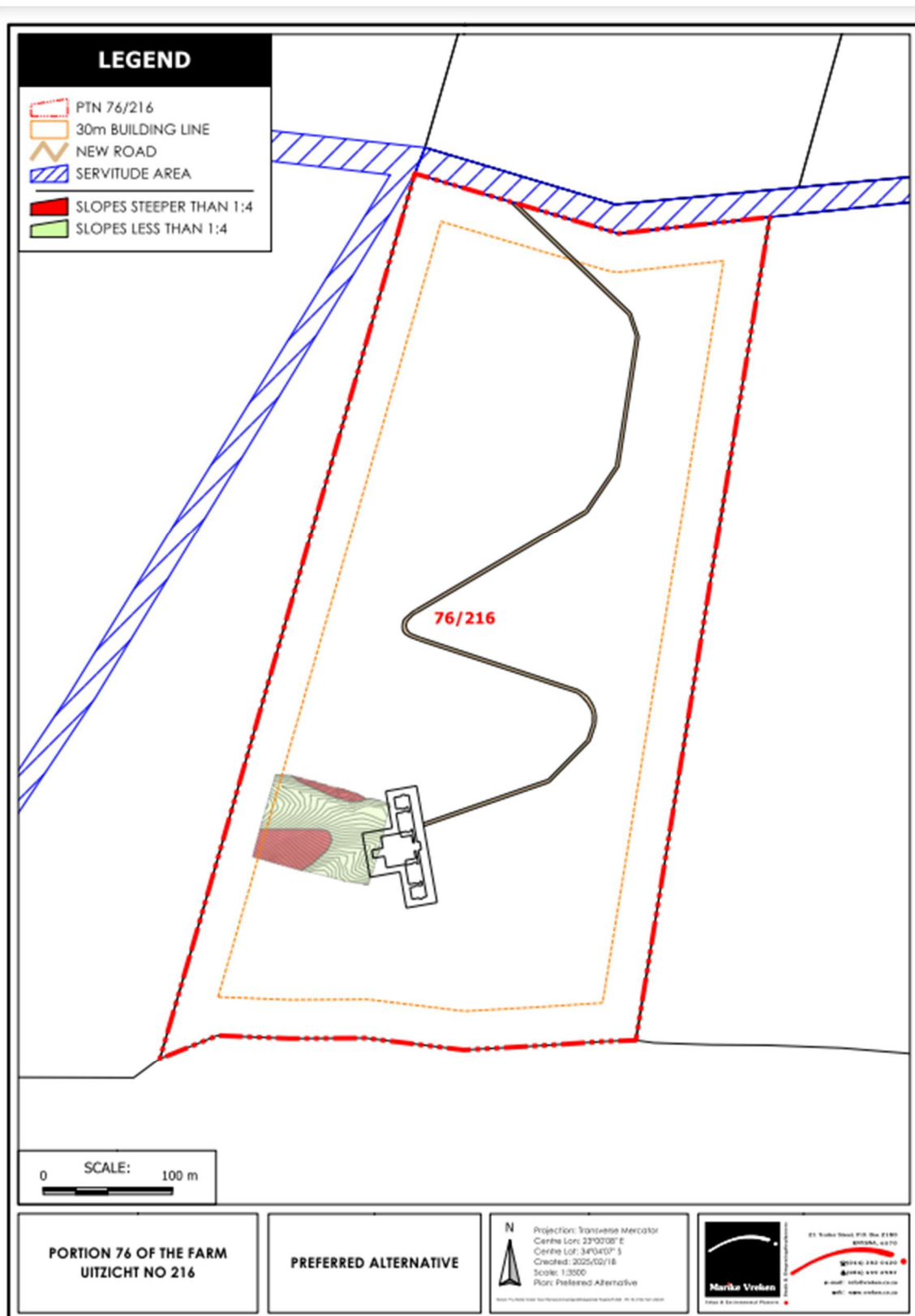
Compiled with CapeFarmMapper



Western Cape Government
Agriculture

PO Box 1252 Sedgfield, 6573





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 residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a single main residential dwelling and associated infrastructure. The proposed development has been refined during the Basic Assessment process to substantially reduce the overall development footprint and associated environmental impacts.

Main Dwelling (Preferred Alternative)

The preferred development comprises:

- Construction of one single-storey residential dwelling with a total built footprint of approximately 1 000 m², including covered verandas and an integrated garage.
- Contemporary coastal architectural design incorporating low-profile buildings, non-reflective finishes and earth-toned materials to minimise visual intrusion within the surrounding landscape.
- Associated outdoor living areas, including a swimming pool and landscaped areas within the approved development footprint.

Access to Portion 76 of the Farm Uitzicht 216:

Access to the property will continue to be obtained via the existing public servitude road (Kerk Laan) situated along the northern property boundary.

A new internal access road will connect the existing servitude road to the proposed dwelling and will:

- be approximately 830 m in length;
- have a running surface of approximately 2.5 m wide;
- require a temporary construction disturbance width of approximately 4.0–5.5 m, where necessary; and
- follow the natural topography as far as reasonably practicable to minimise earthworks, vegetation clearing and erosion.





The existing public access road is reflected on General Plan SG No. 6783/1951 as a public access servitude measuring 60 Cape Feet (approximately 18.9 m) in width and forms the northern boundary of the property.



FIGURE 2: APPLICATION AREA IN RELATION TO EXISTING ACCESS SERVITUDE

Services

The development will be supported by the following services:

- Rainwater harvesting with on-site storage tanks as the primary water supply.
- Supplementary borehole water, if required and subject to the necessary authorisations.
- Roof-mounted off-grid solar photovoltaic system with battery storage.
- Engineered on-site wastewater treatment and disposal system.
- Stormwater managed through infiltration measures, permeable surfaces and rainwater harvesting.
- Underground service connections located within the approved disturbance footprint.

Development Footprint

The preferred layout has been refined through the Basic Assessment process following specialist investigations, engineering input, public participation and authority comments.

The refined development footprint has been designed to:

- minimise disturbance to sensitive vegetation;
- avoid direct development within the primary dune system;
- reduce impacts on coastal processes;
- minimise visual intrusion;
- reduce habitat fragmentation; and
- confine disturbance to the approved development footprint.

No disturbance shall occur outside the authorised development footprint shown on the approved layout plans.

Integrated Coastal Management Plan (ICMP) Considerations

Portion 76 is situated within the coastal zone regulated by the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) (NEM:ICMA) and informed by the Garden Route District Municipality Integrated Coastal Management Plan (ICMP). The southern boundary of the property forms part of a sensitive primary dune system associated with Brenton Beach and the Coastal Protection Zone.

The preferred development footprint was refined during the Basic Assessment process following specialist investigations, engineering input and public participation. The dwelling has been positioned approximately 120–140 m landward of the High-Water Mark (HWM), thereby avoiding direct development within the primary dune system and reducing potential impacts on coastal processes, dune stability, biodiversity and the visual character of the coastal landscape. The refined layout is consistent with the objectives of the ICMP and the coastal management principles contained in NEM:ICMA.

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. 327, 2017	Description of project activity
Listing Notice 1, Activity 27 The clearance of an area of 1 hectare or more of indigenous vegetation, except where such clearance is required for maintenance purposes undertaken in accordance with a maintenance management plan.	The proposed development, including the dwelling, internal access road, associated services, construction footprint and required fire protection management zone, will cumulatively require the clearance and ongoing management of more than 1 hectare of indigenous vegetation. Although the preferred development footprint has been refined and is located within the southern portion of the property, the cumulative vegetation clearance associated with the development exceeds the 1 hectare

	threshold. <i>(Retain only if the total disturbance has been confirmed to exceed 1 ha.)</i>
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	Access to the proposed dwelling will be provided via a new internal access road extending from the existing servitude (Kerk Laan) to the dwelling. While the permanent travelled surface will be approximately 2.5 m wide, the construction disturbance required for the road will vary between approximately 4.0 m and 5.5 m, thereby triggering this listed activity within indigenous vegetation outside the urban area.
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; Within critical biodiversity areas identified in bioregional plans.	The proposed development will require the clearance of more than 300 m² of indigenous vegetation for the dwelling, internal access road, associated infrastructure and construction activities. Although the preferred dwelling is located within the southern portion of the property, the entire property is mapped as a Critical Biodiversity Area (CBA1), and this listed activity is therefore triggered.

Principles contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended

Principals' 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 proposed development will enable the Applicant to exercise the primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a single residential dwelling. The property is currently vacant and contains no existing residential structures.

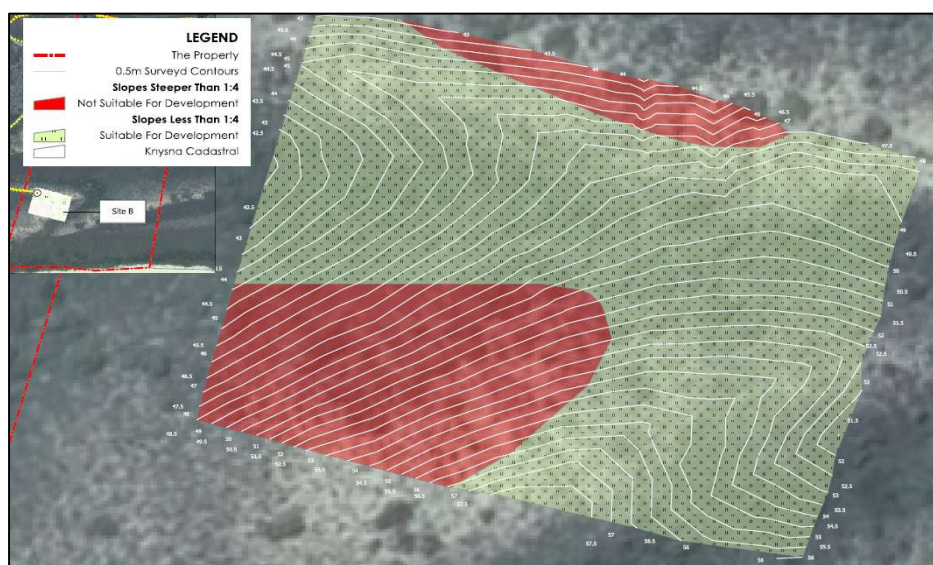
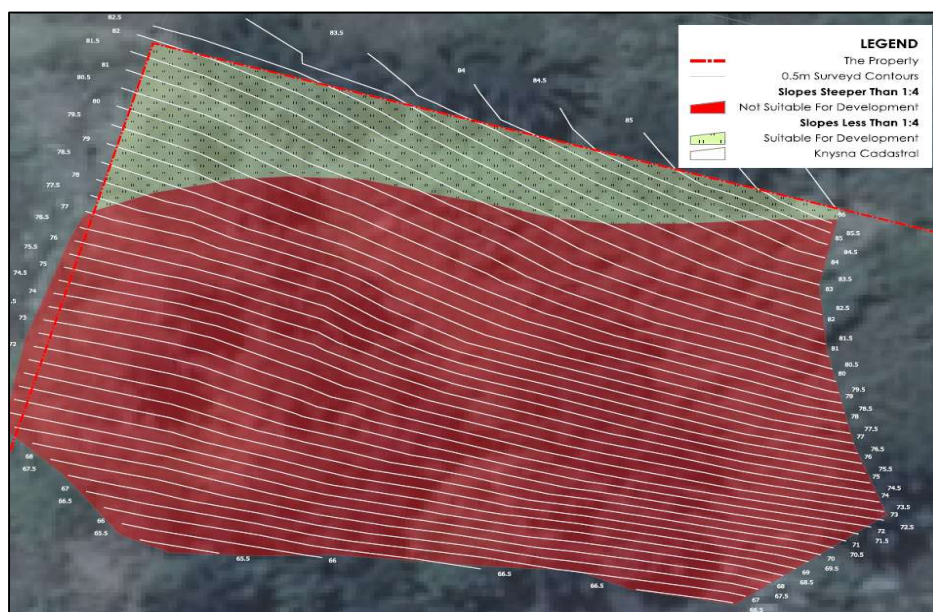
Development must be socially, environmentally and economically sustainable.

Section 2(4)(a)(i) and (ii) of NEMA requires that sustainable development considers all relevant factors, including that the disturbance of ecosystems and loss of biological diversity are avoided or, where they cannot reasonably be avoided, are minimised and remedied.

In response to these principles, the proposed development has been refined throughout the Basic Assessment process following specialist investigations, engineering input, public participation and authority comments. The preferred development footprint has been substantially reduced from the previously proposed layout and positioned within the south-western portion of the property to minimise environmental impacts while allowing the Applicant to exercise the property's primary residential land use rights.

The property is characterised by undulating topography, distinct ridgelines and densely vegetated valleys. Ground levels range between approximately 40 m and 60 m above mean sea level (MSL), with average slopes generally exceeding 25%. The southern portion of the property includes areas of steeper terrain, with localised slopes of up to approximately 55%.

The preferred development footprint has been positioned within an area identified through the specialist investigations as being suitable for development, thereby avoiding the steeper slopes and the more environmentally sensitive portions of the property. Development has been confined to a single residential node, while the remainder of the property will remain undeveloped, thereby reducing habitat fragmentation, visual intrusion and impacts on ecological processes.



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.

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

An The Basic Assessment process has identified the potential environmental impacts associated with the proposed development and has incorporated appropriate avoidance, mitigation and management measures to minimise pollution and environmental degradation throughout the construction, operational and decommissioning phases of the development.

The preferred development footprint has been substantially reduced and refined in response to specialist investigations, public participation and comments received from commenting authorities. The proposed development has been positioned outside the sensitive primary dune system, thereby reducing potential impacts on coastal processes, biodiversity, visual resources and geotechnical stability. All mitigation measures identified during the Basic Assessment process have been incorporated into the Environmental Management Programme (EMPr) and will be implemented throughout the life of the development.

(iii) 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.

The proposed development has been informed by specialist biodiversity, heritage, visual, geotechnical and coastal assessments to minimise impacts on the receiving environment and to ensure that the development remains compatible with the environmental sensitivities of the site.

The property forms part of a Critical Biodiversity Area (CBA1), the Knysna Protected Environment and the broader coastal ecological corridor associated with Brenton Beach. The preferred development footprint has therefore been refined to minimise habitat loss, avoid direct disturbance of the primary dune system, reduce visual intrusion and retain the majority of the property in its natural state.

The Heritage Impact Assessment concluded that no significant heritage resources will be directly affected by the proposed development, subject to the implementation of a Chance Finds Procedure during construction. Similarly, the Visual Impact Assessment concluded that the refined development footprint, together with the proposed architectural design and landscaping measures, will minimise visual impacts on the surrounding coastal landscape.

The proposed development is further consistent with the Western Cape's biodiversity conservation objectives by:

- Protecting sensitive biodiversity and ecological processes through the reduction of the development footprint and confining disturbance to the approved development area.
- Retaining the majority of the property in its natural state, thereby maintaining ecological connectivity and the broader coastal landscape.
- Implementing rehabilitation and invasive alien plant control measures in accordance with the recommendations of the specialist studies and the Environmental Management Programme.

- Promoting the conservation of the scenic qualities and sense of place associated with the Brenton coastal environment through the use of low-profile buildings, earth-toned materials and indigenous landscaping.

The comments received from SANParks, CapeNature, DFFE Oceans & Coasts, WWF South Africa and other Interested and Affected Parties have been considered during the refinement of the preferred development alternative and have informed the mitigation measures incorporated into this Final Basic Assessment Report and the accompanying Environmental Management Programme.

- (iv) 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.**

Waste management during the construction and operational phases will be undertaken in accordance with the waste hierarchy. Construction waste will be minimised at source, reusable and recyclable materials will be separated where practicable, and all remaining waste will be removed by suitably authorised waste service providers and disposed of at licensed waste disposal facilities. Hazardous waste, should any be generated, will be stored, handled and disposed of in accordance with the applicable legislative requirements and the Environmental Management Programme (EMPr).

- (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.**

The proposed development has been designed to minimise the consumption of non-renewable resources. The dwelling will operate as an off-grid development supported by a roof-mounted solar photovoltaic system with battery storage. Rainwater harvesting and on-site storage will provide the primary water supply, while borehole abstraction, if required, will only be utilised as a supplementary source and will be subject to the necessary authorisations. The use of locally available construction materials, where feasible, will further reduce the consumption of natural resources and transport-related impacts.

- (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.**

The proposed development has been designed to minimise its ecological footprint by limiting the development to a single residential node while retaining the majority of the property in its natural state. Renewable resources will be utilised through the implementation of rainwater harvesting and an off-grid solar energy system. The refined layout avoids direct disturbance of the primary dune system and significantly reduces impacts on sensitive vegetation, ecological processes and biodiversity.

- (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 precautionary and risk-averse approach has been applied throughout the Basic Assessment process. Specialist investigations, public participation and comments received from commenting authorities have informed the refinement of the preferred development footprint and the identification of appropriate mitigation measures. The preferred layout has been selected to avoid environmentally sensitive areas where practicable and to minimise residual environmental impacts through the implementation of the Environmental Management Programme.

- (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.**

Potential environmental impacts associated with the proposed development have been identified through the Basic Assessment process and assessed by the relevant specialists. Appropriate avoidance, mitigation, rehabilitation and monitoring measures have been incorporated into the project design and the Environmental Management Programme. The preferred development footprint has been refined in response to specialist recommendations and comments received during the public participation process to minimise impacts on biodiversity, coastal processes, visual resources, heritage resources and the surrounding environment while allowing the Applicant to exercise the property's primary residential land use rights.

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	APPLICABILITY TO THE PROPOSED DEVELOPMENT
National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 (as amended)	Department of Forestry, Fisheries and the Environment (DFFE) and Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)	Environmental Authorisation	The proposed development requires Environmental Authorisation through a Basic Assessment Process. This Final Basic Assessment Report has been prepared in accordance with the EIA Regulations, 2014 (as amended).
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Department of Forestry, Fisheries and the Environment (DFFE); CapeNature	Comment / Relevant Consideration	The property is located within a Critical Biodiversity Area (CBA1) and contains sensitive indigenous vegetation. Botanical and terrestrial specialist assessments were undertaken, and CapeNature's comments have been considered in refining the preferred development layout and associated mitigation measures.
National Environmental Management: Integrated	Department of Forestry, Fisheries and the Environment (DFFE)	Relevant Consideration	The property falls within the coastal zone regulated by NEM:ICMA. The preferred development footprint has

Coastal Management Act, 2008 (Act No. 24 of 2008)			been refined to avoid the primary dune system and is located approximately 120–140 m landward of the High-Water Mark (HWM). The Garden Route Integrated Coastal Management Plan (ICMP) and comments received from DFFE Oceans & Coasts have been incorporated into the project design and assessment.
National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) and Regulations for the Proper Administration of the Knysna Protected Environment (GN R1175 of 2009)	Department of Forestry, Fisheries and the Environment (DFFE); SANParks	Comment / Relevant Consideration	The property forms part of the Knysna Protected Environment and broader coastal conservation landscape. SANParks participated during the public participation process and their comments have been considered in the alternatives assessment and refinement of the preferred layout.
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	Department of Forestry, Fisheries and the Environment (DFFE)	Relevant Consideration	Waste generated during the construction and operational phases will be managed in accordance with the waste hierarchy. Appropriate waste management measures are included in the EMPr.
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	Department of Forestry, Fisheries and the Environment (DFFE)	Relevant Consideration	Temporary dust emissions may occur during construction. Dust suppression and good housekeeping measures will be implemented in accordance with the EMPr. No Atmospheric Emission Licence is required.
National Forests Act, 1998 (Act No. 84 of 1998)	Department of Forestry, Fisheries and the Environment (DFFE)	Permit / Relevant Consideration	Should any protected tree species be identified that require removal or disturbance, the necessary authorisation will be obtained from DFFE prior to commencement of such activities.
National Water Act, 1998 (Act No. 36 of 1998)	Department of Water and Sanitation (DWS) / Breede-Gouritz Catchment Management Agency (BGCMA)	Licence / Relevant Consideration	Supplementary borehole abstraction, if required, will comply with the National Water Act. Any water use requiring authorisation will be undertaken in accordance with the requirements of DWS and/or the BGCMA.

Water Services Act, 1997 (Act No. 108 of 1997)	Knysna Local Municipality	Relevant Consideration	An engineered on-site wastewater management system will be implemented in accordance with municipal requirements and applicable legislation.
Western Cape Nature Conservation Laws Amendment Act, 2000 (Act No. 3 of 2000)	CapeNature	Comment / Relevant Consideration	CapeNature participated during the public participation process and its recommendations have been considered in the Final Basic Assessment Report and EMPr.
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	Western Cape Department of Agriculture	Relevant Consideration	Soil conservation, erosion prevention and rehabilitation measures will be implemented throughout the construction and operational phases in accordance with CARA and the EMPr.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Heritage Western Cape (HWC)	Comment / Relevant Consideration	The application was processed in terms of Section 38(8) of the NHRA. A Heritage Impact Statement was undertaken and its recommendations have been incorporated into the Final Basic Assessment Report and EMPr. A Chance Finds Procedure will be implemented during construction.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)	Department of Employment and Labour	Relevant Consideration	The Contractor will comply with the Occupational Health and Safety Act during construction, including the implementation of appropriate health and safety procedures and the use of personal protective equipment.
South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998)	SANRAL	Comment / Relevant Consideration	SANRAL was afforded an opportunity to comment during the public participation process, where applicable.
Outeniqua Sensitive Coastal Area Extension Regulations (OSCAER)	Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)	Permit	Should an OSCAER Permit be required, the Applicant will obtain the necessary approval from the relevant authority prior to commencement of any regulated activities following the granting of Environmental Authorisation.

Policy / Guideline	Administering Authority
National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended	Department of Forestry, Fisheries and the Environment (DFFE)
Environmental Impact Assessment Regulations, 2014 (as amended)	Department of Forestry, Fisheries and the Environment (DFFE)
EIA Guideline and Information Document Series: Guideline on Public Participation	Department of Forestry, Fisheries and the Environment (DFFE)
EIA Guideline and Information Document Series: Guideline on Alternatives	Department of Forestry, Fisheries and the Environment (DFFE)
EIA Guideline and Information Document Series: Guideline on Need and Desirability	Department of Forestry, Fisheries and the Environment (DFFE)
Guideline on Public Participation (2010)	Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)
Guideline on Involving Biodiversity Specialists in EIA Processes (where applicable)	Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)
Western Cape Biodiversity Spatial Plan (2017; 2023 Update)	Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) / CapeNature
Garden Route District Municipality Integrated Coastal Management Plan (ICMP)	Garden Route District Municipality
Knysna Spatial Development Framework (where applicable)	Knysna Local Municipality

Section F

Need and Desirability for the proposed development

The consideration of need and desirability forms an integral component of the Basic Assessment process and requires the proposed development to be evaluated within the context of applicable legislation, environmental policies, spatial planning frameworks and the principles of sustainable development contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

The proposed development seeks to enable the Applicant to exercise the primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a single main dwelling and associated infrastructure. Throughout the Basic Assessment process, the proposed development has been refined in response to specialist investigations, public participation and comments received from commenting authorities in order to minimise environmental impacts while retaining the Applicant's reasonable development rights.

The need and desirability of the proposed development have been assessed with due consideration of the applicable planning and environmental policy framework, including the Knysna Municipal Spatial Development Framework, the

Garden Route District Municipality Integrated Coastal Management Plan (ICMP), the Western Cape Biodiversity Spatial Plan, the Knysna Protected Environment and the relevant specialist studies undertaken as part of the Basic Assessment process.

Particular consideration has been given to the exceptional environmental sensitivity of the property, including its location within a Critical Biodiversity Area (CBA1), the Knysna Protected Environment and the broader coastal ecological corridor. In response to these constraints, the preferred development footprint has been substantially reduced and refined to avoid direct development within the primary dune system, minimise vegetation loss, reduce visual intrusion and limit habitat fragmentation. The majority of the property will remain undeveloped and in its natural state.

The need and desirability assessment therefore considers whether the proposed development represents an appropriate balance between protecting the environmental attributes of the property and enabling the Applicant to exercise the lawful residential development rights associated with the property in a manner that is environmentally responsible and sustainable.

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

The proposed development has been assessed against the applicable national, provincial and municipal planning frameworks, environmental policies, biodiversity planning tools and coastal management instruments to determine its consistency with the planning and environmental context of the study area.

The table below identifies the principal plans, guidelines, spatial planning tools and municipal development frameworks that have informed the assessment of the proposed development. The assessment is based on the relevant specialist studies, the Town Planning Report prepared by Marike Vreken Consultants, applicable environmental legislation, and comments received from commenting authorities during the Basic Assessment process.

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: <i>"...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..."</i> The proposal is primarily to exercise the Applicant's lawful right to construct a single farmhouse on Agriculture Zone I land. Limited agricultural activities, including the maintenance of natural veld and, where appropriate, small-scale bee farming, may continue as ancillary agricultural activities on the property. 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.

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.

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 province's 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 is 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 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 infrastructure	Spatially aligned infrastructure planning, prioritisation and investment
	Limited economic opportunities	Variety of livelihood and income opportunities
	Unbalanced rural and urban space economies	Balanced urban and rural space economies built around green and information technologies
SETTLEMENT	Suburban approaches to settlement	Urban approaches to settlement
	Emphasis on ‘greenfields’ development and low density sprawl	Emphasis on ‘brownfields’ development
	Low density sprawl	Increased densities in appropriate locations aligned with resources and space-economy
	Segregated land use activities	Integration of complementary land uses
	Car dependent neighbourhoods and private mobility focus	Public transport orientation and walkable neighbourhoods
	Poor quality public spaces	High quality public spaces
	Fragmented, isolated and inefficient community facilities	Integrated, clustered and well located community facilities
	Focus on private property rights and developer led growth	Balancing private and public property rights and increased public direction on growth
	Exclusionary land markets and top-down delivery	Inclusionary land markets and partnerships with beneficiaries in delivery
	Limited tenure options and standardised housing types	Diverse tenure options and wider range of housing typologies
	Delivering finished houses through large contracts and public finance and with standard levels of service	Progressive housing improvements and incremental development through public, private and community finance with differentiated levels of service

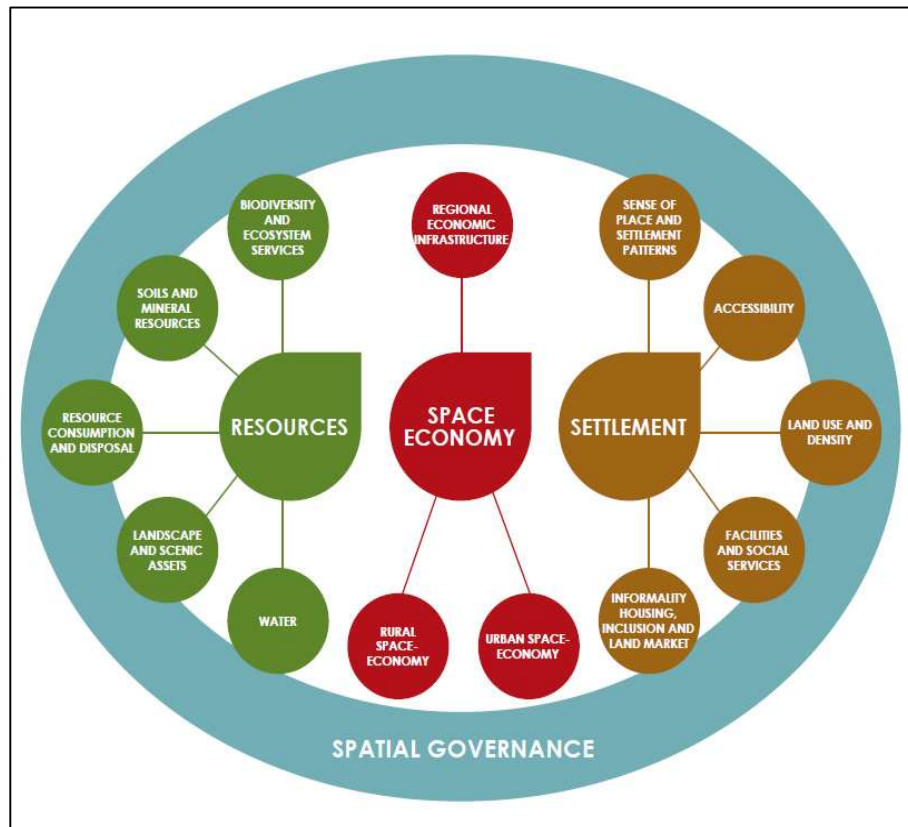
KEY TRANSITIONS FOR THE PSDF

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 were, in general, limited to provincial-scale planning.

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.	<i>The entire property is earmarked as "Terrestrial CBA".</i> <i>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..."</i> <i>The biodiversity mapping has been verified through specialist field investigations undertaken as part of the Basic Assessment process. The preferred development footprint has been substantially refined and reduced to approximately 1 000 m² and is located within the least environmentally sensitive portion of the southern development node, thereby minimising ecological disturbance while allowing the Applicant to exercise the primary</i>

residential land use right. 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)	<i>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.</i>

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 biodiversity mapping has been verified through specialist field investigations undertaken as part of the Basic Assessment 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.

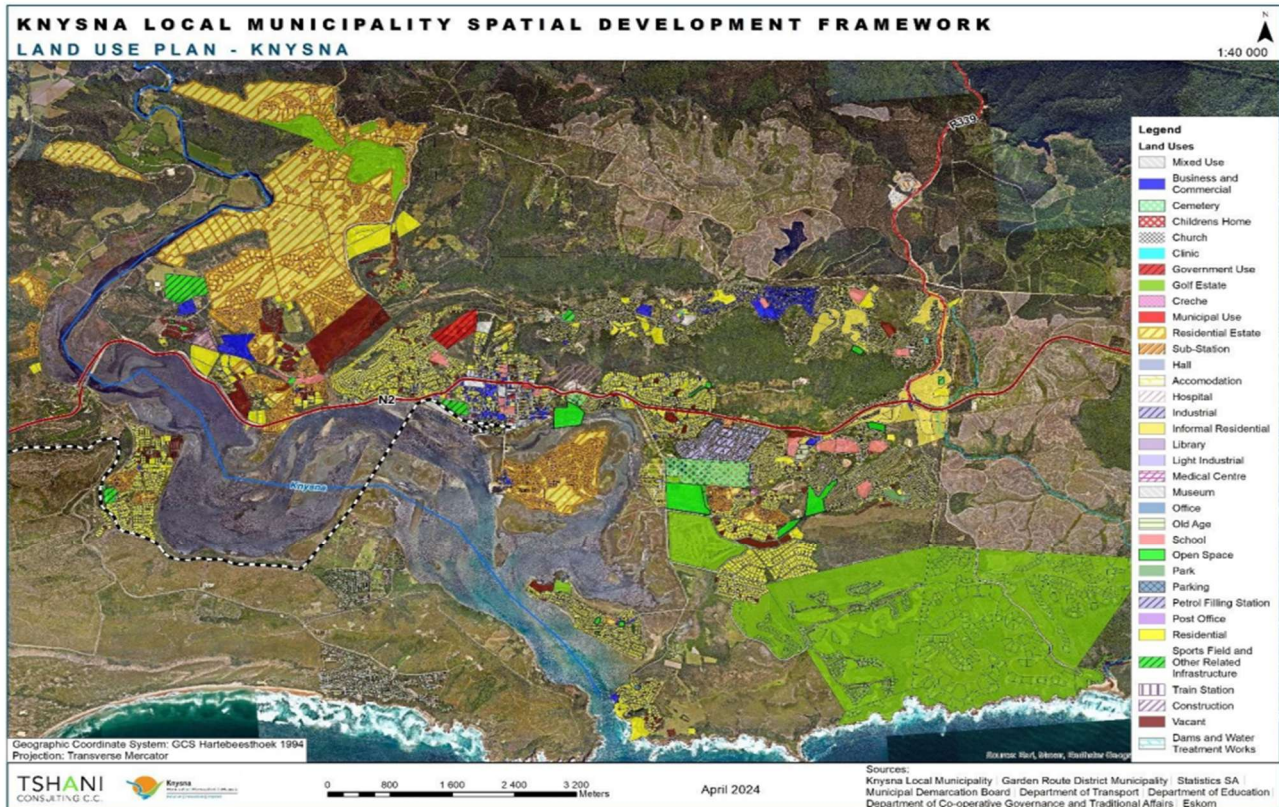
The subject property is located in Ward 5 of the Knysna Municipality. None of the issues raised in the community for Ward 5 applies to the proposed development.



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 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.

Land-use Management Guidelines for rural clustering include:

- 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 Route³.

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 with and scaled 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:

<u>Conservation use:</u>	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, <i>establish ecological linkages across</i> the rural landscape, and <i>mainstream a conservation ethic into all rural activities.</i>
<u>Holiday accommodation:</u>	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.
<u>Rural Housing:</u>	Towards integrated rural development and sustainable human settlements in the Western Cape, <i>new housing development beyond the urban edge urgently needs to be curtailed.</i> 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.
<u>Tourist facilities:</u>	Towards <i>diversifying</i> the Western Cape's <i>rural economic base</i> into the <i>tourism</i> and <i>recreation sectors</i> 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.

The need for the proposal is to enable the Applicant to exercise the existing residential land use rights associated with Agriculture Zone I through the construction of a single farmhouse. The proposal has been progressively refined during the Basic Assessment process to minimise environmental impacts while retaining the lawful development rights associated with the property.

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.

During the Basic Assessment process a number of alternative layouts were investigated, including a substantially larger southern dwelling footprint, a dual-dwelling option and a northern development option. Following specialist investigations and comments received from the competent authorities and commenting authorities, the preferred alternative was refined to a single 1 000 m² dwelling located within the least environmentally sensitive portion of the southern development node. This represents the Best Practicable Environmental Option (BPEO).

Planning Evaluation

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

The preferred layout has been refined in response to specialist recommendations and authority comments to minimise impacts on biodiversity, coastal processes, landscape character and ecological connectivity while retaining the Applicant's lawful development rights.

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 be 1000 m², 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 conservancy tanks 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 implications 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. Four alternatives, including the No-Go Alternative, were assessed during the Basic Assessment process. Based on the integrated findings of the specialist studies and authority comments, the preferred refined southern layout represents the Best Practicable Environmental Option as it achieves the greatest reduction in ecological disturbance while allowing the Applicant to exercise the lawful residential development rights associated with the property.
Will the benefits of the proposed land use/development outweigh the negative impacts of it?
The specialist studies conclude that, subject to the implementation of the recommended mitigation measures and the Environmental Management Programme, the residual impacts associated with the preferred alternative are low and acceptable.
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.

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.*

The preferred layout reflects the outcome of the integrated environmental management process, whereby specialist investigations, public participation, alternatives assessment and authority comments were incorporated into the final project design to minimise environmental impacts and promote sustainable development.

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 –

Alternatives, in relation to a proposed activity, means meeting the general purpose and requirements of the activity, which may include alternatives to –	Motivation
(a) The property on which, or the location where, it is proposed to undertake the activity	No alternative property was considered. The Applicant seeks to exercise the existing primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216. The Basic Assessment therefore focused on identifying the most environmentally acceptable location for the dwelling within the property rather than considering alternative properties.
(b) The type of activity to be undertaken	Preferred Alternative: Construction of one (1) main dwelling (approximately 1 000 m ²) within the south-western portion of the property together with an internal access road and associated services. Alternative 1: Construction of one (1) main dwelling (approximately 3 000 m ²) within the south-western portion together with an internal access road and associated services. Alternative 2: Construction of one (1) main dwelling (approximately 4 000 m ²) within the south-western portion together with one (1) farm manager's house (approximately 1 200 m ²) within the north-western portion, associated services and an internal access road. Alternative 3: Construction of one (1) main dwelling (approximately 3 000 m ²) and associated infrastructure within the northern portion of the property adjacent to the existing public access corridor (Kerk Laan/Bushy Way), with direct access from the existing servitude.
(c) The design or layout of the activity	Four layout alternatives were assessed during the Basic Assessment process. Following specialist investigations, the alternatives assessment, public participation and comments received from the competent and commenting authorities, the preferred alternative was refined to a single 1 000 m ² dwelling located within the south-western portion of the property. This layout substantially reduces the development footprint compared to the original proposal, avoids the northern Critically Endangered Knysna Sand Fynbos, minimises vegetation loss and habitat fragmentation, reduces visual intrusion, avoids unnecessary disturbance of sensitive coastal features and represents the Best Practicable Environmental Option (BPEO). Alternative 1 results in a substantially larger development footprint; Alternative 2 introduces a second development node and greater ecological fragmentation; and Alternative 3 places the

	development within the more environmentally sensitive northern portion of the property.
(d) The technology to be used in the activity	The proposed development will operate as an off-grid residential development. Electricity will be supplied by a roof-mounted solar photovoltaic system with a sealed Lithium Iron Phosphate battery storage system. Rainwater harvesting will provide the primary water supply, supplemented by a borehole where necessary and subject to the required authorisations. Wastewater will be managed by an engineered on-site treatment system. These technologies reduce reliance on municipal infrastructure and minimise the environmental footprint of the development.
(e) The operational aspect of the activity	The operational phase will comprise the occupation and use of a single private residential dwelling together with associated access and services. The property will remain predominantly in its natural state, with only the authorised development footprint being utilised. Limited agricultural activities consistent with Agriculture Zone I, including the maintenance of natural veld and small-scale bee farming where appropriate, may continue as ancillary activities.
(f) The option of not implementing the activity (No-Go Alternative)	Under the No-Go Alternative, the property would remain undeveloped, and the existing natural environment would be retained. However, the Applicant would be unable to exercise the lawful primary residential land use rights associated with the property. While the No-Go Alternative would avoid all development-related impacts, it would also preclude the socio-economic benefits associated with the proposal and would not allow the Applicant to realise the lawful use of the property. The preferred alternative is therefore considered the most appropriate balance between environmental protection and the Applicant's development rights.

The preferred Alternative: Refined Southern Development Layout (Single 1 000 m² Main Dwelling)

Description of the Preferred Proposed Development

The proposal is to exercise the primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a single main dwelling and associated infrastructure within the south-western portion of the property.

The proposed development entails the following:

1. The construction of one (1) main dwelling house (approximately 1 000 m²) within the south-western portion of the property.
2. The construction of an internal access road to provide access from the existing servitude road (Kerk Laan) to the proposed dwelling.
3. The installation of associated engineering services, including an off-grid electricity supply, rainwater harvesting infrastructure, on-site wastewater management and associated service connections.

Main Dwelling House

The proposed single-storey main dwelling will have a total floor area of approximately 1 000 m² and will comprise:

- Six (6) bedrooms;
- An open-plan living area incorporating the kitchen, lounge, dining room, bar, scullery, bathrooms and wine cellar;
- Covered verandas;
- An integrated garage;
- Open deck areas; and
- A swimming pool.

The dwelling has been designed as a low-profile contemporary coastal residence using earth-toned, non-reflective materials to integrate with the surrounding natural landscape and minimise visual intrusion.

Internal Access Road

Access to the property will be obtained from the existing public access servitude (Kerk Laan). A new internal access road will be constructed to connect the existing servitude to the proposed dwelling.

The internal road will:

be approximately 830 m in length;

have a travelled surface width of approximately 2.5 m;

require a temporary construction disturbance width varying between 4 m and 5.5 m; and follow the natural contours of the site, thereby minimising earthworks, vegetation clearance and erosion potential.

Services

Electricity

No electrical infrastructure is currently available on the property or within the adjacent road reserve. The proposed development will therefore operate as an off-grid residential development.

Solar Energy System

Type and System

Electricity will be supplied by a roof-mounted photovoltaic (PV) solar system. The system will utilise solar energy during daylight hours while simultaneously charging a battery storage system. Should future energy requirements increase, the system may be expanded through additional photovoltaic capacity using AC-coupled inverters.

Plant Location

The solar panels will be mounted on the roof of the main dwelling and associated outbuildings where required. The northern-facing roof orientation provides suitable conditions for efficient solar energy generation.

Plant Capacity

The proposed solar system will have an approximate storage capacity of 15 kWh, with an anticipated peak daily electricity demand of approximately 30 kWh.

Energy Storage

Energy storage will comprise a sealed Lithium Iron Phosphate (LiFePO₄) battery system with an expected operational lifespan exceeding ten (10) years under normal operating conditions.

Distribution Network

Electricity will be distributed via underground cabling between the main dwelling and associated infrastructure. Trenches for underground services will be kept to the minimum dimensions required by engineering standards. Remote infrastructure, such as boreholes or pumps, may be supplied either by dedicated solar-powered systems or by underground electrical cabling where appropriate.

Area Lighting

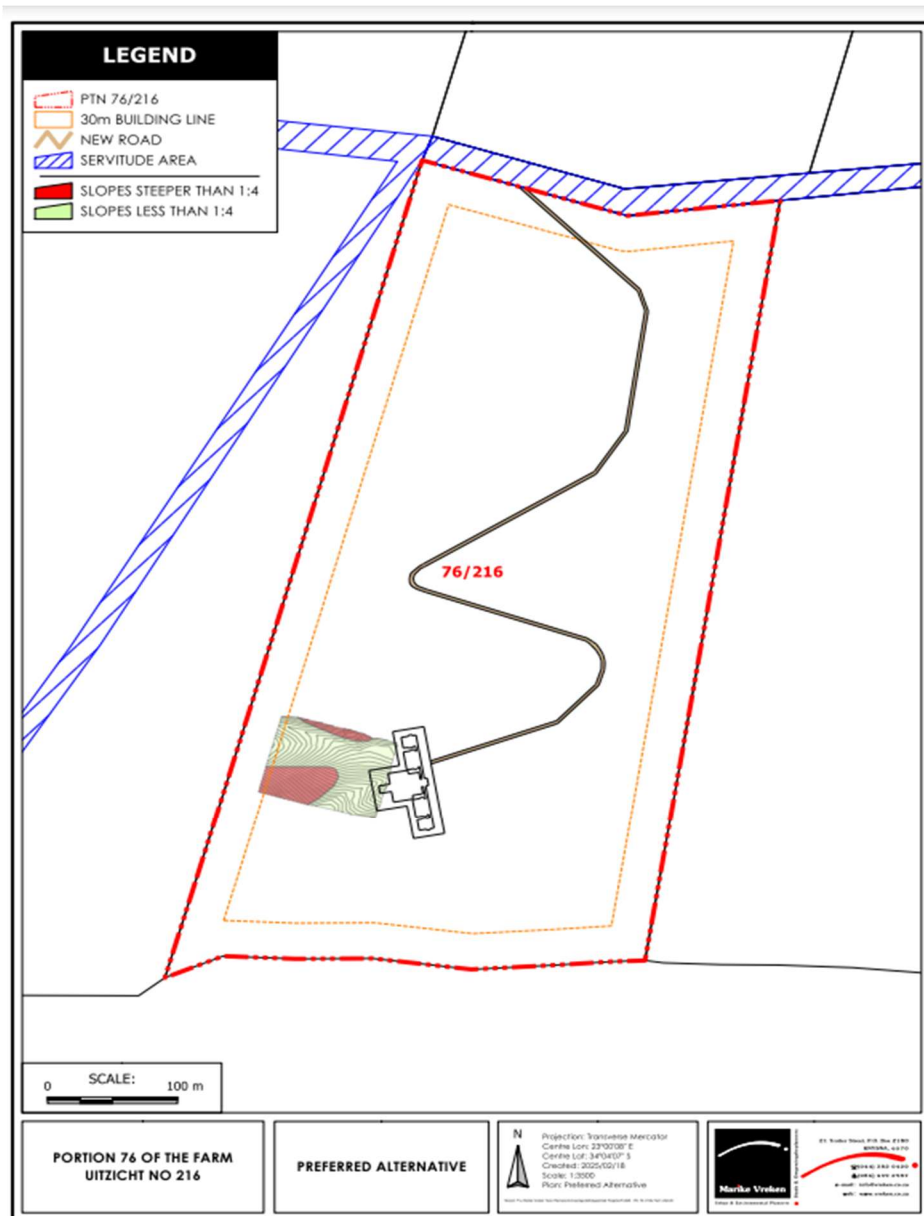
External lighting will comprise low-intensity, downward-directed bollard lighting designed to minimise light spill into the surrounding environment. Motion sensors and energy-efficient LED fittings will be utilised where practical to reduce unnecessary lighting and minimise impacts on the surrounding coastal environment.

The preferred development footprint represents the outcome of an iterative design process undertaken during the Basic Assessment. The original development proposal was substantially refined following specialist investigations, public participation and comments received from the competent and commenting authorities. The preferred layout reduces the overall development footprint to approximately **1 000 m²**, confines development to a single residential node within the south-western portion of the property, avoids direct disturbance of the primary dune system and the more sensitive northern vegetation, and minimises impacts on biodiversity, coastal processes, visual resources and landscape character while enabling the Applicant to exercise the lawful residential development rights associated with the property.

ENVIRONMENTAL IMPACT

Impact on Existing Electricity Consumers

The proposed development will operate as an off-grid residential development powered by a roof-mounted solar photovoltaic (PV) system with battery storage. As the development will not be connected to the municipal electricity network, it is not anticipated to have any impact on the capacity, reliability or quality of electricity supply to existing consumers. Accordingly, no cumulative impacts on the existing electrical distribution network are expected.



Alternative 1: Earlier Southern Development Layout (Single 3 000 m² Main Dwelling)

The proposal is to exercise the primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a single main dwelling and associated infrastructure within the south-western portion of the property.

The development proposal entails the following:

1. The construction of one (1) main dwelling house (approximately 3 000 m²) within the south-western portion of the property.
2. 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 within the south-western portion of the property and will have a total floor area of approximately 3 000 m², consisting of:

- Six (6) bedrooms;
- An open-plan living area comprising the kitchen, lounge, dining room, bar, scullery, bathrooms and wine cellar;
- Open deck areas; and
- A swimming pool.

The Internal Road

The internal road will be approximately 830 m in length. The travelled road surface will be approximately 2.5 m wide, while the temporary construction disturbance width will vary between 4 m and 5.5 m. The internal road will provide access from the existing public access servitude (Kerk Laan) to the proposed dwelling.

Alternative 2: Southern Main Dwelling with Northern Farm Manager's House (Dual Development Node)

The proposal is to exercise the primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a main dwelling, a farm manager's house and associated infrastructure.

The development proposal entails the following:

- (i) The construction of one (1) main dwelling house (approximately 4 000 m²) within the south-western portion of the property.
- (ii) The construction of one (1) farm manager's house (approximately 1 200 m²) within the north-western portion of the property.
- (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 within the south-western portion of the property and will have a total floor area of approximately 4 000 m², consisting of:

- Six (6) bedrooms;
- An open-plan living area comprising the kitchen, lounge, dining room, bar, scullery, bathrooms and wine cellar;
- Open deck areas; and
- A swimming pool.

The Farm Manager's House

The proposed farm manager's house would be located within the north-western portion of the property. The dwelling would encroach into the prescribed 30 m building line, requiring an application for a permanent departure to relax the northern and western building lines.

The proposed location was originally selected to minimise disturbance of surrounding vegetation by utilising an existing transformed area. The proposed development would comprise:

- Ground floor: approximately 600 m²

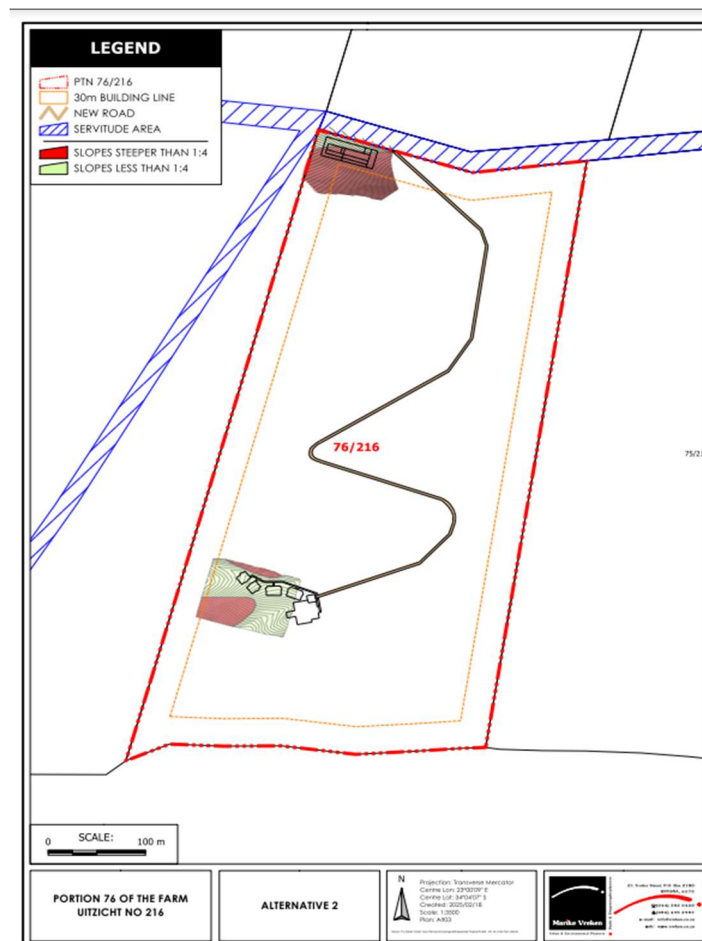
- First floor: approximately 400 m²
- Building footprint: approximately 600 m²
- Total disturbance area: approximately 1 200 m²

Notwithstanding the use of an existing transformed area, this alternative introduces a second development node within the more environmentally sensitive northern portion of the property, resulting in increased habitat fragmentation, greater infrastructure requirements and increased cumulative environmental impacts.

Specialist investigations concluded that this alternative would result in increased impacts on the Critically Endangered Knysna Sand Fynbos, ecological connectivity and the broader coastal landscape. Consequently, this alternative is not considered environmentally preferable and is not supported.

The Internal Road

The internal road would be approximately 830 m in length. The travelled road surface would be approximately 2.5 m wide, while the temporary construction disturbance width would vary between 4 m and 5.5 m. The internal road would provide access from the existing public access servitude (Kerk Laan) to the proposed development.



Alternative 3: Northern Development Layout Adjacent to Kerk Laan (Single 3 000 m² Main Dwelling)

The proposal is to exercise the primary residential land use rights associated with Portion 76 of Farm Uitzicht No. 216 through the construction of a single main dwelling and associated infrastructure within the northern portion of the property.

The development proposal entails the following:

1. The construction of one (1) main dwelling house (approximately 3 000 m²) within the northern portion of the property.
2. The construction of an internal access track providing direct access from the existing public access servitude (Kerk Laan).

The Main Dwelling House

The proposed single-storey main dwelling would have a total floor area of approximately 3 000 m², comprising:

- Six (6) bedrooms;
- An open-plan living area comprising the kitchen, lounge, dining room, bar, scullery, bathrooms and wine cellar;
- Open deck areas; and
- A swimming pool.

Internal Access

Access would be obtained directly from the existing public access servitude (Kerk Laan) by means of an internal access track connecting the proposed dwelling to the existing access route.

This alternative would place the development within the more environmentally sensitive northern portion of the property, which supports Critically Endangered Knysna Sand Fynbos vegetation. Specialist investigations concluded that this layout would result in greater impacts on sensitive vegetation, ecological connectivity and the broader coastal landscape than the preferred alternative. Consequently, Alternative 3 is not considered environmentally preferable and is not supported.

The No Go Alternative

The No-Go Alternative assumes that the proposed development would not proceed and that Portion 76 of Farm Uitzicht No. 216 would remain in its current undeveloped state. No residential dwelling, internal access road or associated infrastructure would be constructed, and the existing natural vegetation, ecological processes and landscape character would remain unchanged.

Implementation of the No-Go Alternative would avoid all direct development-related environmental impacts associated with the proposed activity. However, it would also prevent the Applicant from exercising the lawful primary residential land use rights associated with the property and would preclude the socio-economic benefits associated with the development.

The No-Go Alternative was considered as part of the Basic Assessment process and provides the baseline against which the identified development alternatives were assessed. Although it represents the environmentally least impactful option, it does not meet the Applicant's objective of establishing a single residential dwelling on the property.

CIVIL SERVICES: ROADS, STORMWATER, WATER AND SEWER

The Civil Engineering Services Report was prepared by Tuiniqua Consulting Engineers, who were appointed by the Applicant to assess the engineering services required for the proposed development. The report evaluates the feasibility of the proposed roads, water supply, wastewater management, stormwater management and associated civil infrastructure required to service the preferred development alternative.

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 comprises a single private residential dwelling. As no municipal water supply is available, the development will rely primarily on rainwater harvesting, supplemented by a borehole where required.

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

The proposed development comprises a single private residential dwelling and is considered a low-risk residential development. Fire protection measures will include on-site water storage, the swimming pool (approximately 160 kL) as the primary fire-fighting water source, and supplementary water supplied from the borehole, where available. Fire protection infrastructure and emergency access will be designed in accordance with the recommendations of the Civil Engineering Report and the applicable fire safety requirements.

Sewer Reticulation

The proposed development will utilise an engineered on-site wastewater management system (conservancy tank), as there is no municipal sewerage network available in the area. Care will be taken when positioning the conservancy tank in relation to the proposed borehole(s), and vehicle access will be provided to facilitate periodic maintenance and suction of the tank when required.

The conservancy tank will be positioned within the southern development platform, adjacent to the proposed dwelling footprint, as shown on the Preferred Layout Plan (Appendix B1). This area comprises the least dense vegetation on the property and is located on gentle, stable slopes (less than 1:4), making it the most suitable location from both an engineering and environmental perspective.

The conservancy tank will be located on the inland side of the dwelling, outside the more sensitive dune vegetation and well away from any protected Milkwood trees. Positioning the tank adjacent to the internal access road will facilitate safe maintenance access while minimising additional environmental disturbance. No

wastewater infrastructure is proposed within the High-Water Mark buffer, on steep slopes or within the northern Critically Endangered Knysna Sand Fynbos area.

Roads

An existing public road network services the area, with access obtained via the existing public access servitude (Kerk Laan). The existing dirt track within the road reserve will be upgraded where necessary to provide access to the proposed development.

Stormwater

No formal municipal stormwater system exists within the immediate vicinity of the proposed development. Stormwater generated by the development will be managed on-site in accordance with Sustainable Drainage Systems (SuDS) principles.

Internal Services

Outline Scheme

The design of the internal engineering services will follow the principles contained in the *Guidelines for Human Settlement Planning and Design*, applicable municipal engineering requirements and relevant SANS standards. Internal services will be located within common service corridors where practicable to minimise vegetation disturbance and reduce impacts on indigenous root systems.

Water Reticulation

As no municipal water supply is available, the proposed development will rely primarily on rainwater harvesting, supplemented by a borehole where required.

The development will include approximately 110 kL of rainwater storage associated with the main dwelling. Water harvested from the roof of the dwelling will be stored in on-site tanks and distributed through an internal reticulation system. Borehole water will supplement the rainwater supply where necessary.

A suitable water filtration system will be installed to ensure potable water quality. Borehole water quality will be tested before use, and rainwater harvesting infrastructure will be incorporated into the overall water management system.

Sewer Reticulation

The proposed development will utilise an engineered on-site wastewater management system (conservancy tank), as there is no municipal sewerage network available.

The conservancy tank will be located within the southern development platform adjacent to the proposed dwelling, positioned on stable ground within the least environmentally sensitive portion of the development footprint. The location has been selected to minimise environmental impacts while ensuring safe maintenance access. The conservancy tank will be located outside the High-Water Mark buffer, outside sensitive dune vegetation and away from the northern Critically Endangered Knysna Sand Fynbos vegetation.

Internal Roads

The development will have a single vehicular access from the existing public access servitude (Kerk Laan) along the northern boundary of the property. The internal access road will comprise a 2.5 m-wide reinforced concrete roadway with passing bays provided where required. The road alignment has been designed to minimise earthworks, vegetation clearance and the overall disturbance footprint.

Internal Stormwater

Stormwater runoff will not be concentrated at any single location but will be dispersed naturally over the permeable sandy soils. The internal access road and associated infrastructure will be designed in accordance with Sustainable Drainage Systems (SuDS) principles to minimise erosion and promote infiltration.

Waste Management

Waste generated during both the construction and operational phases will be managed in accordance with the principles of the waste hierarchy. General waste will be removed by a suitably authorised waste service provider and disposed of at approved waste disposal facilities. Recyclable materials will be separated where practicable, and green waste generated during construction or maintenance activities will be chipped on-site or disposed of at an appropriately authorised facility.

Details of the alternatives considered

Preferred Alternative: Main Dwelling (1 000 m²) in the South-Western Portion

The preferred alternative proposes the construction of a single main dwelling (approximately **1 000 m²**) within the south-western portion of Portion 76 of Farm Uitzicht No. 216. The development footprint has been substantially reduced from the original proposal following specialist investigations, public participation and comments received from the competent and commenting authorities.

The selected development area is located outside the highly sensitive primary dune system and within the least environmentally sensitive portion of the southern development node. The location benefits from natural topographical screening, thereby significantly reducing visual exposure from Brenton Beach, Brenton-on-Sea and surrounding viewpoints. The preferred layout also enables the development to utilise the existing access servitude (Kerk Laan), thereby limiting the extent of new infrastructure required.

Although the internal access road traverses areas of indigenous vegetation, the overall disturbance footprint has been minimised through careful route selection and engineering design. Mitigation measures include limiting the width of the construction corridor, following natural contours to reduce earthworks, implementing erosion control measures and rehabilitating disturbed areas using indigenous vegetation rescued prior to construction.

This alternative provides the most appropriate balance between environmental protection, biodiversity conservation, visual integration, engineering feasibility, regulatory compliance and the Applicant's lawful development rights. Accordingly, it represents the **Best Practicable Environmental Option (BPEO)**.

Alternative 1: Main Dwelling (3 000 m²) in the South-Western Portion

Alternative 1 proposes the construction of a single main dwelling (approximately **3 000 m²**) within the same south-western development area.

Although this alternative would utilise the same general development node and remain outside the primary dune system, the substantially larger development footprint would require greater vegetation clearance, increased earthworks and a larger construction platform. This would increase habitat loss, edge effects, visual impacts and the overall disturbance footprint within the Goukamma Dune Thicket vegetation.

The internal access road would follow the same general alignment as the preferred alternative, with mitigation measures including minimising the construction corridor, implementing erosion control measures and rehabilitating disturbed areas.

While environmentally feasible, the increased scale of development would result in greater environmental impacts than the preferred alternative. Consequently, Alternative 1 is considered less desirable from both an environmental and sustainability perspective.

Alternative 2: Main Dwelling in the South-Western Portion and Farm Manager's House in the North-Western Portion

Alternative 2 proposes the construction of a **4 000 m²** main dwelling within the south-western portion of the property together with a **1 200 m²** farm manager's house within the north-western portion.

Although the proposed farm manager's house was positioned within an existing transformed area to reduce vegetation disturbance, this alternative introduces a second development node within the more environmentally sensitive northern portion of the property. The proposed location also requires a departure application to relax the prescribed northern and western building lines.

The introduction of a second development node would increase habitat fragmentation, require additional infrastructure and services, increase cumulative disturbance and result in greater impacts on the **Critically Endangered Knysna Sand Fynbos**, ecological connectivity and the broader coastal landscape.

Based on the integrated findings of the specialist studies and the overall environmental assessment, Alternative 2 is not considered environmentally preferable and is therefore **not supported**.

Alternative 3: Main Dwelling (3 000 m²) in the Northern Portion Adjacent to Kerk Laan

Alternative 3 proposes relocating the main dwelling (approximately **3 000 m²**) and associated infrastructure to the northern portion of the property adjacent to the existing public access servitude (Kerk Laan).

This alternative would reduce the length of the internal access road; however, the proposed development would be located within the more environmentally sensitive northern portion of the property, which supports **Critically Endangered Knysna Sand Fynbos** vegetation.

Specialist investigations concluded that this alternative would result in greater impacts on sensitive vegetation, ecological connectivity and the broader coastal landscape than the preferred alternative. Although the shorter access route would reduce some engineering requirements, the increased biodiversity impacts outweigh these potential benefits.

Consequently, Alternative 3 is not considered environmentally preferable and is therefore **not supported**.

Alternative 4: No-Go Alternative

The No-Go Alternative assumes that the proposed development would not proceed and that Portion 76 of Farm Uitzicht No. 216 would remain in its current undeveloped state. No residential dwelling, internal access road or associated infrastructure would be constructed, and the existing natural vegetation, ecological processes and landscape character would remain unchanged.

Implementation of the No-Go Alternative would avoid all direct development-related environmental impacts associated with the proposed activity. However, it would also prevent the Applicant from exercising the lawful primary residential land use rights associated with the property and would preclude the socio-economic benefits associated with the development.

While the No-Go Alternative represents the environmentally least impactful option, it does not meet the purpose and need of the proposed development and is therefore not considered the preferred alternative.

Conclusion

The preferred alternative, comprising the construction of a single **1 000 m²** main dwelling within the south-western portion of Portion 76 of Farm Uitzicht No. 216, is considered the most appropriate and environmentally sustainable development option. This alternative was selected following an integrated assessment of biodiversity sensitivity, geotechnical suitability, visual impacts, engineering feasibility, access requirements, specialist recommendations and comments received from the competent and commenting authorities.

From an ecological perspective, the preferred layout avoids development within the more environmentally sensitive northern portion of the property that supports **Critically Endangered Knysna Sand Fynbos** and instead locates the development within the southern portion, where the vegetation comprises **Goukamma Dune Thicket**. Although the internal access road and associated infrastructure will result in some disturbance, the overall development footprint has been substantially reduced and the identified impacts can be effectively mitigated through the implementation of the Environmental Management Programme (EMPr).

The preferred layout also benefits from natural topographical screening, reducing visual intrusion from surrounding viewpoints and maintaining the landscape character of the Brenton area. The reduced building footprint, low-profile architectural design and use of earth-toned materials further minimise visual impacts.

Alternative 1 would result in a substantially larger **3 000 m²** development footprint, increasing vegetation clearance, visual impacts and habitat disturbance. Alternative 2 would introduce a second development node through the construction of a **4 000 m²** main dwelling together with a **1 200 m²** farm manager's house, resulting in greater habitat fragmentation, additional infrastructure requirements and increased impacts on the environmentally sensitive northern portion of the property. Alternative 3 would relocate the main dwelling to the northern portion of the property, where specialist investigations identified greater impacts on the **Critically Endangered Knysna Sand Fynbos**, ecological connectivity and the broader coastal landscape.

Accordingly, the preferred **1 000 m²** development layout represents the **Best Practicable Environmental Option (BPEO)**, providing the most appropriate balance between environmental protection, legal compliance,

engineering feasibility, visual integration and the Applicant's lawful residential development rights. This alternative is therefore recommended for environmental authorisation.

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 of the Environmental Impact Assessment Regulations, 2014 (GN R.982 of 4 December 2014), as amended, prescribes the minimum public participation requirements applicable to a Basic Assessment Process. The public participation process for the proposed development was undertaken in accordance with these requirements to ensure that all potentially Interested and Affected Parties (I&APs) and relevant authorities were afforded a reasonable opportunity to participate in the environmental assessment process.

The public participation process included notification of adjacent landowners, commenting authorities, organs of state, registered Interested and Affected Parties (I&APs), placement of site notices, publication of a newspaper advertisement, and the circulation of the Draft Basic Assessment Report for a 30-day public review period. Copies of all supporting documentation, including proof of notification, comments received and the Comments and Responses Report, are included in **Appendix G**.

Regulation with regard to conducting a Public Participation Process	Description of Compliance with 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 obtain written consent of the landowner before applying for Environmental Authorisation.	The Applicant is the registered owner of Portion 76 of Farm Uitzicht No. 216. Accordingly, no landowner consent was required.
2(a) Fixing a notice board at a place conspicuous to and accessible by the public at the site where the activity is to be undertaken and any alternative site.	A site notice was erected at a prominent and publicly accessible location on the application property. There is no alternative site. Refer to Appendix G .
2(b)(i) Giving written notice to the occupiers of the site and, where applicable, the landowner.	The Applicant is both the owner and occupier of the property. No additional notification was required.
2(b)(ii) Giving written notice to owners, occupiers and persons in control of adjacent land.	Adjacent landowners and occupiers were notified in writing. Proof of notification is included in Appendix G .
2(b)(iii) Giving written notice to the ward councillor and relevant ratepayers' associations.	The relevant Ward Councillor and applicable community and ratepayer organisations were notified. Copies of the notifications are included in Appendix G .
2(b)(iv) Giving written notice to the Municipality.	Knysna Municipality was notified and afforded an opportunity to comment. Refer to Appendix G .

2(b)(v) Giving written notice to organs of state having jurisdiction over the proposed activity.	All relevant commenting authorities and organs of state were notified in accordance with Regulation 41. Refer to Appendix G for the complete notification register.
2(b)(vi) Giving written notice to any other party required by the Competent Authority.	Relevant Interested and Affected Parties, non-governmental organisations and stakeholder groups were notified. Refer to Appendix G .
2(c) Placing an advertisement in one local newspaper or an official gazette.	A newspaper advertisement was published in a local newspaper circulating within the Knysna area. A copy of the advertisement is included in Appendix G .
2(d) Placing an advertisement in a provincial or national newspaper where impacts extend beyond the district municipality.	Not applicable. The proposed development is localised and is not anticipated to result in impacts extending beyond the Garden Route District Municipality.
2(e) Using reasonable alternative methods where participation is limited by illiteracy, disability or other disadvantage.	No requests for alternative participation methods were received during the public participation process. Appropriate measures would have been implemented should the need have arisen.
3) Content requirements for notices, advertisements and site notices.	All notices and advertisements contained the information required by Regulation 41, including the nature and location of the proposed activity, the applicable environmental assessment process, where documentation could be obtained, and the manner in which comments could be submitted. Refer to Appendix G .
4) Requirements relating to notice boards.	The site notice complied with the minimum size and information requirements prescribed by Regulation 41. Refer to Appendix G .
5) Additional public participation requirements for revised reports.	Registered Interested and Affected Parties and commenting authorities were notified of the availability of the Draft Basic Assessment Report and afforded a 30-day public review period . All comments received have been incorporated into the Final Basic Assessment Report where appropriate and are addressed in the Comments and Responses Report included in Appendix G .
6(a) Relevant information must be made available to potential Interested and Affected Parties.	The Draft Basic Assessment Report and supporting documentation were made available to all registered Interested and Affected Parties and commenting authorities for review throughout the public participation period. Copies were distributed electronically, and supporting documentation is contained in Appendix G .
6(b) Participation must provide Interested and Affected Parties with a reasonable opportunity to comment.	Interested and Affected Parties and commenting authorities were provided with a reasonable opportunity to review the Draft Basic Assessment Report and submit written comments during the prescribed review period. All comments received have been recorded and responded to in the Comments and Responses Report (Appendix G).

7) Public participation processes may be combined where another Specific Environmental Management Act requires public participation.	Not applicable. No concurrent public participation process in terms of another Specific Environmental Management Act was undertaken.
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Registration of Key Stakeholders

As this is a resubmission of a previously assessed proposal, Interested and Affected Parties (I&APs) registered during the previous public participation processes were automatically carried forward and registered for the current application. These stakeholders were afforded an opportunity to participate in the current Basic Assessment Process and to comment on the Draft Basic Assessment Report.

The proposal has previously been subject to public participation and environmental assessment processes under former DFFE reference numbers 14/12/16/3/3/1/3114 and 14/12/16/3/3/1/3185, which subsequently lapsed due to administrative timeframes. The current application constitutes a new application process, and all previously registered I&APs, together with additional stakeholders identified during the current process, were notified in accordance with Regulation 41 of the EIA Regulations, 2014 (as amended).

The complete stakeholder register is provided in Appendix G.

Authority	Role
Department of Forestry, Fisheries and the Environment (DFFE)	Competent Authority
Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)	Commenting Authority
DEA&DP: Coastal Management	Commenting Authority
Department of Water and Sanitation (DWS)	Commenting Authority
Department of Agriculture (Western Cape)	Commenting Authority
Department of Economic Development and Tourism (Western Cape)	Commenting Authority
Department of Infrastructure (Western Cape)	Commenting Authority
Department of Public Works and Infrastructure	Commenting Authority
Department of Health (Western Cape)	Commenting Authority

Authority / Organisation	Role
CapeNature	Biodiversity Authority
Heritage Western Cape (HWC)	Heritage Authority
SANParks	Protected Area Management Authority

Knysna Municipality	Local Authority
Knysna Municipality – Environmental Management	Commenting Authority
Knysna Municipality – Town Planning	Commenting Authority
Ward Councillor	Local Government Representative
Brenton Ratepayers Association	Interested and Affected Party
Knysna Ratepayers Association	Interested and Affected Party
Western Head–Goukamma Conservancy	Interested and Affected Party
Adjacent Landowners	Interested and Affected Parties
Registered Interested and Affected Parties (I&APs)	Interested and Affected Parties

Stakeholder Group	Description
Adjacent Landowners	Owners of properties adjoining Portion 76 of Farm Uitzicht No. 216.
Registered Interested and Affected Parties	Persons and organisations registered during previous and current public participation processes.
Environmental Organisations	Relevant environmental organisations and conservancies identified during the public participation process.
Community Organisations	Relevant community organisations and ratepayer associations identified during the public participation process.

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 (BAR) was made available as part of the previous public participation processes and was accessible on the Eco Route Environmental Consultancy website for review by registered Interested and Affected Parties (I&APs) and commenting authorities.

As the previous application lapsed due to administrative timeframes, the current submission constitutes a new Basic Assessment application. Accordingly, a new public participation process was undertaken in accordance with Regulation 41 of the Environmental Impact Assessment Regulations, 2014 (as amended). The current Draft Basic Assessment Report was made available to all registered I&APs and commenting authorities for the prescribed 30-day public review period, and all comments received have been considered in the preparation of this Final Basic Assessment Report.

Comments and Response Report

A summary of the issues raised by Interested and Affected Parties (I&APs), commenting authorities and organs of state, together with the manner in which these issues were considered and addressed, is provided below.

Historical comments and responses received during the previous public participation processes have been retained as part of the decision-making record and process trail. In addition, comments received during the current public participation process have been considered and, where appropriate, incorporated into the Final Basic Assessment Report, Environmental Management Programme (EMPr), specialist studies and supporting documentation.

The complete Comments and Responses Report, together with copies of all correspondence received during the public participation process, is included in Appendix G.

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 strongly opposed, and the off-grid solar option is preferred.	Section D – A description of the activities to be undertaken including associated structures and infrastructure.
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 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 m²),	Section D – A description of the activities to be undertaken including associated structures and infrastructure.

- (ii) a farm manager's house in the northwestern corner (600 m²),
- (iii) a new internal road for access to the southern portion of the property.

The total development area is approximately 8,765 m². 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.

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

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.

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Section H - The impacts and risks identified for each alternative.

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.	
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 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	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. Appendix B – Town Planning Report Appendix F - Vegetation Sensitivity Analysis

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.	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 <i>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 similar businesses. These claims are false and cause confusion. Is this a 'cut and paste' error or something more concerning?</i> The draft BAR presents a major concern on page 4: <i>"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)."</i> 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. Section D – A description of the activities to be undertaken including associated structures and infrastructure. Section D – A description of the activities to be undertaken including associated structures and infrastructure. Appendix B – Town Planning Report

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)?"*

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.

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.

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.

5. Using MV supply on overhead cables on Kerk Street should be outright rejected.

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,

Appendix F - Vegetation Sensitivity Analysis

Section D – A description of the activities to be undertaken including associated structures and infrastructure.

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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

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, <i>Brunsvigia</i>, and <i>Haemanthus</i> 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. 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: 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	Appendix B – Town Planning Report Appendix B – Town Planning Report Appendix F – Vegetation Sensitivity Analysis 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).

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.

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.

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.
- 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

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.

Appendix F – Vegetation Sensitivity Analysis

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.

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 $\leq 60\text{m}^2$. 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.

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.

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.

Section H - The impacts and risks identified for each alternative.

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.

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.

Commenting Authority / I&AP	Summary of Key Issues Raised	How the Issue was Addressed in the Final BAR
SANParks (2020, 2021 and subsequent correspondence)	SANParks objected to the original proposal on the basis that Portion 76 forms part of the Garden Route National Park expansion footprint, Knysna Sand Fynbos Coastal Corridor and a Critical Biodiversity Area. SANParks considered the original proposal to result in unnecessary fragmentation of the landscape, loss of biodiversity and adverse impacts on ecological connectivity. SANParks supported consolidating development closer to Kerk Laan and objected to the proposed access road through the dune corridor. Additional concerns related to biodiversity stewardship, rezoning of the remaining property for conservation purposes, fire management, swimming pool backwash, beach access, boreholes and visual impacts.	The original proposal has been substantially amended since the first Draft BAR. The proposed farm manager's dwelling has been removed entirely. The preferred dwelling footprint has been reduced from approximately 3 000 m² to approximately 1 000 m² , substantially reducing the overall disturbance footprint. Numerous additional specialist studies have since been completed, including terrestrial biodiversity, terrestrial fauna, botanical, geotechnical, visual and heritage investigations. The Final BAR includes a detailed alternatives assessment evaluating the northern and southern development options, together with updated mitigation measures, revised engineering information, an Alien Invasive Plant Management Plan, Rehabilitation Plan and updated EMPr. While SANParks' preference remains development adjacent to Kerk Laan, the applicant's preferred alternative remains the reduced south-western layout following consideration of all specialist findings and engineering constraints. SANParks' comments have therefore been fully considered and incorporated into the environmental assessment and decision-making process, although the applicant has elected not to adopt SANParks' preferred layout.
Western Heads-Goukamma Conservancy	The Conservancy objected to the proposal due to the Critical Biodiversity Area status, Critically Endangered Knysna Sand Fynbos, ecological corridors, visual impacts, dune instability, road construction, swimming pool backwash, groundwater contamination, boreholes, access road impacts, tourism impacts, precedent-setting, rare species and biodiversity legislation. They also questioned the original dwelling size, proposed manager's house and the adequacy of the biodiversity assessment.	The Final BAR has undergone extensive revision since these comments were received. The farm manager's dwelling has been removed entirely, the main dwelling has been reduced to approximately 1 000 m ² , the overall disturbance footprint has been significantly reduced, additional terrestrial biodiversity, botanical and fauna assessments have been completed, engineering designs refined, and specialist mitigation incorporated into the EMPr. The Final BAR now reflects the latest biodiversity information, revised layout plans, updated engineering proposals and strengthened mitigation measures. The

		comments materially influenced the evolution of the preferred alternative.
DFFE Directorate: Biodiversity Conservation	DFFE advised that the site has Very High biodiversity sensitivity and requested consultation with SANParks and CapeNature, consultation with DFFE Protected Areas Planning, completion of specialist biodiversity studies, preparation of an Alien Invasive Plant Management Plan and Rehabilitation Plan, compliance with the Environmental Theme Protocols and prevention of fragmentation of CBA areas.	These recommendations have been incorporated. Additional specialist assessments were completed, SANParks and CapeNature were consulted, the Alien Invasive Plant Management Plan and Rehabilitation Plan form part of the EMPr, the BAR complies with the Environmental Theme Protocols and the revised preferred layout substantially reduces the overall environmental footprint compared to the original proposal.
CapeNature	CapeNature raised concerns regarding biodiversity sensitivity, Critical Biodiversity Areas, protected vegetation and ecological management.	The biodiversity specialist studies, preferred layout and EMPr were amended to reflect CapeNature's recommendations. CapeNature's comments have been incorporated into the Final BAR.
Forestry (DFFE)	Forestry requested updated botanical investigations following the fires, mapping of protected trees and forest patches and consideration of protected indigenous vegetation under the National Forests Act.	Updated botanical investigations have been completed. Protected vegetation and indigenous forest patches have been mapped and considered in the Final BAR. Compliance with the National Forests Act will be required should protected trees be affected.
Transport and Public Works	Requested upgrading of the northern road reserve intersection with DR1600 where required and compliance with the relevant road authority requirements.	The requirement has been acknowledged and will be implemented during detailed design in consultation with the relevant authority.
Adjacent landowners and registered I&APs	Concerns related to visual impacts, access road construction, road upgrades, security, overhead electricity lines, swimming pool backwash, boreholes, beach access, conservancy tanks, precedent, traffic and protection of the coastal landscape.	The Final BAR includes revised engineering designs, confirmation of an off-grid solar system, updated road design, revised services layout, strengthened mitigation measures and confirmation that the proposal comprises a single private dwelling only. These comments contributed to the refinement of the preferred alternative and environmental management measures.

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

2. Site Description and Environmental Attributes

Geographical and Physical Aspects

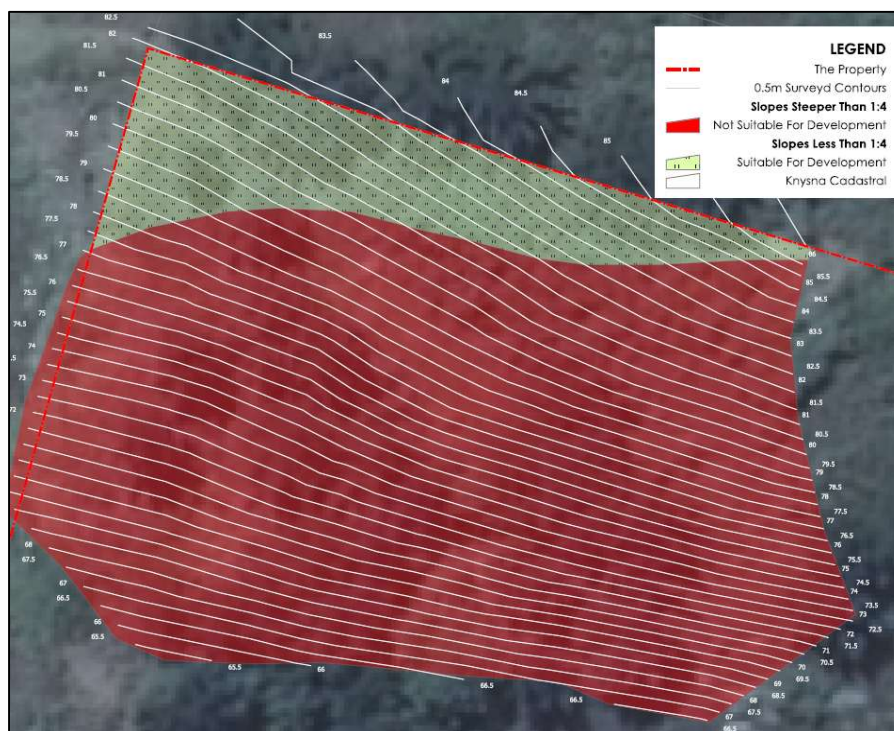
Topography

A topographical survey undertaken by Eden Geomatics (November 2016) identified two potential development areas on Portion 76 of Farm Uitzicht No. 216, located within the northwestern and southwestern portions of the property. These areas formed the basis of the alternatives assessment undertaken during the environmental impact assessment process.

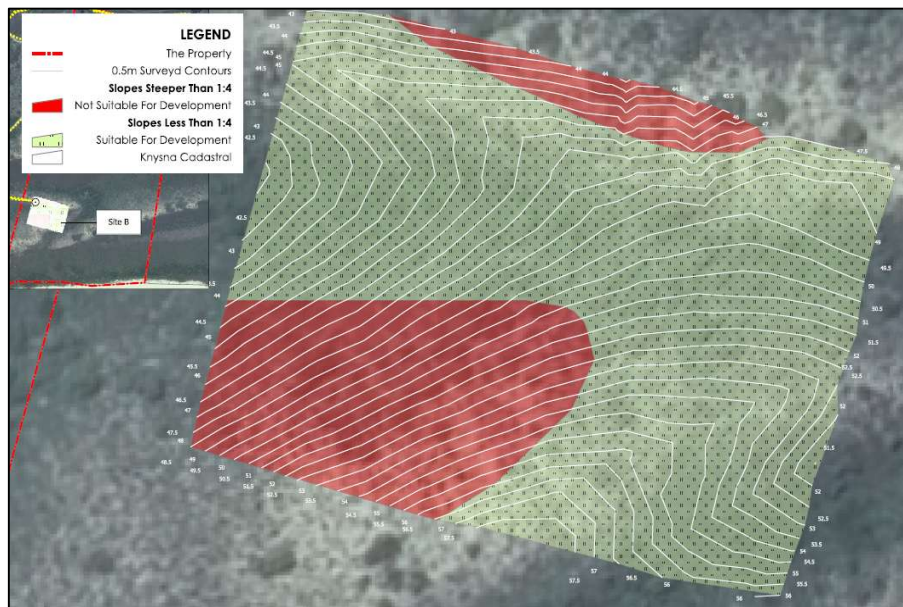
The property is characterised by undulating coastal topography comprising prominent ridgelines, densely vegetated valleys and moderately to steeply sloping terrain. Elevations across the property range from approximately 40 m to 60 m above mean sea level (MSL), with the southern dune system containing localised slopes of up to 55%.

Following detailed specialist investigations, including the botanical, terrestrial fauna, geotechnical, visual and heritage assessments, the southwestern development area was identified as the preferred development location. This area comprises comparatively gentler slopes, is more suitable from an engineering perspective, and enables the proposed development to be accommodated while minimising environmental impacts.

The preferred development comprises a single main dwelling (approximately 1 000 m²) together with an internal access road and associated services. The development footprint has been substantially reduced from the original proposal, while the remainder of the property will remain in its natural state.



Site: A Layout



Site: B Layout

Please refer to the Locality map below:

Locality Map



Locality

Legend

Location Information

Lat: -34.067589 | Lon: 23.004063

Name: _____
Exam No: _____

Farm Nr: 76/216
Area (Ha): 31.01

Area (Ha):
SG Code:

SG Code: C03900000000021600076
SG Region: KNYRNA

SG Region:	KNYSNA
Legal Status:	Registered

Legal Status: Registered

Property Boundary Marked in Red

Scale: 1:36 112

Date created: August 10, 2020

Compiled with CapeFarmMapper



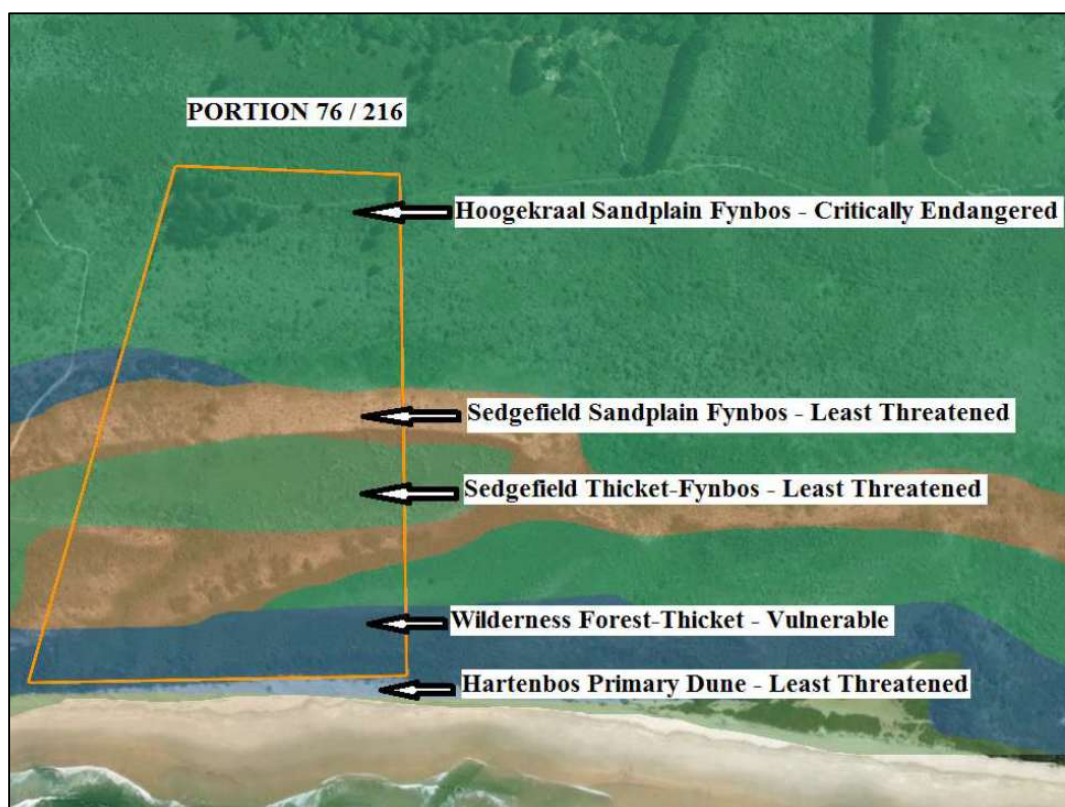
**Western Cape
Government**

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

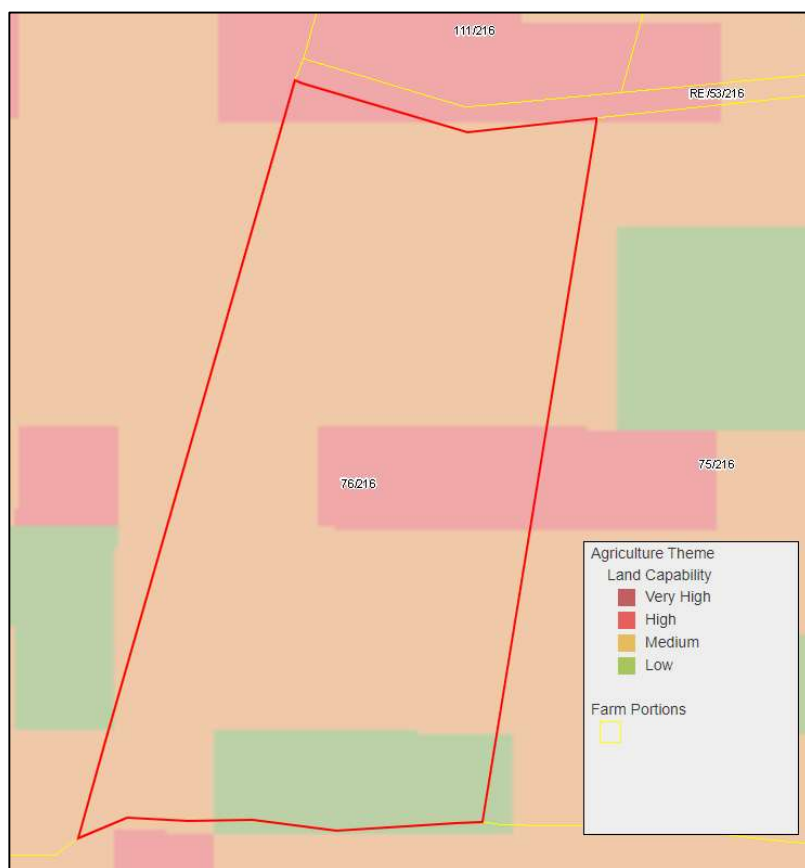
According to the Critical Biodiversity Areas of the 'Garden Route Conservation Planning Report 2010 (Holness et al) (GRI)' the following vegetation types occur on the property.

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.

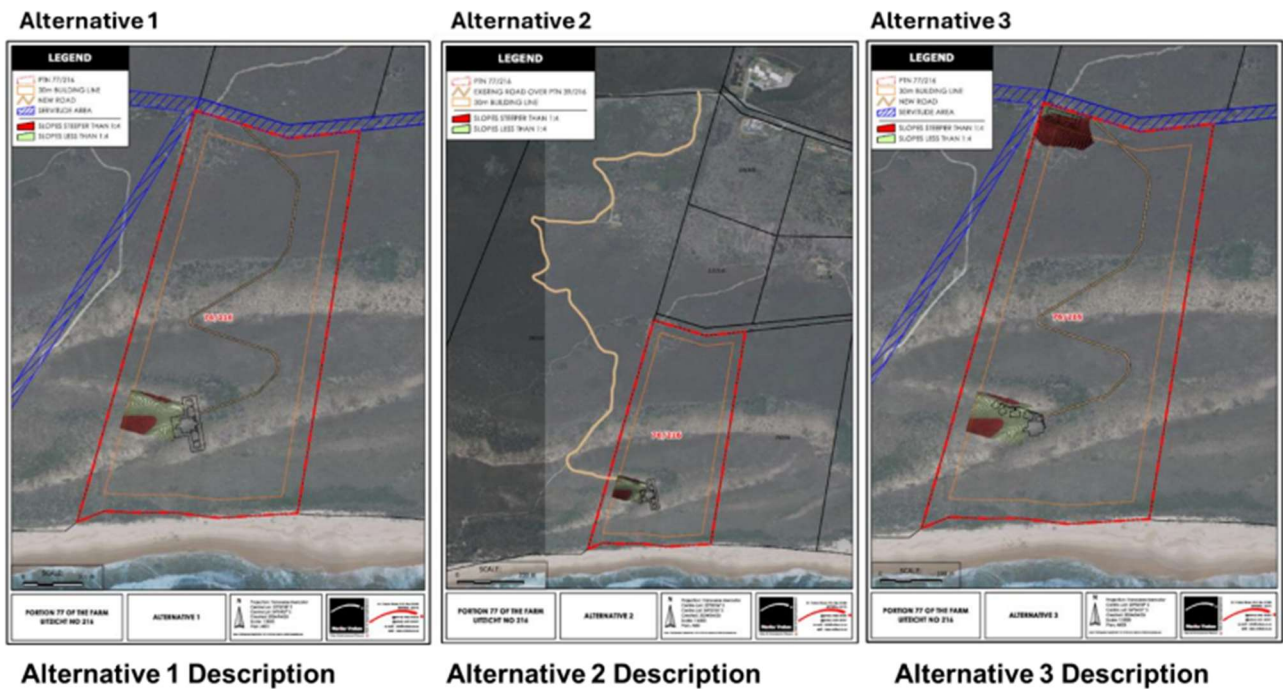
In July 2024, Confluent Environmental submitted an updated Site Sensitivity Verification Report (SSVR) assessing the botanical and terrestrial sensitivity of Farm 76/216, known as Uitzicht, located west of Brenton on Sea.

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.

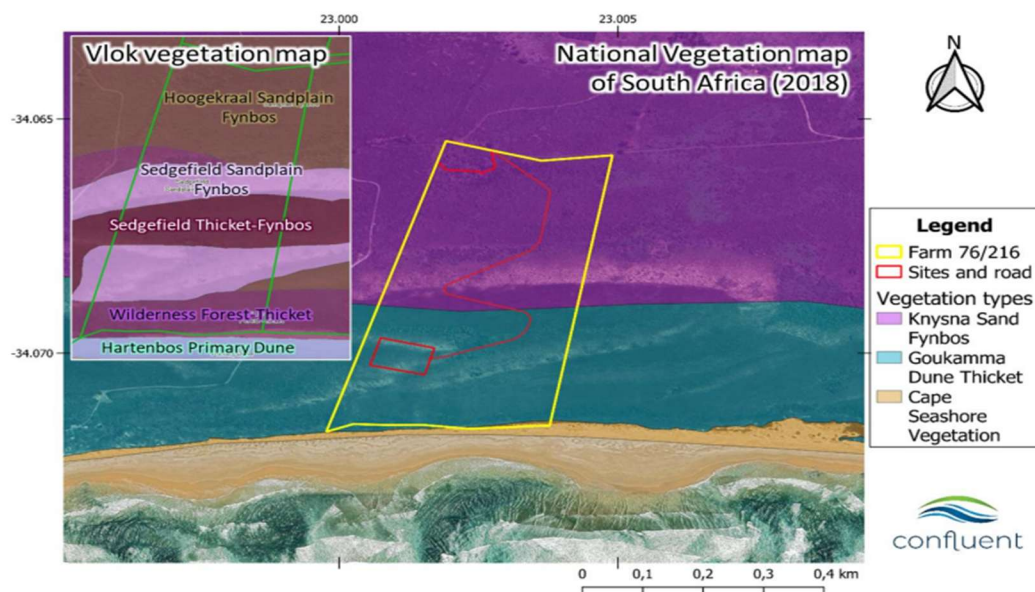
The Site Development Plans (SDP) present three alternatives. The primary proposal involves constructing a main dwelling in the southern section over the dunes, while option three includes a secondary dwelling in the northwest. Option one proposes a new road connecting the two dwellings, whereas option 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				
		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

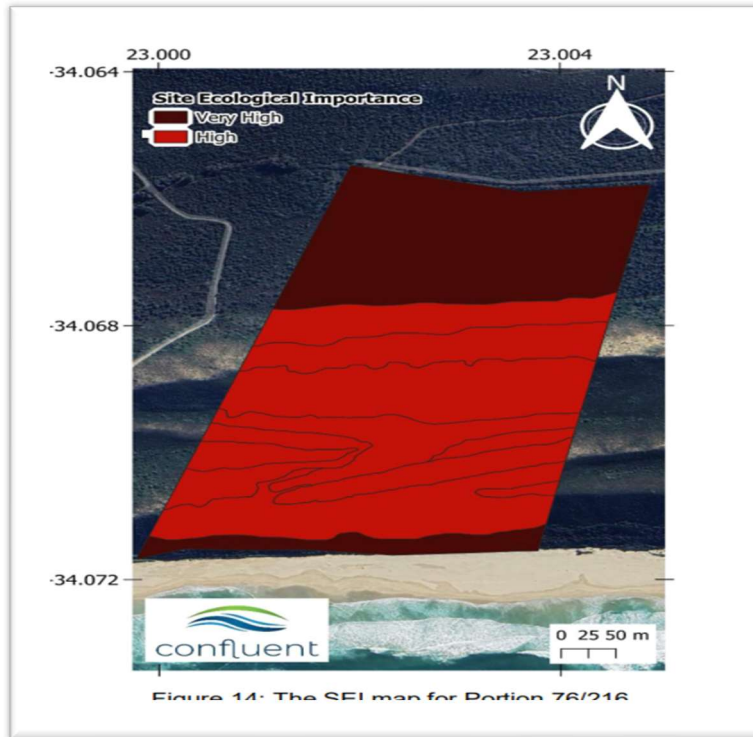
THE MATRIX THAT DEFINES THE BIODIVERSITY IMPORTANCE (BI) OF A GIVEN HABITAT TYPE, AS IDENTIFIED FROM A DESKTOP AND FIELD ASSESSMENT.

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.

		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



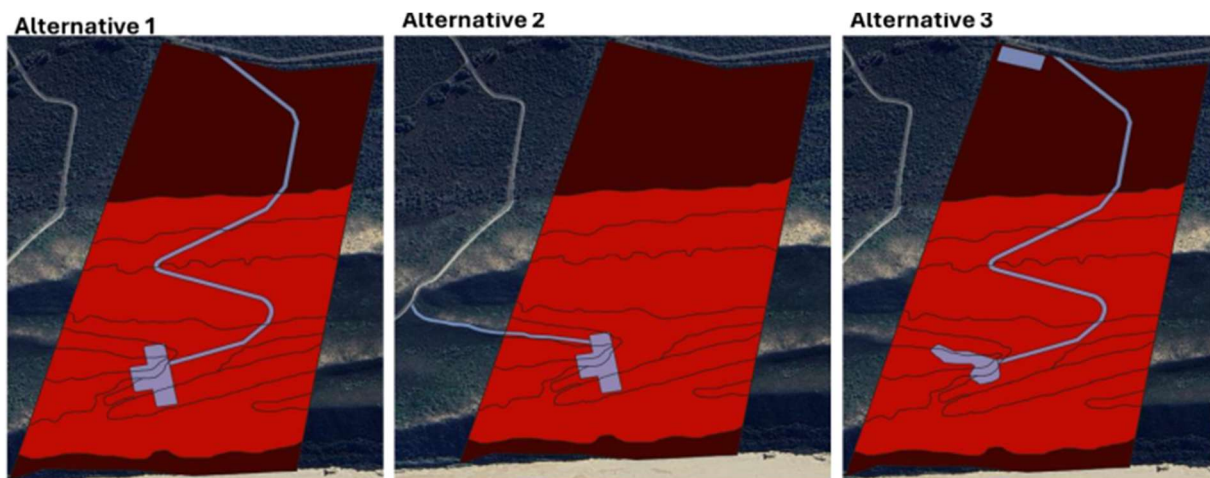
THE SEI MAP FOR PORTION 76/216

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 is causing fire suppression in an ecosystem that needs fire. The fynbos requires a burn by 2030, but controlled burns are unlikely without environmental authorisation.

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**.

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:

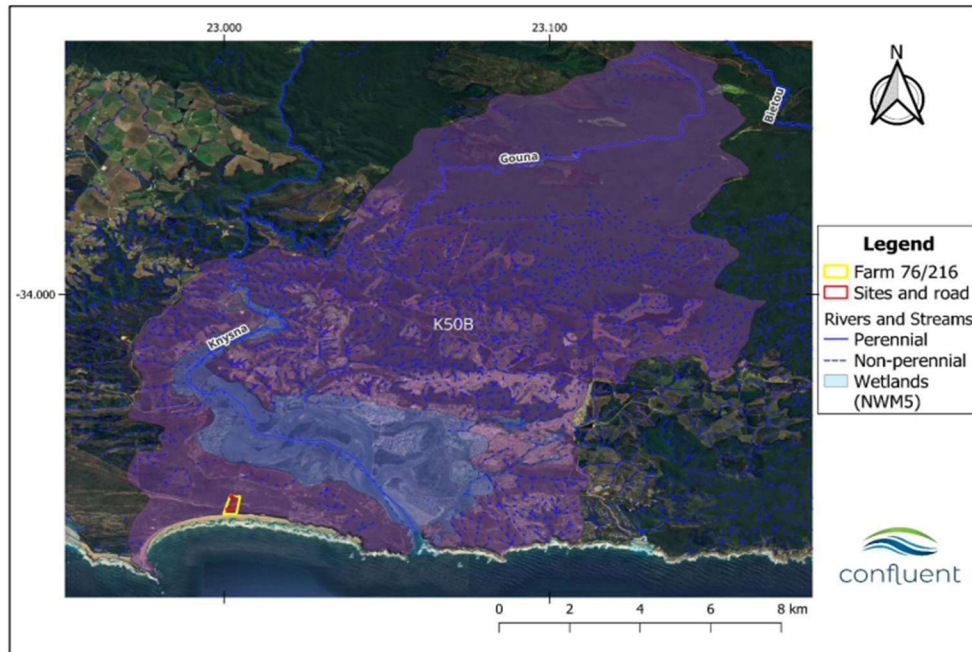
- Habitat required as part of the CBA network.
- A critical and important supporting area for maintaining corridors, linkages and ecological processes.
- A critical and important supporting area for maintaining hydrological processes.
- Areas with potential occurrence of threatened species or habitat 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.

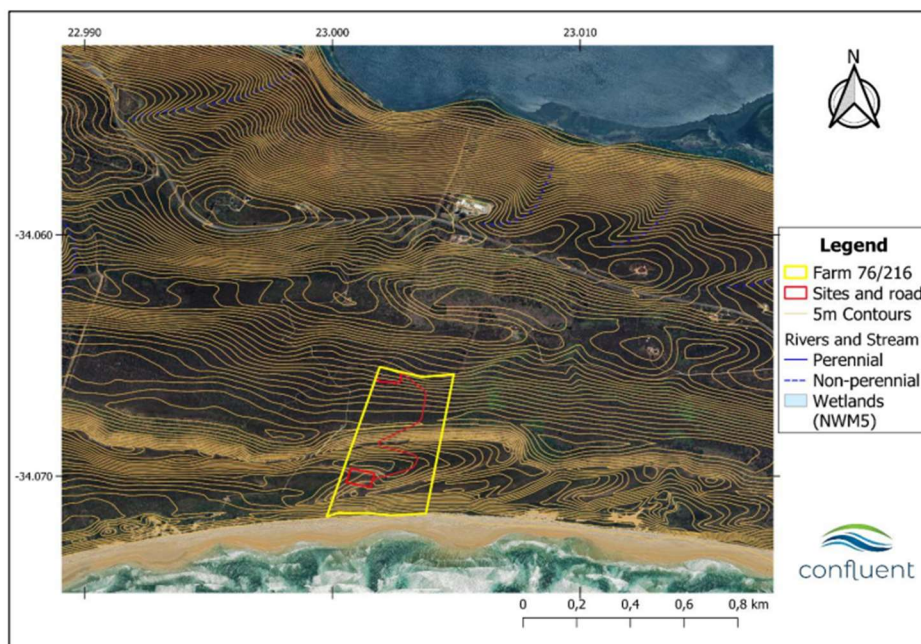
Aquatic

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.



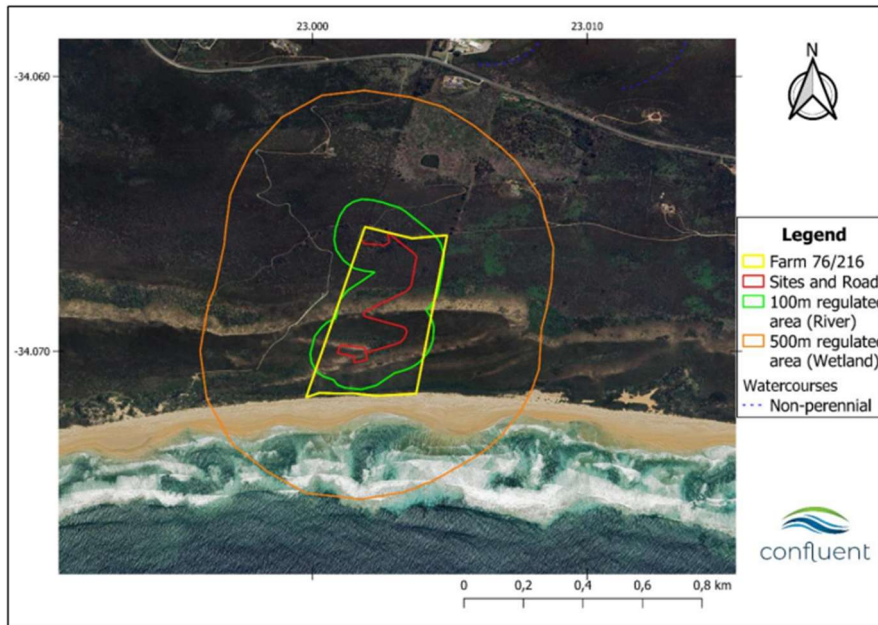
LOCATION OF FARM 76/216 IN THE QUATERNARY CATCHMENTS K50B.



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 characterised 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.

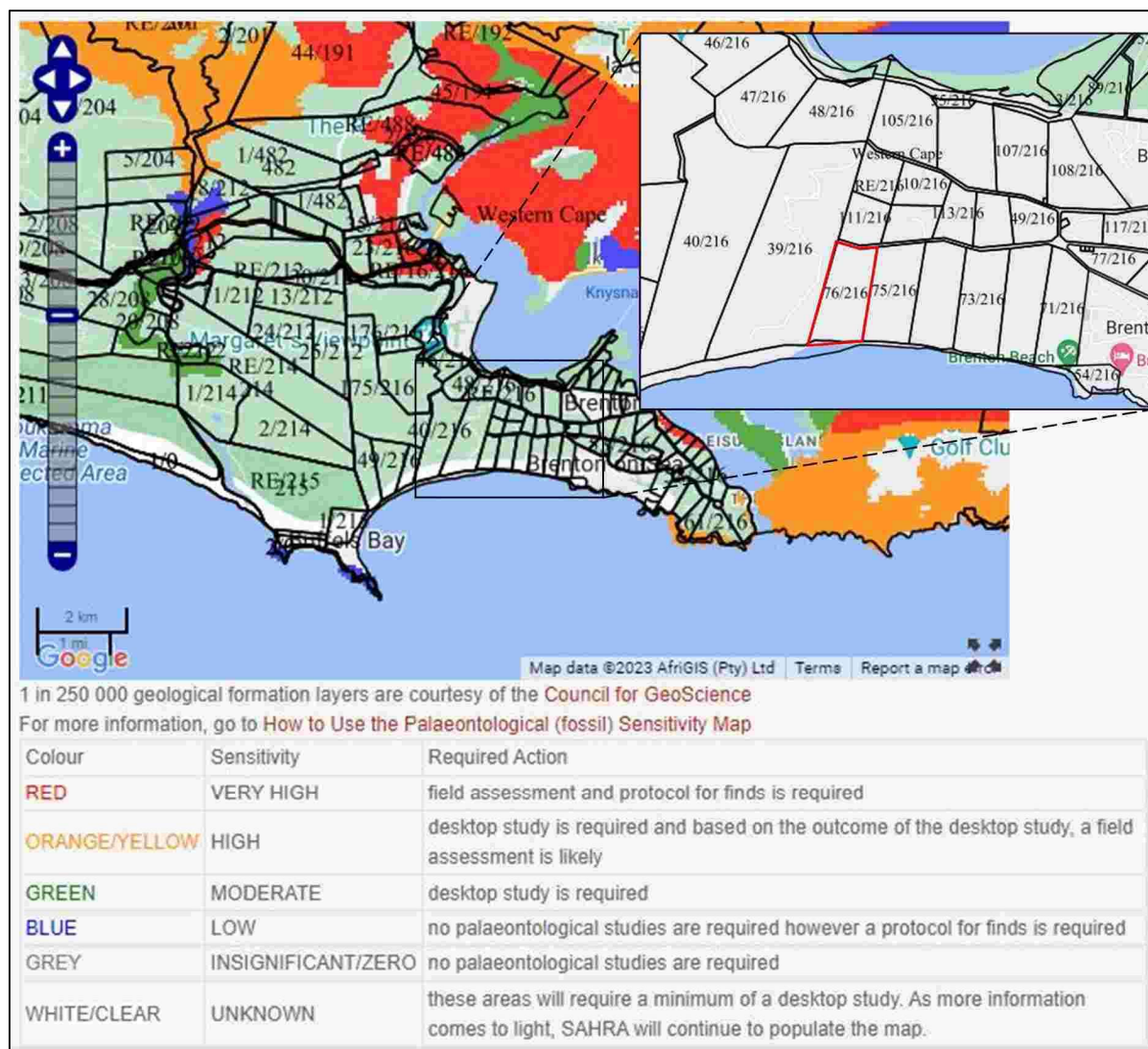


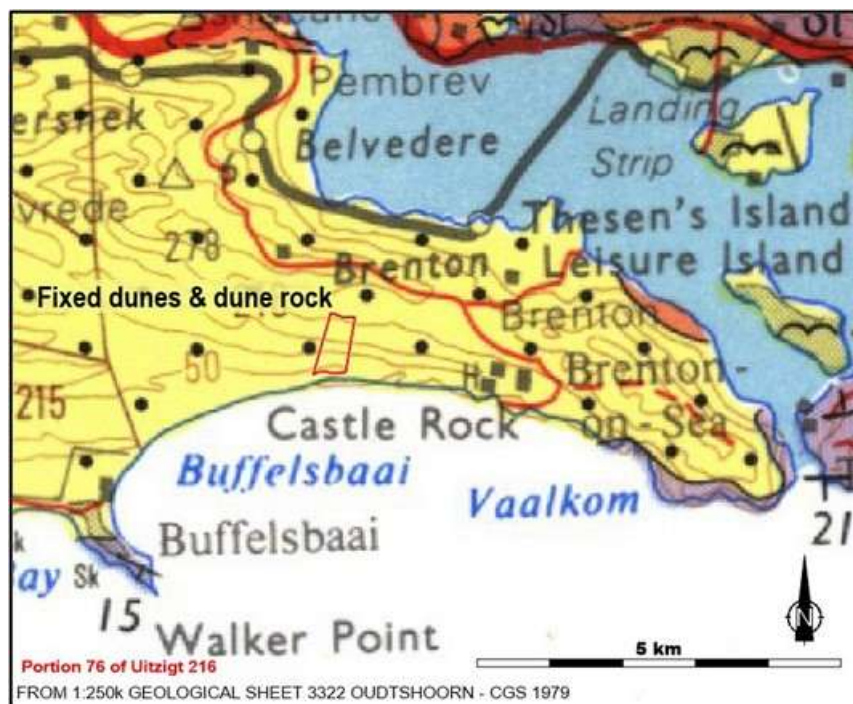
FIGURE 20. SAHRIS PALAEOSENSITIVITY MAP SHOWS THAT THE STUDY AREA (RED POLYGON IN INSET) IS WHITE/CLEAR/UNSHADED ([HTTP://WWW.SAHRA.ORG.ZA/](http://www.sahra.org.za/)).

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 includes 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.



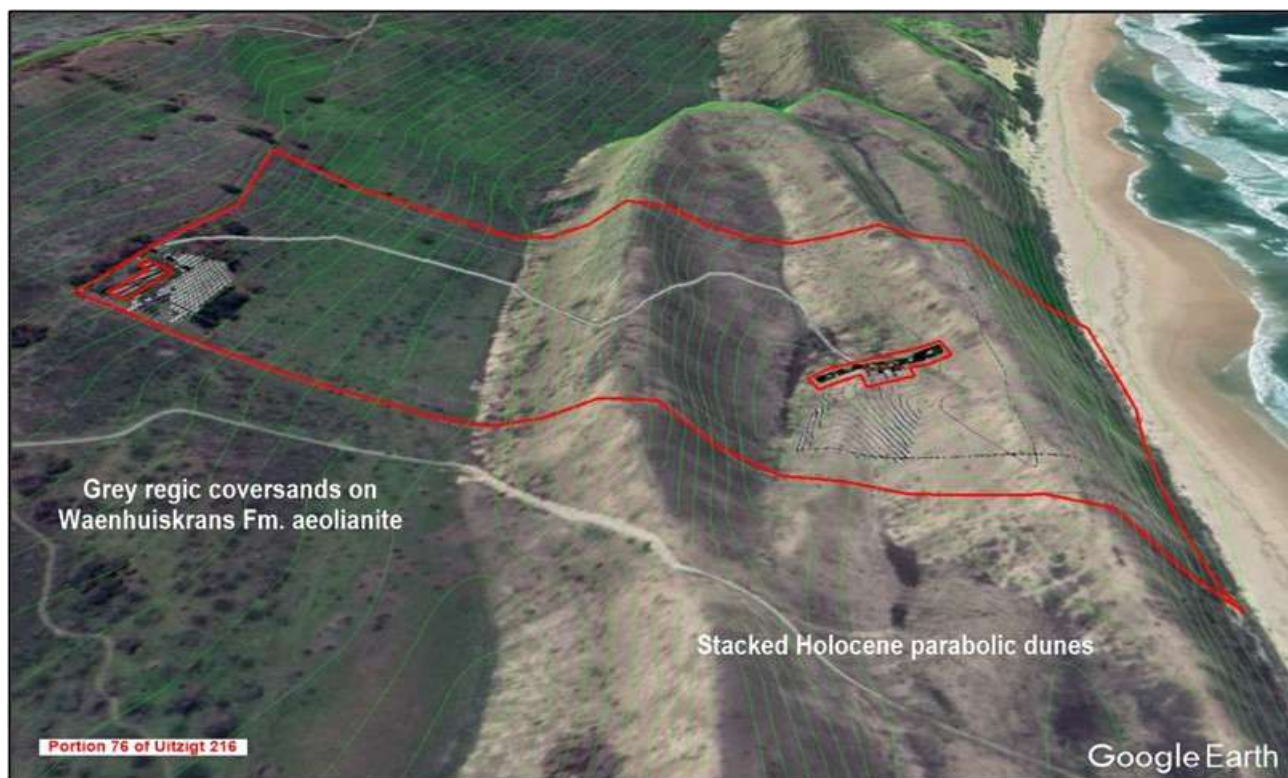
SURFACE GEOLOGY OF THE BRENTON AREA AND LOCATION OF PORTION 76 OF UITZICHT 216.



THE LANDSCAPE SETTING OF PORTION 76 OF UITZICHT 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

Question	Revised Response
What is the expected capital value of the activity on completion?	Approximately R8 000 000.00 <i>(confirm with the Applicant if available)</i>
What is the expected yearly income that will be generated by or as a result of the activity?	None. The proposed development is for a private residential dwelling and is not intended to generate commercial income.
Will the activity contribute to service infrastructure?	No. The development will be self-sufficient, utilising an off-grid solar power system, rainwater harvesting, supplementary borehole supply (where authorised), and on-site wastewater management.
Is the activity a public amenity?	No.
How many new employment opportunities will be created during the development and construction phase of the activity?	Approximately 15–20 temporary employment opportunities.
What is the expected value of the employment opportunities during the development and construction phase?	Approximately R150 000–R250 000. <i>(confirm with the Applicant if required)</i>
What percentage of this will accrue to previously disadvantaged individuals?	100% (where practicable).
How many permanent new employment opportunities will be created during the operational phase of the activity?	None. <i>(or 1–2 if the owner intends to permanently employ domestic or maintenance staff—confirm with the Applicant.)</i>

What is the expected current value of the employment opportunities during the first 10 years?	Not applicable, or approximately R1 200 000–R1 800 000 if permanent employment is created.
What percentage of this will accrue to previously disadvantaged individuals?	100% (where applicable).

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 or future development rights set a precedent in an area. The process of cumulative impacts may arise from any of the following four events:

- A single larger event
- Multiple interrelated events
- Sudden or catastrophic events
- Incremental change

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: Refined Southern Development Layout (Single 1 000 m² Main Dwelling)

The preferred development comprises the exercise of the primary residential land use rights on Portion 76 of Farm Uitzicht No. 216 through the construction of a single main dwelling (approximately 1 000 m²) within the

south-western portion of the property, together with an internal access road and associated services infrastructure.

Main Dwelling

The primary dwelling will be situated within the south-western portion of the property and will comprise:

- Bedrooms;
- Open-plan living area incorporating a kitchen, lounge, dining room, bar, scullery, bathrooms and wine cellar;
- Covered verandas, outdoor entertainment areas and a swimming pool.

The development footprint has been substantially reduced from the original proposal in order to minimise environmental impacts and reduce disturbance within this environmentally sensitive coastal property.

Internal Access Road

Access to the dwelling will be provided via the existing public servitude (Kerk Laan) and a new internal access road approximately 830 m in length.

The travelled road surface will be approximately 2.5 m wide, while the temporary construction disturbance corridor will vary between 4 m and 5.5 m, depending on local topography and engineering requirements. The road alignment has been selected to follow natural contours as far as practicable to minimise earthworks, vegetation clearance and erosion.

Potential Environmental Impacts

The principal environmental impacts associated with the preferred alternative include:

- Loss and disturbance of indigenous vegetation within the authorised development footprint;
- Localised impacts on the Critical Biodiversity Area (CBA) and ecological processes;
- Potential impacts on the Knysna Sand Fynbos Coastal Corridor associated with the internal access road;
- Habitat disturbance and fragmentation during construction;
- Soil disturbance, erosion and stormwater runoff associated with earthworks and road construction;
- Localised visual impacts associated with the dwelling and associated infrastructure;
- Temporary construction-related impacts, including dust, noise, waste generation and increased traffic;
- Potential contamination of soil and groundwater associated with fuels, oils, cement and wastewater if not appropriately managed;
- Potential impacts on surface water quality through uncontrolled stormwater runoff;
- Potential impacts on heritage resources should previously unidentified archaeological or palaeontological material be encountered during excavation;
- Temporary socio-economic impacts associated with construction activities and positive employment opportunities during the construction phase.

The specialist investigations concluded that these impacts can be reduced to acceptable levels through implementation of the recommended mitigation measures contained in the specialist reports and the Environmental Management Programme (EMPr). The preferred alternative, incorporating the reduced 1 000 m² dwelling footprint and associated mitigation measures, is considered to represent the Best Practicable Environmental Option (BPEO) for the proposed development.

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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and air quality.
Nature of impact:	Construction of the proposed 1 000 m ² main dwelling, associated internal access road and supporting infrastructure will result in localised soil disturbance and compaction within the authorised development footprint. Groundwater may be affected should fuels, oils or other hazardous substances associated with construction equipment be spilled and allowed to infiltrate the soil. Soils: Potential impacts include soil compaction, localised erosion, loss of topsoil and contamination from cement, fuels, oils or other hazardous materials if not appropriately managed. Mixing cement directly on the ground could contaminate soils. Any contaminated soil will require remediation or disposal at an appropriately licensed facility. Surface Water and Groundwater: Poor management of construction materials, fuels and stormwater may result in contamination of surface water runoff and groundwater. The highly permeable sandy soils require strict pollution prevention measures during construction. Air Quality: Temporary dust generation is expected during vegetation clearing, excavation, earthworks and construction of the dwelling and internal access road. Vehicle emissions and exhaust fumes from construction equipment will be temporary, localised and of low significance. Although these impacts are unavoidable during construction, the reduced development footprint significantly limits the extent of disturbance compared with the previously proposed larger development alternatives.
Extent and duration of impact:	Localised and temporary during the construction phase, limited primarily to the authorised development footprint and immediately adjacent areas.
Probability of occurrence:	Probable.
Degree to which the impact can be mitigated:	High. The impacts can be effectively mitigated through implementation of the recommendations contained in the specialist studies and the EMPr.
Degree to which the impact may cause irreplaceable loss of resources:	Low to partial irreplaceable loss.
Cumulative impact prior to mitigation:	Without mitigation, cumulative impacts may include localised soil erosion, sedimentation, contamination of stormwater

	runoff, groundwater and soils, together with temporary dust nuisance and degradation of disturbed areas.
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 completely avoided, as earthworks are required for construction of the dwelling and internal access road. However, the extent, duration and intensity of the impacts can be substantially reduced through implementation of appropriate mitigation measures.
Proposed mitigation:	Geotechnical recommendations: The internal access road shall follow the natural contours of the site as far as practicable to minimise earthworks. Deep excavations and box cuts shall be appropriately stabilised and retained where required. Suitable imported subgrade material shall be used where necessary in accordance with the geotechnical recommendations. Existing natural drainage patterns shall be maintained as far as practicable. Rainwater harvesting tanks shall be installed to reduce stormwater runoff. Stockpiles shall be located away from drainage lines and protected against wind erosion. Dust suppression measures shall be implemented during dry and windy conditions. Construction vehicles transporting loose material shall be covered. Construction vehicles and machinery shall be regularly maintained to minimise exhaust emissions. Vegetation clearance shall be limited strictly to the approved and demarcated development footprint. Appropriate erosion control measures shall be implemented throughout construction. Topsoil shall be stripped, stockpiled separately and protected for rehabilitation. Disturbed areas shall be rehabilitated progressively as construction is completed. An Environmental Control Officer (ECO) shall monitor compliance with the EMPr throughout construction. Construction activities: Fuel, oil, cement and other hazardous materials shall be stored within bunded areas on impermeable surfaces. Only the minimum quantity of fuel required for daily operations shall be stored on site. Construction equipment shall not be serviced on site unless emergency repairs are unavoidable. Drip trays and spill kits shall be available at all times. Contaminated soil and absorbent materials shall be removed to an appropriately licensed hazardous waste facility. Cement mixing shall not occur directly on exposed ground. Dust suppression shall be undertaken where required using water or other approved methods. All construction activities shall remain within the approved development footprint. Suitable ablution facilities shall be provided and serviced regularly. Search-and-rescue

	plants shall be maintained in the on-site nursery and utilised during rehabilitation in accordance with the Botanical Specialist's recommendations.
Alternative comparison:	The Preferred Alternative, comprising a single 1 000 m ² main dwelling in the south-western portion of the property, represents the most environmentally acceptable option. The reduced development footprint substantially decreases soil disturbance, stormwater runoff, vegetation clearance, construction material requirements and potential groundwater contamination compared with the larger development alternatives. Alternative 1 would result in a larger disturbance footprint and greater cumulative environmental impacts. Alternative 2 would introduce a second development node within the environmentally sensitive northern portion of the property, increasing habitat fragmentation and ecological disturbance. Alternative 3 is not preferred as it would directly affect Critically Endangered Knysna Sand Fynbos. The No-Go Alternative would avoid these impacts but would prevent the lawful exercise of the applicant's residential development rights.
Cumulative impact post mitigation:	Following implementation of the recommended mitigation measures, cumulative impacts on soils, groundwater, stormwater runoff and air quality are expected to be localised, temporary and of low significance. Progressive rehabilitation and strict environmental management will further reduce residual impacts.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impact on biological aspects:	Habitat and biodiversity loss.
Nature of impact:	Construction of the proposed 1 000 m ² main dwelling, internal access road and associated infrastructure will result in the permanent loss of indigenous vegetation within the authorised development footprint. The preferred development area is located within the southern portion of the property, which comprises Goukamma Dune Thicket (Least Threatened). Although the entire property is mapped as a Critical Biodiversity Area (CBA), the preferred layout has been selected to minimise impacts on sensitive habitats and ecological processes. The reduced development footprint significantly decreases vegetation clearance, habitat disturbance and fragmentation compared to the previously proposed larger

	development alternatives. Localised habitat loss and disturbance to fauna during construction remain unavoidable.
Extent and duration of impact:	Localised and permanent within the authorised development footprint. Construction-related disturbance will be temporary.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	Low to Medium. While cleared vegetation cannot be fully restored in the short term, disturbed areas outside the permanent footprint can be rehabilitated using indigenous species.
Degree to which the impact may cause irreplaceable loss of resources:	Low. The preferred layout avoids the more sensitive northern portion of the property and substantially reduces impacts on indigenous vegetation. Any residual loss is limited to the approved development footprint.
Cumulative impact prior to mitigation:	Without mitigation, cumulative impacts include the loss of indigenous vegetation, habitat fragmentation, disruption of ecological processes and a reduction in ecological connectivity within the Critical Biodiversity Area.
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:	High
Proposed mitigation:	• Impacts on ecological processes and ecological corridors shall be minimised throughout construction and operation. • An Environmental Control Officer (ECO) shall monitor compliance with the EMPr and specialist recommendations. • Alien invasive plant species shall be removed and controlled throughout construction and operation. • A search-and-rescue programme shall be undertaken prior to vegetation clearance, with rescued indigenous plants maintained in an on-site nursery and used during rehabilitation. • Vegetation clearance shall be limited strictly to the approved and demarcated development footprint. • The internal access road shall be constructed using the minimum practical disturbance width and follow natural contours where feasible. • Disturbed areas shall be rehabilitated progressively using locally indigenous vegetation. • No construction activities, stockpiling or vehicle movement shall occur outside the demarcated construction footprint. • The mitigation measures and recommendations contained in the Botanical, Terrestrial Fauna and other relevant specialist reports shall be implemented in full.

Alternative comparison:	The Preferred Alternative represents the most environmentally acceptable option. The reduced 1 000 m ² dwelling substantially decreases vegetation clearance and habitat disturbance compared with Alternative 1. Alternative 2 introduces an additional development node within the environmentally sensitive northern portion of the property, increasing habitat fragmentation and biodiversity impacts. Alternative 3 would directly impact Critically Endangered Knysna Sand Fynbos and is therefore not supported. The No-Go Alternative would avoid biodiversity impacts but would prevent the applicant from exercising the lawful residential development rights associated with the property.
Cumulative impact post mitigation:	Following implementation of the recommended mitigation measures, residual impacts on biodiversity are expected to be localised and of low significance. The preferred layout, reduced development footprint and rehabilitation measures minimise cumulative effects on ecological processes and habitat connectivity.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	The construction of the proposed 1 000 m ² main dwelling, internal access road and associated infrastructure will result in temporary positive socio-economic benefits through the creation of employment opportunities for contractors, subcontractors and local labour during the construction phase. The development will generate demand for local goods, materials and services, contributing positively to the local economy. Opportunities for skills transfer and training may also be created. No significant negative impacts on existing land uses, community livelihoods, public access or social well-being are anticipated.
Extent and duration of impact:	Local to the Knysna Municipal area during the construction phase. The positive economic benefits will be temporary, while any skills transfer may provide longer-term benefits.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact. The economic benefits will diminish once construction is complete; however, skills development and local economic stimulation may provide longer-term benefits.
Degree to which the impact may cause irreplaceable loss of resources:	None.

Cumulative impact prior to mitigation:	Temporary employment opportunities and local economic stimulation through procurement of labour, materials and services. The project will contribute positively to the local economy during construction.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	High (Positive)
Degree to which the impact can be enhanced:	High. The positive impact can be enhanced through the appointment of local contractors, employment of local labour and the provision of training opportunities where feasible.
Proposed enhancement measures:	• Employ suitably qualified local labour where practical. • Provide employment opportunities to previously disadvantaged individuals where feasible. • Encourage the use of local suppliers and service providers. • Provide on-site training and skills transfer where appropriate. • Ensure fair labour practices and compliance with applicable labour legislation. • Maintain a safe working environment in accordance with the Occupational Health and Safety Act.
Cumulative impact post enhancement:	Continued positive contribution to the local economy through temporary employment, procurement of local goods and services, and potential skills development. No significant adverse cumulative socio-economic impacts are anticipated.
Significance rating of impact after enhancement (Low, Medium, Medium-High, High or Very High):	High (Positive)

Aspect	Assessment
Potential waste management impacts:	Waste generation.
Nature of impact:	Construction activities will generate general and limited hazardous waste. Inappropriate handling or disposal could result in pollution of soil, groundwater and surface water.
Extent and duration of impact:	Localised during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	Reversible.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Potential pollution resulting from poor waste management practices.
Significance rating prior to mitigation:	Low (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	• Separate recyclable and general waste. • Provide suitable waste containers. • Remove waste regularly by licensed contractors. • Maintain waste disposal records. • Include waste management in environmental awareness training. • Dispose of hazardous waste at appropriately licensed facilities.

Cumulative impact post mitigation:	Waste generation will be effectively managed, minimising cumulative impacts on soil, water and air quality.
Significance rating after mitigation:	Low (Negative)

Aspect	Assessment
Potential noise impacts:	Noise disturbance
Nature of impact:	Construction activities associated with the proposed development will temporarily increase ambient noise levels due to the operation of construction vehicles, earthmoving equipment, power tools and increased worker activity. The impacts will be localised and limited to the construction phase.
Extent and duration of impact:	Localised to the site and immediately surrounding properties during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	Fully reversible upon completion of construction.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary increase in ambient noise levels associated with construction vehicles, machinery and personnel.
Significance rating prior to mitigation:	Low (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	• Construction activities shall be limited to normal daytime working hours. • No construction shall occur on Sundays or public holidays unless authorised. • Construction equipment shall be regularly maintained. • Machinery shall not be left idling unnecessarily. • Contractors shall minimise unnecessary noise generation.
Cumulative impact post mitigation:	Temporary construction noise will remain localised and short-term.
Significance rating after mitigation:	Low (Negative)

Aspect	Assessment
Potential visual impacts:	Visual and aesthetic impacts.
Nature of impact:	Construction activities will temporarily introduce visual disturbance through vegetation clearing, construction equipment, temporary stockpiles and worker activity. Although

	the site is currently undeveloped, the reduced scale of the preferred development limits the extent of visual disturbance.
Extent and duration of impact:	Localised to the site and surrounding area during construction. Permanent visual change is limited to the authorised development footprint.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Temporary construction impacts are reversible. Permanent visual changes relate only to the approved development footprint.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary reduction in visual quality during construction due to equipment, stockpiles and site activities.
Significance rating prior to mitigation:	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	• Construction areas shall be kept neat and orderly. • Temporary construction areas shall be appropriately screened where practical. • Good housekeeping shall be maintained throughout construction. • Indigenous vegetation shall be retained where possible and used for rehabilitation. • Buildings shall utilise earth-toned, non-reflective materials in accordance with the architectural design.
Cumulative impact post mitigation:	Natural dune topography, indigenous landscaping and appropriate architectural design will substantially reduce residual visual impacts.
Significance rating after mitigation:	Low (Negative)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	Heritage resources may potentially be encountered during excavation activities. A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape. A Heritage Impact Statement prepared by Dr Peter Nilssen concluded that no significant archaeological or heritage resources occur within the development footprint. The palaeontological assessment concluded that the palaeontological sensitivity is low to unknown and recommended the implementation of a Fossil Finds Procedure.
Extent and duration of impact:	Limited to construction activities.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Irreversible if heritage resources are damaged; however, this is unlikely.
Degree to which the impact may cause irreplaceable loss of resources:	Low. No significant heritage resources have been identified.

Cumulative impact prior to mitigation:	Low potential for accidental disturbance of previously unknown archaeological or palaeontological material.
Significance rating prior to mitigation:	Low (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	• Environmental awareness training shall include heritage awareness. • If archaeological material, fossils or graves are discovered, all work shall cease immediately, and Heritage Western Cape shall be notified. • The Fossil Finds Procedure shall form part of the EMPr. • All recommendations contained within the Heritage Impact Statement shall be implemented.
Cumulative impact post mitigation:	No significant cumulative impacts on heritage resources are anticipated.
Significance rating after mitigation:	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	Construction workers may be exposed to risks associated with machinery, excavation, dust, manual handling, electrical equipment and fire.
Extent and duration of impact:	Construction site during construction only.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	Reversible.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Potential injuries to workers if appropriate safety procedures are not implemented.
Significance rating prior to mitigation:	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	• Comply with the Occupational Health and Safety Act. • Provide appropriate PPE. • Maintain first-aid facilities. • Conduct regular safety training. • Maintain fire-fighting equipment. • Implement relevant SANS standards. • Maintain emergency response procedures.
Cumulative impact post mitigation:	Residual occupational risks are expected to be low following the implementation of health and safety measures.
Significance rating after mitigation:	Low (Negative)

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

- (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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and stormwater management.
Nature of impact:	During the operational phase, the proposed development may result in localised impacts on soils, groundwater and surface water if stormwater, wastewater or other pollutants are not appropriately managed. Potential impacts include soil erosion associated with uncontrolled stormwater runoff, contamination from accidental spills, failure of the on-site wastewater management system, and inappropriate management of household waste. The development will be serviced by rainwater harvesting, supplementary borehole water (where authorised), and an on-site conservancy tank. Stormwater will be managed through infiltration-based measures designed to maintain natural drainage patterns and minimise erosion. Given the relatively small development footprint and the implementation of appropriate engineering controls, long-term impacts on the receiving environment are expected to be limited.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.

Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Medium. Localised impacts can generally be rehabilitated should they occur.
Degree to which the impact may cause irreplaceable loss of resources:	Low. Appropriate management measures will minimise the risk of permanent impacts.
Cumulative impact prior to mitigation:	Without mitigation, poor stormwater management, wastewater leakage or accidental contamination may contribute to localised soil degradation, groundwater contamination and erosion over time.
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:	High.
Proposed mitigation:	• Maintain all stormwater management measures in accordance with the approved engineering design. • Ensure that runoff is dispersed naturally and does not result in concentrated flows or erosion. • Maintain rainwater harvesting systems in good working order. • Regularly inspect and maintain the conservancy tank and associated wastewater infrastructure to prevent leakage. • Store fuels, oils and hazardous substances appropriately and clean up spills immediately. • Prevent discharge of pollutants into surrounding natural areas. • Monitor disturbed areas for signs of erosion and implement rehabilitation where necessary. • Maintain indigenous groundcover to reduce erosion and promote infiltration.
Cumulative impact post mitigation:	Following implementation of the recommended mitigation measures, cumulative impacts on soils, groundwater and stormwater are expected to remain localised and of low significance throughout the operational life of the development.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impact on biological aspects:	Habitat and biodiversity.
Nature of impact:	During the operational phase, the presence of the proposed 1 000 m ² main dwelling, associated infrastructure and continued residential use may result in localised disturbance to indigenous vegetation and fauna within the immediate development footprint. Potential impacts include incidental disturbance of wildlife, trampling of adjacent vegetation, introduction or spread of alien invasive plant species, increased fire risk, domestic animal disturbance (if applicable), and ongoing fragmentation of habitat within the immediate vicinity of the development. The preferred layout has been specifically selected to minimise impacts on ecological processes by avoiding the more sensitive northern portion of the property containing Critically Endangered Knysna Sand Fynbos. The development footprint is limited to the southern portion of the property where Goukamma Dune

	Thicket (Least Threatened) occurs, while the majority of the property will remain in its natural state.
Extent and duration of impact:	Localised to the authorised development footprint and immediate surroundings for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Low to Medium. Permanent habitat loss within the approved development footprint cannot be reversed; however, disturbed areas outside the permanent footprint can be rehabilitated and managed.
Degree to which the impact may cause irreplaceable loss of resources:	Low. The preferred layout substantially reduces habitat loss and avoids direct impacts on the more sensitive northern vegetation communities.
Cumulative impact prior to mitigation:	Without mitigation, continued residential activities could contribute to incremental habitat degradation, spread of invasive alien plants, disturbance of fauna and reduced ecological functioning within the immediate development area.
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:	High.
Proposed mitigation:	• Restrict all operational activities to the approved development footprint. • Maintain all surrounding indigenous vegetation in a natural state and prevent unnecessary disturbance outside the authorised footprint. • Implement an Alien Invasive Plant Control Programme and remove invasive species on a continuous basis. • Rehabilitate disturbed areas using indigenous vegetation rescued during the construction phase. • No additional clearing of indigenous vegetation shall occur without the necessary environmental authorisations. • Outdoor lighting shall be low-intensity, downward-facing and designed to minimise disturbance to nocturnal fauna. • Fire management shall be implemented in accordance with the approved Fire Management Plan and EMPr. • Domestic animals, if present, should be appropriately controlled to minimise disturbance to indigenous fauna. • The recommendations contained in the Botanical, Terrestrial Fauna and other specialist reports shall be implemented throughout the operational phase.
Cumulative impact post mitigation:	Following implementation of the recommended mitigation measures, residual impacts on biodiversity are expected to remain localised and of low significance. The majority of the property will remain undeveloped, thereby maintaining ecological processes, habitat connectivity and the conservation value of the surrounding landscape.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential visual impacts:	Visual and aesthetic impacts.
Nature of impact:	During the operational phase, the completed dwelling, internal access road and associated infrastructure will permanently alter the visual character of the immediate development footprint. However, the preferred development comprises a single 1 000 m² dwelling designed in a low-profile contemporary coastal style using earth-toned, non-reflective materials that integrate with the surrounding landscape. The dwelling is positioned within the south-western portion of the property where existing topography and vegetation provide substantial natural screening from surrounding viewpoints, including Brenton Beach and Brenton-on-Sea. The reduced building footprint, together with indigenous landscaping, significantly reduces visual intrusion compared to the previously proposed larger development alternatives.
Extent and duration of impact:	Localised for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low. The visual change associated with the permanent structures cannot be fully reversed without removal of the development.
Degree to which the impact may cause irreplaceable loss of resources:	Low. No irreplaceable visual or landscape resources will be lost.
Cumulative impact prior to mitigation:	The development will introduce a permanent built element into an otherwise natural landscape. Without appropriate design and landscaping, cumulative visual impacts could gradually reduce the natural character of the surrounding landscape.
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:	High.
Proposed mitigation:	• The approved architectural design shall be implemented, incorporating low-profile buildings and non-reflective, earth-toned finishes. • Existing indigenous vegetation shall be retained wherever possible. • Disturbed areas shall be rehabilitated using indigenous vegetation. • Additional indigenous landscaping shall be undertaken where required to soften the visual appearance of the development. • External lighting shall be low-intensity, downward-facing and designed to minimise light spill. • Satellite dishes, water tanks and other ancillary infrastructure shall be positioned to minimise visual intrusion. • No additional structures shall be erected outside the approved development footprint without the necessary authorisations.
Cumulative impact post mitigation:	Following implementation of the recommended design and landscaping measures, the development is expected to integrate with the surrounding landscape. Natural topography, indigenous vegetation and the reduced development footprint will minimise cumulative visual impacts and maintain the scenic character of the area. The Heritage Impact Assessment concluded that the proposed development is not expected to result in significant impacts

	on the visual or aesthetic heritage value of the surrounding landscape.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	During the operational phase, the proposed development will continue to generate positive socio-economic benefits through permanent employment associated with the maintenance and management of the property. The development will contribute to the local economy through the ongoing procurement of goods and services from local suppliers and contractors. The proposal represents the lawful exercise of the applicant's primary residential land use rights and is not expected to negatively affect surrounding land uses, public access, or community well-being. The operational phase is anticipated to create limited permanent employment opportunities and support local businesses through routine maintenance, security, landscaping and property management activities.
Extent and duration of impact:	Local to the Knysna Municipal area for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact. The socio-economic benefits will continue throughout the operational life of the development.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Continued support for the local economy through permanent employment, procurement of local goods and services, and expenditure associated with the ongoing operation and maintenance of the property.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	Medium (Positive)
Degree to which the impact can be enhanced:	High. The positive impacts can be enhanced through continued use of local suppliers, employment of local labour and ongoing skills development where appropriate.
Proposed enhancement measures:	• Employ local contractors and service providers where practical. • Provide permanent employment opportunities for suitably qualified local residents where feasible. • Continue to utilise local suppliers for maintenance and operational requirements. • Promote skills development and training for employees where appropriate. • Ensure compliance with all applicable labour legislation and fair employment practices. • Maintain a safe and healthy working environment in accordance with the Occupational Health and Safety Act.
Cumulative impact post enhancement:	Continued positive contribution to the local economy through permanent employment opportunities, procurement of local goods and services, and long-term support of local businesses. No significant adverse cumulative socio-economic impacts are anticipated.

Significance rating of impact after enhancement (Low, Medium, Medium-High, High or Very High):	Medium (Positive)
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Aspect	Assessment
Potential noise impacts:	Noise disturbance.
Nature of impact:	During the operational phase, the proposed development is expected to generate only low levels of noise associated with normal residential activities, including occasional vehicle movements, domestic maintenance activities and operation of household equipment. The development comprises a single private dwelling and is not expected to generate significant or continuous noise. The surrounding area is characterised by low-density residential development and natural open space, and the proposed activity is compatible with the existing acoustic environment.
Extent and duration of impact:	Localised to the immediate vicinity of the dwelling for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High. Any temporary increase in noise levels can be eliminated through appropriate management practices.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Minor increases in ambient noise associated with normal residential activities. No significant cumulative noise impacts are anticipated due to the low-intensity nature of the proposed land use.
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:	High.
Proposed mitigation:	• Normal residential activities shall be conducted in a manner that minimises disturbance to neighbouring properties. • All mechanical equipment shall be properly maintained to prevent unnecessary noise. • Landscape maintenance activities shall be undertaken during normal daytime hours. • Outdoor entertainment areas shall be managed responsibly to minimise excessive noise. • Any backup generators, should they be required, shall comply with applicable noise regulations and be appropriately enclosed or screened to reduce noise emissions.
Cumulative impact post mitigation:	Following implementation of the recommended mitigation measures, operational noise levels are expected to remain compatible with the surrounding environment and will not result in significant cumulative impacts.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Cultural and heritage resources.
Nature of impact:	During the operational phase, the proposed development is not expected to result in significant impacts on

	archaeological, palaeontological or cultural heritage resources. A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape, and a Heritage Impact Statement prepared by Dr Peter Nilssen concluded that no significant heritage resources occur within the proposed development footprint. The palaeontological assessment similarly concluded that the palaeontological sensitivity of the site is low to unknown and no significant operational impacts are anticipated. The completed development will remain compatible with the surrounding cultural landscape due to its reduced footprint, low-profile architectural design and integration with the natural environment.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Low. Should heritage resources be damaged, the impact would be irreversible; however, no such impacts are anticipated during the operational phase.
Degree to which the impact may cause irreplaceable loss of resources:	Low. No significant heritage resources have been identified within the development footprint.
Cumulative impact prior to mitigation:	No significant cumulative impacts on archaeological, palaeontological or cultural heritage resources are anticipated. The development will not materially alter the cultural landscape or heritage significance of the surrounding area.
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:	High.
Proposed mitigation:	• No additional disturbance shall occur outside the approved development footprint. • Any future maintenance or excavation outside the approved footprint shall comply with the provisions of the National Heritage Resources Act (Act 25 of 1999). • Should any previously unknown archaeological material, fossils or human remains be discovered during future maintenance works, all work shall cease immediately and Heritage Western Cape shall be notified. • The recommendations contained in the Heritage Impact Statement and palaeontological assessment shall continue to be implemented throughout the operational phase. • The visual character of the development shall be maintained through appropriate building maintenance and retention of indigenous landscaping.
Cumulative impact post mitigation:	Following implementation of the recommended management measures, no significant cumulative impacts on cultural or heritage resources are anticipated. The development will remain compatible with the surrounding cultural landscape and will not diminish its heritage significance.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	During the operational phase, potential health and safety risks will be associated with the routine occupation and maintenance of the dwelling, including the use of electrical installations, domestic equipment, vehicles, landscaping equipment, the swimming pool, fire hazards and maintenance activities. Given the nature of the proposed development as a single private residence, these risks are expected to be low and can be effectively managed through routine maintenance and adherence to applicable safety standards.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High. Potential risks can be effectively managed through routine maintenance and implementation of appropriate safety measures.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Without appropriate maintenance and safety management, there is a potential risk of accidents, injuries, fires or equipment failure associated with normal residential activities.
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:	High.
Proposed mitigation:	• Electrical installations shall comply with all applicable SANS standards and be inspected and maintained regularly. • Fire protection equipment shall be maintained in good working order and readily accessible. • The swimming pool shall be appropriately secured and maintained to minimise safety risks. • Access roads and walkways shall be maintained in a safe condition. • Routine maintenance of buildings, retaining structures and associated infrastructure shall be undertaken to prevent structural deterioration. • Hazardous household substances (such as fuels, pesticides and cleaning chemicals) shall be stored safely and disposed of appropriately. • Emergency contact information and first aid equipment shall be readily available on site. • Fire management measures shall be implemented in accordance with the approved Fire Management Plan and EMPr.
Cumulative impact post mitigation:	Following implementation of the recommended safety measures and routine maintenance, operational health and safety risks are expected to remain low and no significant cumulative impacts are anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential waste management impacts:	Waste generation and waste management.
Nature of impact:	During the operational phase, the proposed development will generate typical domestic waste, including general household waste and limited recyclable materials. Small quantities of hazardous household waste (e.g. batteries, paints, oils, fluorescent light bulbs and electronic waste) may also be generated. If waste is not appropriately stored, separated and disposed of, it may result in littering, pollution of soils, groundwater and surface water, attract vermin and negatively affect the surrounding natural environment. Given the scale of the proposed development as a single private dwelling, waste generation is expected to be low and readily manageable through appropriate waste management practices.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High. Impacts associated with poor waste management can generally be reversed through proper clean-up and implementation of appropriate waste management practices.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Without appropriate waste management, cumulative impacts may include litter accumulation, pollution of soils and groundwater, attraction of pests, degradation of the surrounding natural environment and unnecessary disposal of recyclable materials.
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:	High.
Proposed mitigation:	• General waste shall be stored in suitable, covered waste receptacles until collection or disposal. • Recyclable materials shall be separated from general waste and recycled where practical. • Hazardous household waste shall be stored separately and disposed of at appropriately authorised facilities. • Waste shall not be burnt or buried on site. • No littering shall be permitted within the property or surrounding natural areas. • Waste shall be removed regularly by the local municipal waste collection service or an appropriately authorised waste contractor. • Composting of suitable organic waste is encouraged where practical. • Good housekeeping practices shall be maintained throughout the operational life of the development.
Cumulative impact post mitigation:	Following implementation of the recommended waste management measures, waste generation will be effectively managed and no significant cumulative impacts on soils, groundwater, surface water or the surrounding environment are anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Environmental Impact Statement

The proposed development comprises the construction of a single **1 000 m²** main dwelling, associated internal access road and supporting infrastructure on Portion 76 of Farm Uitzicht No. 216, Brenton-on-Sea. The preferred layout represents a substantial reduction in development footprint compared to previous proposals and was selected following an integrated assessment of biodiversity, heritage, visual, geotechnical, engineering and planning constraints.

The preferred development footprint is located within the south-western portion of the property, where it avoids the more environmentally sensitive northern area containing **Critically Endangered Knysna Sand Fynbos**. The selected location also benefits from favourable topography, reduced visual exposure, lower geotechnical risk and improved access to services. The majority of the property will remain in its natural state, thereby maintaining ecological functioning and habitat connectivity.

Specialist investigations confirmed that the proposed development can proceed, subject to the implementation of the recommended mitigation measures. The development has been refined to minimise environmental impacts through:

- reduction of the dwelling footprint from earlier alternatives to approximately **1 000 m²**;
- limitation of disturbance to the authorised development footprint;
- implementation of search-and-rescue and rehabilitation measures for indigenous vegetation;
- retention of surrounding natural vegetation wherever practicable;
- implementation of stormwater management, erosion control and pollution prevention measures;
- adoption of low-profile architectural design using earth-toned, non-reflective materials;
- implementation of the Environmental Management Programme (EMPr) and specialist recommendations.

Following implementation of the proposed mitigation measures, the majority of identified environmental impacts are expected to be of **Low Negative** significance. Positive socio-economic impacts associated with temporary construction employment and limited permanent employment during operation are anticipated.

Alternative 1 would result in a larger development footprint and greater vegetation loss. Alternative 2 would introduce a second development node within the environmentally sensitive northern portion of the property, resulting in increased habitat fragmentation. Alternative 3 would directly impact **Critically Endangered Knysna Sand Fynbos** and is therefore not considered environmentally acceptable. Although the No-Go Alternative would avoid environmental impacts, it would prevent the applicant from exercising the lawful residential development rights associated with the property.

Based on the findings of the Basic Assessment, specialist studies, public participation process and integrated environmental assessment, the **Preferred Alternative** is considered to represent the most appropriate balance between environmental protection and sustainable development. It is therefore recommended that Environmental Authorisation be granted, subject to appropriate conditions and the implementation of the EMPr and specialist recommendations.

Alternative 1: Earlier Southern Development Layout (Single 3 000 m² Main Dwelling)

Main Dwelling House

- The primary dwelling unit would be situated in the **south-western portion** of the property and would comprise an approximate built footprint of **3 000 m²**, including:
- Six (6) bedrooms;
- An open-plan living area comprising the kitchen, lounge, dining area, bar, scullery, bathrooms and wine cellar;
- Covered verandas, outdoor entertainment areas, and a swimming pool.

Internal Road

Access to the dwelling would be provided via an internal access road approximately 830 m in length. The travelled road surface would be approximately 2.5 m wide, with a construction disturbance width varying between 4 m and 5.5 m. The road would provide access from the existing servitude (Kerk Laan) to the south-western development platform.

Environmental Impacts

- The larger development footprint associated with Alternative 1 would result in greater environmental impacts than the Preferred Alternative, including:
- Increased vegetation clearance within the authorised development footprint;
- Greater soil disturbance and an increased risk of stormwater runoff and erosion associated with the larger building platform and construction activities;
- Increased habitat loss and fragmentation within the Critical Biodiversity Area (CBA);
- Greater disturbance to indigenous vegetation, including Goukamma Dune Thicket;
- Increased visual intrusion resulting from the substantially larger dwelling;
- Higher construction-related impacts, including increased dust generation, noise, waste generation and traffic movements.

Although Alternative 1 remains technically feasible and is located within the same south-western development area as the Preferred Alternative, the substantially larger building footprint would result in greater environmental disturbance and cumulative impacts. For these reasons, Alternative 1 is considered less environmentally desirable than the Preferred Alternative and is **not recommended**.

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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and air quality.
Nature of impact:	Construction of the proposed 3 000 m² main dwelling , associated internal access road and supporting infrastructure would result in a substantially larger area of soil disturbance

	than the Preferred Alternative. The larger building platform would increase the extent of excavation, soil compaction, vegetation clearance and exposure of bare soils to erosion. There is an increased potential for contamination of soils, groundwater and stormwater through accidental spills of fuels, oils, cement and other hazardous materials during construction. Greater earthworks would also result in increased dust generation and construction-related emissions.
Extent and duration of impact:	Localised to the development footprint during construction, with permanent soil disturbance beneath the completed infrastructure.
Probability of occurrence:	Probable.
Degree to which the impact can be mitigated:	High.
Degree to which the impact may cause irreplaceable loss of resources:	Partial irreplaceable loss.
Cumulative impact prior to mitigation:	Increased soil disturbance, greater stormwater runoff, increased erosion potential and greater risk of groundwater contamination compared to the Preferred Alternative.
Significance rating prior to mitigation	Medium (Negative)
Proposed mitigation:	Implement all recommendations contained in the Geotechnical Report and EMPr, including limiting vegetation clearance to the approved footprint, implementing erosion control measures, protecting topsoil, maintaining natural drainage, implementing dust suppression, storing hazardous materials within bunded areas, using drip trays and spill kits, rehabilitating disturbed areas and monitoring compliance through an Environmental Control Officer (ECO).
Cumulative impact post mitigation:	Residual impacts remain localised but are greater than those associated with the Preferred Alternative due to the larger development footprint.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity loss.
Nature of impact:	Alternative 1 would result in a substantially larger area of indigenous vegetation being permanently transformed. Although located within the same south-western development area, the increased footprint would result in greater habitat loss, increased edge effects and greater fragmentation within the Critical Biodiversity Area.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Medium.
Cumulative impact prior to mitigation:	Greater cumulative loss of indigenous vegetation and ecological functioning than the Preferred Alternative.

Significance rating prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Implement all botanical specialist recommendations, undertake search-and-rescue of indigenous plants, establish an on-site nursery, rehabilitate disturbed areas using indigenous species, remove alien invasive plants, appoint an ECO, and restrict all disturbance to the approved development footprint.
Cumulative impact post mitigation:	Residual biodiversity impacts remain greater than the Preferred Alternative because of the larger permanent development footprint.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	Construction of the larger dwelling would generate additional temporary employment opportunities and greater demand for local goods and services during construction. The operational phase would provide limited permanent employment associated with maintenance of the property.
Extent and duration of impact:	Local during construction and operation.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Positive contribution to the local economy through employment and procurement of local services.
Significance rating prior to mitigation	High (Positive)
Degree to which the impact can be enhanced:	High.
Proposed enhancement:	Employ local labour where feasible, utilise local contractors and suppliers, provide training opportunities and comply with labour legislation.
Cumulative impact post mitigation:	Continued positive contribution to the local economy.
Significance rating after mitigation	High (Positive)

Aspect	Assessment
Potential visual impacts:	Visual and aesthetic impacts.
Nature of impact:	The substantially larger dwelling would be more visually prominent within the landscape despite natural screening. The larger roof area, building mass and associated

	infrastructure would result in greater alteration of the natural landscape than the Preferred Alternative.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Greater permanent alteration of the landscape character compared to the Preferred Alternative.
Significance rating prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Use low-profile architectural design, non-reflective materials, indigenous landscaping, downward-facing lighting and retain existing vegetation wherever possible.
Cumulative impact post mitigation:	Visual impacts remain greater than the Preferred Alternative because of the increased building mass.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential noise impacts:	Construction noise.
Nature of impact:	Construction of the larger dwelling would require longer construction periods, increased machinery usage and greater vehicle movements, resulting in increased temporary noise levels.
Extent and duration of impact:	Local during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Increased temporary construction noise compared to the Preferred Alternative.
Significance rating prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Restrict construction to daytime hours, maintain machinery, minimise idling and implement good construction practices.
Cumulative impact post mitigation:	Temporary and localised.
Significance rating after mitigation	Low (Negative)

- (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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and stormwater management.
Nature of impact:	During operation, the larger dwelling and associated impermeable surfaces would generate a greater volume of stormwater runoff than the Preferred Alternative. Potential impacts include localised soil erosion, contamination of groundwater through failure of the on-site wastewater system, accidental spills, and increased maintenance requirements. The larger developed footprint would reduce infiltration when compared to the Preferred Alternative.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Medium.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Increased stormwater runoff and greater potential for soil erosion and groundwater contamination compared to the Preferred Alternative.
Significance rating prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Maintain stormwater infrastructure, inspect wastewater systems regularly, maintain rainwater harvesting systems, prevent pollution, rehabilitate eroded areas and implement all EMP requirements.
Cumulative impact post mitigation:	Localised impacts remain but are effectively managed.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	The larger permanent footprint would result in greater habitat transformation and fragmentation than the Preferred Alternative. Although located within the same south-western development area, the larger dwelling would permanently reduce a greater area of indigenous vegetation and ecological functioning.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Low.

Degree to which the impact may cause irreplaceable loss of resources:	Medium.
Cumulative impact prior to mitigation:	Increased habitat fragmentation and greater long-term disturbance of indigenous vegetation compared with the Preferred Alternative.
Significance rating prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Retain indigenous vegetation outside the development footprint, implement alien invasive control, rehabilitate disturbed areas, implement all botanical recommendations and prevent additional vegetation clearing.
Cumulative impact post mitigation:	Residual impacts remain greater than the Preferred Alternative due to the larger permanent footprint.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	The larger permanent footprint would result in greater habitat transformation and fragmentation than the Preferred Alternative. Although located within the same south-western development area, the larger dwelling would permanently reduce a greater area of indigenous vegetation and ecological functioning.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Medium.
Cumulative impact prior to mitigation:	Increased habitat fragmentation and greater long-term disturbance of indigenous vegetation compared with the Preferred Alternative.
Significance rating prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Retain indigenous vegetation outside the development footprint, implement alien invasive control, rehabilitate disturbed areas, implement all botanical recommendations and prevent additional vegetation clearing.
Cumulative impact post mitigation:	Residual impacts remain greater than the Preferred Alternative due to the larger permanent footprint.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	The larger dwelling would provide slightly greater long-term employment opportunities associated with maintenance, landscaping and property management, together with increased procurement of local goods and services.

Extent and duration of impact:	Local for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Positive contribution to the local economy through ongoing employment and maintenance activities.
Significance rating prior to mitigation	Medium (Positive)
Degree to which the impact can be enhanced:	High.
Proposed enhancement:	Continue utilising local suppliers and employ local labour where practical.
Cumulative impact post mitigation:	Continued positive socio-economic contribution.
Significance rating after mitigation	Medium (Positive)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	The larger dwelling would provide slightly greater long-term employment opportunities associated with maintenance, landscaping and property management, together with increased procurement of local goods and services.
Extent and duration of impact:	Local for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Positive contribution to the local economy through ongoing employment and maintenance activities.
Significance rating prior to mitigation	Medium (Positive)
Degree to which the impact can be enhanced:	High.
Proposed enhancement:	Continue utilising local suppliers and employ local labour where practical.
Cumulative impact post mitigation:	Continued positive socio-economic contribution.
Significance rating after mitigation	Medium (Positive)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	No significant operational impacts on heritage resources are anticipated. The larger dwelling would not directly affect identified heritage resources but would result in a greater permanent alteration of the cultural landscape than the Preferred Alternative.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Low.

Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Slightly greater alteration of landscape character than the Preferred Alternative.
Significance rating prior to mitigation	Low (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Maintain indigenous landscaping, implement heritage recommendations and comply with the NHRA should future excavations occur.
Cumulative impact post mitigation:	No significant cumulative heritage impacts anticipated.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	Routine operation and maintenance of the larger dwelling present typical residential safety risks associated with electrical systems, fire, maintenance equipment and swimming pool use.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Low operational safety risks.
Significance rating prior to mitigation	Low (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Maintain fire protection systems, electrical installations, emergency procedures and comply with applicable SANS standards.
Cumulative impact post mitigation:	Low residual safety risks.
Significance rating after mitigation	Low (Negative)

Aspect	Assessment
Potential waste management impacts:	Waste generation and management.
Nature of impact:	The larger dwelling would generate greater quantities of domestic waste than the Preferred Alternative, although waste volumes would remain consistent with residential use. Inappropriate waste management could result in pollution of soil and groundwater.
Extent and duration of impact:	Localised throughout operation.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Increased domestic waste generation compared with the Preferred Alternative.
Significance rating prior to mitigation	Low (Negative)

Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Separate recyclable waste, provide covered waste containers, dispose of waste through authorised service providers, prevent littering and implement good housekeeping practices.
Cumulative impact post mitigation:	No significant cumulative impacts anticipated.
Significance rating after mitigation	Low (Negative)

Alternative 2: Southern Main Dwelling with Northern Farm Manager's House (Dual Development Node)

The Main Dwelling House

Alternative 2 proposes the construction of a 3 000 m² main dwelling within the south-western portion of the property together with a 1 200 m² farm manager's dwelling in the north-western portion of the property.

The development proposal comprises:

- The construction of one (1) main dwelling house within the south-western portion of the property (approximately **3 000 m²**);
- The construction of one (1) farm manager's dwelling within the north-western portion of the property (approximately **1 200 m²**);
- The construction of an internal access road providing access to the south-western development platform.

Internal Road

The internal access road would be approximately 830 m in length. The travelled road surface would be approximately 2.5 m wide, with a construction disturbance width varying between 4 m and 5.5 m. The road would provide access from the existing servitude (Kerk Laan) to the south-western development platform.

Environmental Impacts

Alternative 2 would result in substantially greater environmental impacts than the Preferred Alternative due to the larger overall development footprint and the introduction of a second development node within the environmentally sensitive northern portion of the property.

Potential impacts include:

- Increased stormwater runoff, soil disturbance and erosion associated with the larger building platforms and internal access infrastructure;
- Increased vegetation clearance and permanent habitat transformation;
- Greater fragmentation of the Critical Biodiversity Area (CBA);
- Direct impacts on Critically Endangered Knysna Sand Fynbos associated with the proposed farm manager's dwelling;
- Increased disturbance to ecological corridors and ecological processes;
- Increased visual intrusion resulting from two separate residential development nodes;
- Increased demand for supporting infrastructure and services;
- Increased construction-related impacts, including dust generation, waste production, traffic and noise.

In addition to the increased ecological impacts, the proposed farm manager's dwelling would require a departure from the prescribed municipal building lines and would introduce unnecessary development within a highly sensitive ecological area.

Alternative 2 is therefore considered **environmentally undesirable** and is **not supported**, as it would result in significantly greater ecological disturbance and fragmentation than the Preferred Alternative while providing limited additional planning or environmental benefit.

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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and air quality.
Nature of impact:	Construction of the proposed 3 000 m ² main dwelling, 1 200 m ² farm manager's dwelling, associated internal access road and supporting infrastructure would result in extensive earthworks, vegetation clearance and soil disturbance across two separate development areas. The larger combined footprint would increase the potential for soil compaction, erosion, sedimentation, groundwater contamination and stormwater pollution. Greater quantities of construction materials, machinery movements and excavation activities would also increase dust generation and exhaust emissions.
Extent and duration of impact:	Localised to the development footprint during the construction phase, with permanent disturbance beneath the completed infrastructure.
Probability of occurrence:	Probable.
Degree to which the impact can be mitigated:	High.
Degree to which the impact may cause irreplaceable loss of resources:	Medium.
Cumulative impact prior to mitigation:	Increased soil disturbance, stormwater runoff, erosion potential, groundwater contamination and dust generation resulting from the larger development footprint and construction of two separate development nodes.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	Medium-High (Negative)
Degree to which the impact can be mitigated:	Although earthworks cannot be avoided, the impacts can be substantially reduced through implementation of appropriate engineering and environmental management measures.
Proposed mitigation:	• Implement all recommendations contained in the Geotechnical Report and EMPr. • Restrict vegetation clearance to the approved development footprints. • Follow natural contours during road construction to minimise cut-and-fill. • Protect topsoil and stockpile separately for rehabilitation. • Implement erosion and sediment control measures. • Install rainwater harvesting infrastructure and maintain natural drainage patterns. • Store fuels, oils, cement and hazardous substances on bunded, impermeable surfaces. • Use drip trays and spill kits at all times. • No servicing of construction vehicles on site unless in an emergency. • Dust suppression measures shall be implemented during dry and windy conditions. • Construction vehicles transporting loose material shall be covered. • Disturbed areas shall be rehabilitated

	progressively using indigenous vegetation. • An Environmental Control Officer (ECO) shall monitor compliance throughout construction.
Alternative comparison:	Alternative 2 results in substantially greater disturbance than the Preferred Alternative because it introduces two development platforms, additional infrastructure and a significantly larger construction footprint. The Preferred Alternative therefore remains environmentally preferable.
Cumulative impact post mitigation:	Residual impacts remain localised but are greater than those associated with the Preferred Alternative because of the larger permanent footprint and increased disturbance area.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Medium (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity loss.
Nature of impact:	Construction of the proposed 3 000 m ² main dwelling, 1 200 m ² farm manager's dwelling, associated internal access road and supporting infrastructure would result in substantial clearing of indigenous vegetation and increased habitat fragmentation across two separate development nodes. The proposed farm manager's dwelling in the north-western portion of the property would directly impact Critically Endangered Knysna Sand Fynbos, while the larger southern development footprint would further reduce areas of Goukamma Dune Thicket. The introduction of a second development node would fragment ecological corridors, reduce habitat connectivity and increase disturbance to indigenous flora and fauna within the Critical Biodiversity Area (CBA). The loss of Critically Endangered Knysna Sand Fynbos is considered irreplaceable and irreversible.
Extent and duration of impact:	Localised to the authorised development footprint but permanent. Construction-related disturbance would be temporary; however, habitat transformation would remain for the life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low. Permanent loss of indigenous vegetation cannot be fully reversed. Rehabilitation is limited to temporarily disturbed areas outside the permanent footprint.
Degree to which the impact may cause irreplaceable loss of resources:	High. The proposed farm manager's dwelling would directly affect Critically Endangered Knysna Sand Fynbos, resulting in permanent loss of an irreplaceable vegetation type.
Cumulative impact prior to mitigation:	Without mitigation, Alternative 2 would result in increased habitat fragmentation, loss of indigenous vegetation, disruption of ecological corridors, permanent transformation of portions of the Critical Biodiversity Area and direct impacts on Critically Endangered Knysna Sand Fynbos.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	High (Negative)

Degree to which the impact can be mitigated:	Medium. Although mitigation can reduce construction-related disturbance, it cannot avoid the permanent loss of Critically Endangered Knysna Sand Fynbos associated with the northern development node.
Proposed mitigation:	• Restrict all disturbance to the approved development footprint. • Implement all recommendations contained in the Botanical Specialist Report, Terrestrial Fauna Specialist Report and EMPr. • Undertake a search-and-rescue programme for suitable indigenous plant species prior to vegetation clearance. • Establish and maintain an on-site indigenous plant nursery for rehabilitation purposes. • Remove and control alien invasive plant species throughout construction. • Clearly demarcate no-go areas and prevent unnecessary disturbance outside the approved footprint. • Rehabilitate disturbed areas using locally indigenous vegetation immediately following construction. • Appoint an Environmental Control Officer (ECO) to monitor compliance with all specialist recommendations. • Prevent unnecessary fragmentation of remaining natural habitat and ecological corridors.
Alternative comparison:	Alternative 2 is significantly less favourable than the Preferred Alternative because it introduces a second development node within the environmentally sensitive northern portion of the property, resulting in direct impacts on Critically Endangered Knysna Sand Fynbos, increased habitat fragmentation and greater biodiversity loss. The Preferred Alternative avoids these impacts by limiting development to a single, reduced footprint within the south-western portion of the property.
Cumulative impact post mitigation:	Although mitigation will reduce construction-related disturbance, Alternative 2 will continue to result in permanent habitat loss, fragmentation and direct impacts on Critically Endangered Knysna Sand Fynbos. Residual impacts therefore remain substantially greater than those associated with the Preferred Alternative.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Medium-High (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	Construction of the proposed 3 000 m ² main dwelling, 1 200 m ² farm manager's dwelling, associated internal access road and supporting infrastructure would result in positive socio-economic impacts through the creation of temporary employment opportunities for contractors, subcontractors and local labour during the construction phase. The larger development would require a longer construction period and greater demand for construction materials, goods and services than the Preferred Alternative, thereby providing increased economic benefits to the local economy. However, these additional socio-economic benefits do not outweigh the significantly greater environmental impacts associated with this alternative.

Extent and duration of impact:	Local to the Knysna Municipal area during the construction phase. Temporary employment and associated economic benefits would continue for the duration of construction.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact. The employment opportunities are temporary, although skills transfer may provide longer-term benefits.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary employment opportunities, increased procurement of local goods and services, and stimulation of the local economy through construction-related expenditure.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	High (Positive)
Degree to which the impact can be enhanced:	High. The positive impacts can be enhanced through the employment of local labour, appointment of local contractors and suppliers, and provision of training opportunities where feasible.
Proposed enhancement measures:	• Employ suitably qualified local labour where practical. • Provide employment opportunities to previously disadvantaged individuals where feasible. • Utilise local contractors, suppliers and service providers where practical. • Provide on-site training and skills transfer opportunities where appropriate. • Ensure compliance with all applicable labour legislation and fair employment practices. • Maintain a safe working environment in accordance with the Occupational Health and Safety Act.
Alternative comparison:	Alternative 2 would generate slightly greater short-term economic benefits than the Preferred Alternative due to the larger scale of construction. However, these benefits are temporary and do not outweigh the significantly greater biodiversity, visual and environmental impacts associated with the larger development footprint and second development node. The Preferred Alternative therefore remains the most sustainable option.
Cumulative impact post enhancement:	Continued positive contribution to the local economy through temporary employment, procurement of local goods and services, and skills development during construction. No adverse cumulative socio-economic impacts are anticipated.
Significance rating of impact after enhancement (Low, Medium, Medium-High, High or Very High):	High (Positive)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	Construction of the proposed 3 000 m ² main dwelling, 1 200 m ² farm manager's dwelling, associated internal access road and supporting infrastructure would result in positive socio-economic impacts through the creation of temporary employment opportunities for contractors, subcontractors and local labour during the construction phase. The larger

	development would require a longer construction period and greater demand for construction materials, goods and services than the Preferred Alternative, thereby providing increased economic benefits to the local economy. However, these additional socio-economic benefits do not outweigh the significantly greater environmental impacts associated with this alternative.
Extent and duration of impact:	Local to the Knysna Municipal area during the construction phase. Temporary employment and associated economic benefits would continue for the duration of construction.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact. The employment opportunities are temporary, although skills transfer may provide longer-term benefits.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary employment opportunities, increased procurement of local goods and services, and stimulation of the local economy through construction-related expenditure.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	High (Positive)
Degree to which the impact can be enhanced:	High. The positive impacts can be enhanced through the employment of local labour, appointment of local contractors and suppliers, and provision of training opportunities where feasible.
Proposed enhancement measures:	• Employ suitably qualified local labour where practical. • Provide employment opportunities to previously disadvantaged individuals where feasible. • Utilise local contractors, suppliers and service providers where practical. • Provide on-site training and skills transfer opportunities where appropriate. • Ensure compliance with all applicable labour legislation and fair employment practices. • Maintain a safe working environment in accordance with the Occupational Health and Safety Act.
Alternative comparison:	Alternative 2 would generate slightly greater short-term economic benefits than the Preferred Alternative due to the larger scale of construction. However, these benefits are temporary and do not outweigh the significantly greater biodiversity, visual and environmental impacts associated with the larger development footprint and second development node. The Preferred Alternative therefore remains the most sustainable option.
Cumulative impact post enhancement:	Continued positive contribution to the local economy through temporary employment, procurement of local goods and services, and skills development during construction. No adverse cumulative socio-economic impacts are anticipated.
Significance rating of impact after enhancement (Low, Medium, Medium-High, High or Very High):	High (Positive)

Aspect	Assessment
Potential noise impacts:	Noise disturbance.
Nature of impact:	Construction of two dwellings and associated infrastructure would generate higher levels of temporary construction noise than the Preferred Alternative due to increased machinery operation, vehicle movements, excavation and longer construction duration.
Extent and duration of impact:	Local during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Increased temporary construction noise associated with larger construction activities and longer construction period.
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:	High.
Proposed mitigation:	• Restrict construction activities to normal daytime working hours. • Maintain construction equipment in good working order. • Minimise unnecessary idling of machinery. • Inform neighbouring landowners of unusually noisy activities where appropriate. • Implement good construction practices to minimise noise generation.
Alternative comparison:	Construction noise would be greater than the Preferred Alternative due to the increased scale and duration of construction activities.
Cumulative impact post mitigation:	Construction noise would remain temporary and localised.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	Heritage resources may potentially be encountered during excavation associated with both development nodes. Although no significant archaeological or cultural heritage resources have been identified within the proposed development footprint, the larger disturbance area increases the likelihood of accidental discovery during earthworks.
Extent and duration of impact:	Localised during construction.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Low. Damage to heritage resources would be irreversible should they be encountered.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Slightly increased potential for accidental disturbance due to the larger disturbance footprint.

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:	High.
Proposed mitigation:	• Implement all recommendations contained in the Heritage Impact Statement. • Include the Fossil Finds Procedure within the EMPr. • Stop all work immediately should archaeological material, fossils or human remains be discovered. • Notify Heritage Western Cape before any further disturbance occurs. • Conduct heritage awareness training for construction personnel.
Alternative comparison:	Alternative 2 presents a slightly greater heritage risk due to the larger development footprint but remains manageable through implementation of the specialist recommendations.
Cumulative impact post mitigation:	No significant cumulative heritage impacts anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	Construction of two dwellings and associated infrastructure increases the exposure of workers to hazards associated with excavation, heavy machinery, construction equipment, dust, electrical installations and manual handling. The larger construction footprint and longer construction programme increase the overall health and safety risks.
Extent and duration of impact:	Construction site during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Increased occupational risks associated with a larger construction workforce and longer construction programme.
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:	High.
Proposed mitigation:	• Comply with the Occupational Health and Safety Act. • Provide appropriate PPE. • Maintain first aid facilities. • Conduct regular safety training. • Maintain fire-fighting equipment. • Implement emergency response procedures. • Comply with applicable SANS standards.
Alternative comparison:	Health and safety risks are greater than the Preferred Alternative because of the larger construction programme but remain manageable through implementation of appropriate safety procedures.
Cumulative impact post mitigation:	Residual occupational risks are expected to remain low.

Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)
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Aspect	Assessment
Potential waste management impacts:	Waste generation and management.
Nature of impact:	Construction of two dwellings would generate larger quantities of general construction waste, packaging materials, excavated material and limited hazardous waste than the Preferred Alternative. Inappropriate waste management could result in pollution of soils, groundwater and surrounding natural areas.
Extent and duration of impact:	Local during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Greater waste generation and increased risk of pollution compared to the Preferred Alternative.
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:	High.
Proposed mitigation:	• Separate recyclable and general waste. • Provide suitable covered waste containers. • Remove waste regularly using authorised waste contractors. • Dispose of hazardous waste at licensed facilities. • Maintain waste disposal records. • Implement good housekeeping throughout construction. • Include waste management within environmental awareness training.
Alternative comparison:	Alternative 2 generates substantially more construction waste than the Preferred Alternative due to its larger development footprint and second dwelling.
Cumulative impact post mitigation:	Waste impacts would be effectively managed through implementation of the EMP but remain greater than those associated with the Preferred Alternative.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

- (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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and stormwater management.
Nature of impact:	During operation, the larger development footprint, comprising a 3 000 m ² main dwelling and a 1 200 m ² farm manager's dwelling, would increase the extent of impermeable surfaces, resulting in greater stormwater runoff compared to the Preferred Alternative. The operation of two residential units also increases the potential for groundwater contamination should the on-site wastewater system fail or hazardous substances be improperly managed. Long-term soil disturbance associated with landscaping and maintenance activities would also be greater.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Medium.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Greater stormwater runoff, increased impermeable surfaces and higher potential for groundwater contamination compared to the Preferred Alternative.
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:	High.
Proposed mitigation:	• Maintain all stormwater infrastructure. • Regularly inspect and maintain wastewater infrastructure. • Maintain rainwater harvesting systems. • Prevent pollution from fuels, oils and chemicals. • Rehabilitate eroded areas where necessary. • Implement all EMPr requirements throughout the operation.
Cumulative impact post mitigation:	Localised impacts remain but are effectively managed through the implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	The operation of two residential development nodes would result in greater long-term habitat fragmentation, increased human activity and greater disturbance to indigenous fauna and flora than the Preferred Alternative. The northern farm manager's dwelling would remain within an area supporting

	Critically Endangered Knysna Sand Fynbos, resulting in permanent loss of habitat and reduced ecological connectivity within the Critical Biodiversity Area.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	High.
Cumulative impact prior to mitigation:	Permanent habitat fragmentation, disturbance of ecological corridors and loss of Critically Endangered Knysna Sand Fynbos.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	High (Negative)
Degree to which the impact can be mitigated:	Medium.
Proposed mitigation:	• Retain all indigenous vegetation outside the approved footprint. • Implement long-term alien invasive species control. • Prevent any additional vegetation clearance. • Maintain ecological corridors wherever possible. • Continue implementing all botanical specialist recommendations and EMPr requirements. • Restrict domestic activities to the approved development areas.
Cumulative impact post mitigation:	Residual biodiversity impacts remain significant because the permanent loss of Critically Endangered Knysna Sand Fynbos cannot be fully mitigated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Medium-High (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	The operation of two residential development nodes would result in greater long-term habitat fragmentation, increased human activity and greater disturbance to indigenous fauna and flora than the Preferred Alternative. The northern farm manager's dwelling would remain within an area supporting Critically Endangered Knysna Sand Fynbos, resulting in permanent loss of habitat and reduced ecological connectivity within the Critical Biodiversity Area.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	High.

Cumulative impact prior to mitigation:	Permanent habitat fragmentation, disturbance of ecological corridors and loss of Critically Endangered Knysna Sand Fynbos.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	High (Negative)
Degree to which the impact can be mitigated:	Medium.
Proposed mitigation:	• Retain all indigenous vegetation outside the approved footprint. • Implement long-term alien invasive species control. • Prevent any additional vegetation clearance. • Maintain ecological corridors wherever possible. • Continue implementing all botanical specialist recommendations and EMP requirements. • Restrict domestic activities to the approved development areas.
Cumulative impact post mitigation:	Residual biodiversity impacts remain significant because the permanent loss of Critically Endangered Knysna Sand Fynbos cannot be fully mitigated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Medium-High (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	Operation of two residential dwellings would provide slightly greater long-term employment opportunities associated with maintenance, landscaping and property management than the Preferred Alternative. Increased expenditure on local goods and services would also contribute positively to the local economy.
Extent and duration of impact:	Local for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Positive long-term contribution to the local economy.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	Medium (Positive)
Degree to which the impact can be enhanced:	High.
Proposed enhancement:	Continue employing local service providers and contractors where practical.
Cumulative impact post mitigation:	Continued positive socio-economic contribution.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Medium (Positive)

Aspect	Assessment
Potential noise impacts:	Noise disturbance.
Nature of impact:	Operation of two residential dwellings would result in slightly higher levels of domestic noise, vehicle movements and maintenance activities than the Preferred Alternative. However, noise levels would remain compatible with the surrounding low-density residential environment.
Extent and duration of impact:	Localised throughout the operation.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Slight increase in ambient residential noise levels.
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:	High.
Proposed mitigation:	• Restrict maintenance activities to daytime hours. • Maintain equipment in good working order. • Avoid unnecessary noise generation.
Cumulative impact post mitigation:	No significant cumulative noise impacts anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	No significant operational impacts on identified heritage resources are anticipated. However, the larger permanent development footprint and second dwelling would result in greater alteration of the cultural landscape than the Preferred Alternative.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Slightly greater long-term alteration of landscape character.
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:	High.
Proposed mitigation:	• Maintain indigenous landscaping. • Continue implementing the recommendations of the Heritage Impact

	Statement. • Comply with the National Heritage Resources Act should future excavation be required.
Cumulative impact post mitigation:	No significant cumulative heritage impacts anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	Operation of two residential dwellings increases the extent of routine maintenance activities, electrical installations, fire risks and use of domestic infrastructure compared to the Preferred Alternative.
Extent and duration of impact:	Localised throughout operation.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Low operational health and safety risks.
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:	High.
Proposed mitigation:	• Maintain electrical and fire protection systems. • Maintain emergency procedures. • Comply with applicable SANS standards. • Maintain first aid equipment and emergency contact information.
Cumulative impact post mitigation:	Residual risks remain low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential waste management impacts:	Waste generation and management.
Nature of impact:	Two residential dwellings would generate greater volumes of domestic waste and recyclables than the Preferred Alternative. Inappropriate waste management could result in pollution of soils, groundwater and surrounding natural areas.
Extent and duration of impact:	Localised throughout the operational life of the development.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.

Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Increased domestic waste generation compared to the Preferred Alternative.
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:	High.
Proposed mitigation:	• Separate recyclable materials from general waste. • Store waste in covered containers. • Dispose of waste through authorised service providers. • Dispose of hazardous household waste at approved facilities. • Maintain good housekeeping throughout operation.
Cumulative impact post mitigation:	No significant cumulative waste management impacts anticipated following implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Alternative 3: Northern Development Layout Adjacent to Kerk Laan (3 000 m² Main Dwelling)

Main Dwelling House

Alternative 3 proposes the relocation of the main dwelling and all associated infrastructure to the **northern portion** of Portion 76 of Farm Uitzicht No. 216, adjacent to the existing public access route (Kerk Laan/Bushy Way).

The development proposal comprises:

- The construction of one (1) main dwelling house within the northern portion of the property, with an approximate built footprint of **3 000 m²**;
- Construction of an internal access track connecting the dwelling directly to the existing public access route (Bushy Way/Kerk Laan);
- Associated on-site services, including rainwater harvesting, solar power infrastructure, on-site wastewater treatment, stormwater management infrastructure and ancillary services.

Main Dwelling House

The proposed dwelling would comprise approximately **3 000 m²** and include:

- Six (6) bedrooms;
- Open-plan living areas comprising the kitchen, dining room, lounge, bar, scullery, bathrooms and wine cellar;
- Covered verandas, outdoor entertainment areas and a swimming pool;
- Associated garages and service areas.

Internal Access Track

Access would be provided directly from the existing public access route (Bushy Way/Kerk Laan) via a short internal access track. This alternative would reduce the length of the internal access road compared to the southern development alternatives.

Environmental Impacts

Although Alternative 3 reduces the extent of the internal access road, it would result in substantially greater environmental impacts due to the location of the development within the northern portion of the property.

Potential impacts include:

- Direct loss of Critically Endangered Knysna Sand Fynbos;
- Permanent transformation of a Critical Biodiversity Area (CBA);
- Increased habitat fragmentation and disruption of ecological corridors;
- Permanent loss of irreplaceable indigenous vegetation;
- Increased impacts on biodiversity, protected plant species and ecological functioning;
- Greater visual impacts within the northern landscape setting;
- Increased conflict with biodiversity conservation objectives and protected environment management requirements.

The northern portion of the property contains Critically Endangered Knysna Sand Fynbos, which has been identified through the botanical specialist assessment as the most environmentally sensitive part of the site. Development within this area would result in the permanent loss of an irreplaceable vegetation type and would conflict with the

biodiversity objectives of the Western Cape Biodiversity Spatial Plan (WCBSP), the Knysna Protected Environment and the recommendations of the botanical specialist.

Although this alternative would reduce the length of the internal access road, the environmental costs associated with the loss of Critically Endangered Knysna Sand Fynbos significantly outweigh this benefit.

Accordingly, Alternative 3 is not supported and is considered environmentally unacceptable when compared to the Preferred Alternative, which avoids direct impacts on the northern Critically Endangered vegetation by locating the development within the less sensitive southern portion of the property.

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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and air quality.
Nature of impact:	Construction of the proposed 3 000 m ² main dwelling and associated infrastructure within the northern portion of the property would require vegetation clearance, excavation, earthworks and site levelling within an environmentally sensitive area. Although the internal access track would be shorter than that required for the southern alternatives, construction activities would still result in soil compaction, disturbance of natural drainage patterns, increased stormwater runoff, potential groundwater contamination from fuels, oils and cement, and temporary dust generation.
Extent and duration of impact:	Localised to the northern development footprint during construction, with permanent disturbance beneath completed infrastructure.
Probability of occurrence:	Probable.
Degree to which the impact can be mitigated:	High.
Degree to which the impact may cause irreplaceable loss of resources:	Medium.
Cumulative impact prior to mitigation:	Soil disturbance, stormwater runoff, erosion and potential groundwater contamination associated with construction activities within a sensitive natural environment.
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:	Although construction impacts can be reduced through engineering controls and implementation of the EMPr, permanent disturbance beneath the development footprint cannot be avoided.
Proposed mitigation:	• Implement all recommendations contained in the Geotechnical Report and EMPr. • Restrict all disturbance to the approved construction footprint. • Protect and stockpile

	topsoil for rehabilitation. • Implement erosion and stormwater management measures. • Store hazardous materials on bunded, impermeable surfaces. • Maintain spill kits on site and prohibit servicing of vehicles outside designated areas. • Implement dust suppression during dry and windy conditions. • Rehabilitate disturbed areas immediately following construction. • Appoint an Environmental Control Officer (ECO) to monitor compliance throughout construction.
Alternative comparison:	Alternative 3 benefits from a shorter access track, reducing road-related disturbance. However, this advantage is outweighed by the sensitivity of the northern development area, where construction would occur within Critically Endangered Knysna Sand Fynbos.
Cumulative impact post mitigation:	Residual impacts remain localised but permanent beneath the completed development footprint.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity loss.
Nature of impact:	Construction of the proposed 3 000 m ² main dwelling, associated access track and supporting infrastructure within the northern portion of the property would result in the direct and permanent loss of Critically Endangered Knysna Sand Fynbos, together with increased habitat fragmentation and disruption of ecological corridors within the Critical Biodiversity Area (CBA). The northern portion of the property supports the highest biodiversity sensitivity on the site and contains irreplaceable vegetation identified by the botanical specialist. The permanent loss of this vegetation cannot be adequately mitigated.
Extent and duration of impact:	Localised to the development footprint but permanent.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Very Low. Permanent habitat loss cannot be reversed.
Degree to which the impact may cause irreplaceable loss of resources:	High. Direct loss of Critically Endangered Knysna Sand Fynbos constitutes an irreplaceable loss of biodiversity.
Cumulative impact prior to mitigation:	Permanent loss of Critically Endangered Knysna Sand Fynbos, fragmentation of ecological corridors, reduction in habitat connectivity and degradation of biodiversity within the CBA.
Significance rating of impact prior to mitigation	Very High (Negative)

Degree to which the impact can be mitigated:	Low. Although construction impacts can be reduced, permanent loss of Critically Endangered vegetation cannot be mitigated.
Proposed mitigation:	• Restrict disturbance to the approved footprint. • Implement all Botanical Specialist recommendations. • Undertake search-and-rescue of suitable plant species. • Rehabilitate temporarily disturbed areas using indigenous vegetation. • Remove alien invasive species. • Appoint an ECO. • Protect surrounding vegetation through fencing and demarcation. Despite these measures, the permanent loss of Critically Endangered Knysna Sand Fynbos remains unavoidable.
Alternative comparison:	Although this alternative reduces the length of the internal access road, it results in direct impacts on Critically Endangered Knysna Sand Fynbos and is therefore significantly less environmentally acceptable than the Preferred Alternative.
Cumulative impact post mitigation:	Significant residual biodiversity impacts remain due to permanent habitat loss.
Significance rating of impact after mitigation	High (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	Construction of the proposed dwelling would generate temporary employment opportunities and demand for local goods and services. Although positive, these benefits are similar to Alternative 1 and are substantially outweighed by the environmental impacts associated with developing within the northern sensitive area.
Extent and duration of impact:	Local during construction.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Positive economic contribution through employment and procurement of local services.
Significance rating of impact prior to mitigation	High (Positive)
Degree to which the impact can be enhanced:	High.
Proposed enhancement:	Employ local labour, utilise local suppliers where practical, provide skills transfer and comply with labour legislation.
Alternative comparison:	The socio-economic benefits are comparable to Alternative 1 but do not justify the significantly greater biodiversity impacts associated with this alternative.
Cumulative impact post mitigation:	Continued positive contribution to the local economy during construction.

Significance rating of impact after mitigation	High (Positive)
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Aspect	Assessment
Potential visual impacts:	Visual and landscape character.
Nature of impact:	The proposed dwelling within the northern portion of the property would introduce a prominent built form into an area that currently remains largely natural. Although located adjacent to the existing access route, the development would permanently alter the natural landscape and reduce the visual integrity of the northern portion of the property.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Permanent alteration of landscape character and reduced visual quality.
Significance rating of impact prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	• Utilise low-profile architecture. • Use earth-toned, non-reflective finishes. • Retain existing indigenous vegetation wherever possible. • Implement indigenous landscaping. • Minimise external lighting. • Rehabilitate disturbed areas.
Alternative comparison:	While the northern location benefits from existing road access, it introduces greater visual change within a highly sensitive natural landscape than the Preferred Alternative.
Cumulative impact post mitigation:	Visual impacts reduced but remain greater than the Preferred Alternative.
Significance rating of impact after mitigation	Low (Negative)

Aspect	Assessment
Potential noise impacts:	Noise disturbance.
Nature of impact:	Construction activities would generate temporary noise associated with excavation, machinery and construction vehicles. Although the shorter access road reduces road construction noise, the overall construction programme remains comparable to Alternative 1.
Extent and duration of impact:	Local during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary increase in construction-related noise.

Significance rating of impact prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Restrict construction to daylight hours, maintain equipment, minimise idling and implement good construction practices.
Alternative comparison:	Similar to Alternative 1, although slightly reduced road construction noise due to the shorter access track.
Cumulative impact post mitigation:	Temporary and localised.
Significance rating of impact after mitigation	Low (Negative)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	Although no significant heritage resources have been identified within the proposed footprint, excavation activities always carry a small risk of exposing previously unknown archaeological or palaeontological material.
Extent and duration of impact:	Localised during construction.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Low likelihood of accidental disturbance.
Significance rating of impact prior to mitigation	Low (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Implement all Heritage Specialist recommendations, apply the Fossil Finds Procedure, stop work if heritage resources are encountered and notify Heritage Western Cape.
Alternative comparison:	Heritage impacts are comparable to the Preferred Alternative.
Cumulative impact post mitigation:	No significant cumulative heritage impacts are anticipated.
Significance rating of impact after mitigation	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	Construction activities would expose workers to hazards associated with excavation, heavy machinery, electrical installations and manual handling.
Extent and duration of impact:	Construction site during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.

Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary occupational risks.
Significance rating of impact prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Comply with the Occupational Health and Safety Act, provide PPE, maintain emergency procedures, first aid equipment and regular safety training.
Alternative comparison:	Comparable to Alternative 1.
Cumulative impact post mitigation:	Low residual occupational risks.
Significance rating of impact after mitigation	Low (Negative)

Aspect	Assessment
Potential waste management impacts:	Waste generation and management.
Nature of impact:	Construction would generate general construction waste, packaging, spoil material and limited hazardous waste. Improper management could result in pollution of soils and surrounding natural areas.
Extent and duration of impact:	Local during construction.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Temporary increase in waste generation during construction.
Significance rating of impact prior to mitigation	Medium (Negative)
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Separate recyclable waste, use covered waste containers, dispose of waste at authorised facilities, maintain good housekeeping and implement the EMPr waste management measures.
Alternative comparison:	Waste generation is similar to Alternative 1, although environmental consequences are greater because the development occurs within a more sensitive biodiversity area.
Cumulative impact post mitigation:	Waste impacts remain localised and manageable.
Significance rating of impact after mitigation	Low (Negative)

- (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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and stormwater management.
Nature of impact:	During operation, the proposed 3 000 m ² dwelling and associated infrastructure would permanently alter natural drainage patterns, increase impermeable surfaces and reduce infiltration within the northern portion of the property. Although the shorter access track would reduce the area of road disturbance compared to the southern alternatives, the permanent operational footprint would still increase stormwater runoff and the potential for groundwater contamination associated with the on-site wastewater system.
Extent and duration of impact:	Localised to the development footprint for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	Medium.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Increased impermeable surfaces, altered drainage patterns and potential groundwater contamination associated with long-term occupation.
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:	High.
Proposed mitigation:	• Maintain all stormwater management infrastructure. • Regularly inspect and maintain the wastewater system. • Maintain rainwater harvesting infrastructure. • Prevent pollution from fuels, chemicals and household waste. • Implement all EMP requirements throughout operation.
Alternative comparison:	The shorter access track reduces road-related impacts, but this advantage is outweighed by the environmental sensitivity of the northern development area.
Cumulative impact post mitigation:	Localised impacts remain but are effectively managed.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	Operation of the proposed dwelling within the northern portion of the property would result in the permanent loss of Critically Endangered Knysna Sand Fynbos, continued habitat fragmentation, increased human activity and long-term disturbance to ecological processes within the Critical Biodiversity Area. The permanent transformation of this vegetation type is considered irreversible and cannot be adequately mitigated.

Extent and duration of impact:	Localised but permanent for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Very Low.
Degree to which the impact may cause irreplaceable loss of resources:	High. Permanent loss of Critically Endangered Knysna Sand Fynbos represents an irreplaceable biodiversity loss.
Cumulative impact prior to mitigation:	Permanent fragmentation of ecological corridors, continued loss of habitat and degradation of biodiversity within the Critical Biodiversity Area.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	Very High (Negative)
Degree to which the impact can be mitigated:	Low. Mitigation cannot offset the permanent loss of Critically Endangered vegetation.
Proposed mitigation:	• Retain all remaining indigenous vegetation outside the approved footprint. • Implement long-term alien invasive species control. • Maintain ecological corridors wherever possible. • Prevent any further vegetation clearing. • Continue implementing all Botanical Specialist recommendations and the EMPr. • Restrict all domestic activities to the approved development footprint.
Alternative comparison:	Alternative 3 remains the least environmentally acceptable development alternative because it results in the permanent loss of Critically Endangered Knysna Sand Fynbos, contrary to specialist recommendations and biodiversity planning objectives.
Cumulative impact post mitigation:	Significant residual impacts remain unavoidable because permanent habitat loss cannot be mitigated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	High (Negative)

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	Operation of the proposed dwelling within the northern portion of the property would result in the permanent loss of Critically Endangered Knysna Sand Fynbos, continued habitat fragmentation, increased human activity and long-term disturbance to ecological processes within the Critical Biodiversity Area. The permanent transformation of this vegetation type is considered irreversible and cannot be adequately mitigated.
Extent and duration of impact:	Localised but permanent for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Very Low.
Degree to which the impact may cause irreplaceable loss of resources:	High. Permanent loss of Critically Endangered Knysna Sand Fynbos represents an irreplaceable biodiversity loss.
Cumulative impact prior to mitigation:	Permanent fragmentation of ecological corridors, continued loss of habitat and degradation of biodiversity within the Critical Biodiversity Area.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	Very High (Negative)
Degree to which the impact can be mitigated:	Low. Mitigation cannot offset the permanent loss of Critically Endangered vegetation.
Proposed mitigation:	• Retain all remaining indigenous vegetation outside the approved footprint. • Implement long-term alien invasive species control. • Maintain ecological corridors wherever possible. • Prevent any further vegetation clearing. • Continue implementing all Botanical Specialist recommendations and the EMPr. • Restrict all domestic activities to the approved development footprint.
Alternative comparison:	Alternative 3 remains the least environmentally acceptable development alternative because it results in the permanent loss of Critically Endangered Knysna Sand Fynbos, contrary to specialist recommendations and biodiversity planning objectives.
Cumulative impact post mitigation:	Significant residual impacts remain unavoidable because permanent habitat loss cannot be mitigated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	High (Negative)

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	Operation of the dwelling would provide limited long-term employment associated with property maintenance and landscaping and would contribute to local expenditure on goods and services. These benefits are comparable to Alternative 1 but do not outweigh the significant biodiversity impacts associated with the northern location.
Extent and duration of impact:	Local for the operational life of the development.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	Positive impact.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Positive contribution to the local economy through ongoing maintenance and service provision.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	Medium (Positive)
Degree to which the impact can be enhanced:	High.
Proposed enhancement:	Employ local contractors and service providers wherever practical and continue supporting local economic activity.
Alternative comparison:	The socio-economic benefits are comparable to Alternative 1 and the Preferred Alternative but do not justify the significant environmental impacts.
Cumulative impact post mitigation:	Continued positive local economic contribution.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Medium (Positive)

Aspect	Assessment
Potential noise impacts:	Noise disturbance.
Nature of impact:	Operational noise would be limited to normal residential activities, vehicle movements and routine maintenance. Noise levels would remain compatible with surrounding land uses.
Extent and duration of impact:	Localised for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Minor increase in residential noise levels.
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:	High.
Proposed mitigation:	Restrict maintenance activities to daytime hours, maintain equipment and avoid unnecessary noise generation.
Alternative comparison:	Operational noise impacts are comparable to Alternative 1 and the Preferred Alternative.
Cumulative impact post mitigation:	No significant cumulative noise impacts are anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	No significant operational impacts on identified heritage resources are anticipated. The completed development would, however, result in a greater permanent alteration of the natural landscape than the Preferred Alternative.
Extent and duration of impact:	Localised and permanent.
Probability of occurrence:	Improbable.
Degree to which the impact can be reversed:	Low.
Degree to which the impact may cause irreplaceable loss of resources:	Low.
Cumulative impact prior to mitigation:	Slight long-term alteration of landscape character.
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:	High.
Proposed mitigation:	Maintain indigenous landscaping and continue implementing the recommendations of the Heritage Impact Statement.
Alternative comparison:	Heritage impacts are comparable to Alternative 1 and the Preferred Alternative.
Cumulative impact post mitigation:	No significant cumulative heritage impacts anticipated.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	Routine operation and maintenance of the dwelling present normal residential safety risks associated with electrical systems, fire, maintenance activities and domestic infrastructure.
Extent and duration of impact:	Localised for the operational life of the development.
Probability of occurrence:	Unlikely.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Low operational health and safety risks.
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:	High.
Proposed mitigation:	Maintain electrical installations, fire protection systems and emergency procedures in accordance with applicable standards and the EMPr.
Alternative comparison:	Comparable to the Preferred Alternative and Alternative 1.
Cumulative impact post mitigation:	Residual operational risks remain low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

Aspect	Assessment
Potential waste management impacts:	Waste generation and management.
Nature of impact:	The dwelling would generate normal domestic waste, recyclable materials and limited hazardous household waste. Poor waste management could result in pollution of soils, groundwater and surrounding natural areas.
Extent and duration of impact:	Localised throughout the operational life of the development.
Probability of occurrence:	Probable.
Degree to which the impact can be reversed:	High.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Minor increase in domestic waste generation.
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:	High.
Proposed mitigation:	Separate recyclable waste, provide covered waste containers, dispose of waste through authorised service providers and maintain good housekeeping throughout operation.
Alternative comparison:	Waste generation is similar to Alternative 1; however, the environmental consequences of poor waste management would be greater because the development is located within a highly sensitive biodiversity area.

Cumulative impact post mitigation:	No significant cumulative waste management impacts are anticipated following implementation of mitigation measures.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	Low (Negative)

The No-Go Alternative

The No-Go Alternative entails that no residential development is undertaken on Portion 76 of Farm Uitzicht No. 216. The property would remain in its current undeveloped state, with no construction of the proposed main dwelling, internal access road or associated infrastructure.

Under this alternative, the applicant would not be able to exercise the primary residential land use rights associated with the property. Consequently, the potential socio-economic benefits associated with the proposed development, including temporary construction employment, local economic expenditure and limited long-term operational employment, would not be realised.

The existing natural environment, including indigenous vegetation, ecological corridors, landscape character and biodiversity, would remain unchanged.

Environmental Impacts

- No vegetation clearance or habitat transformation.
- No direct impacts on the Critical Biodiversity Area (CBA).
- No loss of Critically Endangered Knysna Sand Fynbos.
- No construction-related stormwater runoff, soil erosion or pollution.
- No construction noise, dust generation or traffic impacts.
- No visual intrusion associated with residential development.
- No socio-economic benefits associated with construction or operation.
- The existing ecological functioning, biodiversity and landscape character of the property would be maintained.

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

Aspect	Assessment
Potential impacts on geographical and physical aspects:	Surface water runoff, groundwater, soils and air quality.
Nature of impact:	Under the No-Go Alternative, no construction activities would take place. Consequently, there would be no earthworks, vegetation clearance, soil compaction, stormwater runoff associated with construction, groundwater contamination, dust generation or air quality

	impacts. Existing landforms, soils and drainage patterns would remain unchanged.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be mitigated:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	No cumulative impacts anticipated.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High or Very High):	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High or Very High):	No Impact

Aspect	Assessment
Potential impacts on biological aspects:	Habitat and biodiversity.
Nature of impact:	No vegetation would be cleared and no construction would occur. Indigenous vegetation, ecological corridors, the Critical Biodiversity Area (CBA), Goukamma Dune Thicket and Critically Endangered Knysna Sand Fynbos would remain undisturbed. Existing ecological processes and biodiversity would be maintained.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be reversed:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	No cumulative biodiversity impacts.
Significance rating of impact prior to mitigation:	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.
Significance rating of impact after mitigation:	No Impact

Aspect	Assessment
Potential impacts on socio-economic aspects:	Socio-economic impacts.
Nature of impact:	No construction would occur and, therefore, no temporary employment opportunities, procurement of local goods and services or associated economic benefits would be realised. The applicant would also be unable to exercise the

	residential development rights associated with the property.
Extent and duration of impact:	Local.
Probability of occurrence:	Definite.
Degree to which the impact can be reversed:	The loss of temporary economic opportunities would remain unless development proceeds in future.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	Loss of temporary employment opportunities and associated local economic benefits.
Significance rating of impact prior to mitigation:	Medium (Negative)
Degree to which the impact can be mitigated:	None while the No-Go Alternative remains in place.
Proposed mitigation:	No mitigation applicable.
Cumulative impact post mitigation:	Temporary socio-economic benefits remain unrealised.
Significance rating of impact after mitigation:	Medium (Negative)

Aspect	Assessment
Potential visual impacts:	Visual and landscape character.
Nature of impact:	No construction activities or built structures would be introduced. The existing natural landscape, vegetation and scenic character of the property would remain unchanged.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be reversed:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	No cumulative visual impacts.
Significance rating of impact prior to mitigation:	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.
Significance rating of impact after mitigation:	No Impact

Aspect	Assessment
Potential visual impacts:	Visual and landscape character.
Nature of impact:	No construction activities or built structures would be introduced. The existing natural landscape, vegetation and scenic character of the property would remain unchanged.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be reversed:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.

Cumulative impact prior to mitigation:	No cumulative visual impacts.
Significance rating of impact prior to mitigation:	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.
Significance rating of impact after mitigation:	No Impact

Aspect	Assessment
Potential impacts on cultural-historical aspects:	Heritage resources.
Nature of impact:	No ground disturbance would occur and, therefore, no impacts on archaeological, palaeontological or cultural heritage resources would be expected. Existing heritage resources would remain intact.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be reversed:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	No cumulative heritage impacts.
Significance rating of impact prior to mitigation:	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.
Significance rating of impact after mitigation:	No Impact

Aspect	Assessment
Potential occupational health and safety impacts:	Occupational health and safety.
Nature of impact:	No construction activities would take place and, therefore, there would be no construction-related occupational health and safety risks.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be reversed:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	No cumulative occupational health and safety impacts.
Significance rating of impact prior to mitigation:	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.

Significance rating of impact after mitigation:	No Impact
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Aspect	Assessment
Potential waste management impacts:	Waste generation and management.
Nature of impact:	No construction activities would occur and, therefore, no construction waste, hazardous waste or spoil material would be generated.
Extent and duration of impact:	No impact.
Probability of occurrence:	None.
Degree to which the impact can be reversed:	Not applicable.
Degree to which the impact may cause irreplaceable loss of resources:	None.
Cumulative impact prior to mitigation:	No cumulative waste impacts.
Significance rating of impact prior to mitigation:	No Impact
Degree to which the impact can be mitigated:	Not applicable.
Proposed mitigation:	No mitigation required.
Cumulative impact post mitigation:	No impact.
Significance rating of impact after mitigation:	No Impact

Section I

1. Conclusion and Recommendations

Based on the findings of the Basic Assessment process, specialist studies, public participation process and integrated alternatives assessment, the following conclusions are reached:

- The Preferred Alternative, comprising the construction of a single 1 000 m² main dwelling within the south-western portion of Portion 76 of Farm Uitzicht No. 216, represents the most appropriate and balanced development option. The substantially reduced development footprint limits vegetation clearance, minimises visual intrusion, reduces construction-related disturbance and confines development to the less sensitive Goukamma Dune Thicket vegetation type.
- Although the preferred alternative remains located within a Critical Biodiversity Area (CBA), the reduced footprint, together with the implementation of the recommended mitigation measures and Environmental Management Programme (EMPr), results in the lowest overall environmental impact of all the development alternatives assessed.
- Alternative 1 (3 000 m² main dwelling in the south-western portion) was found to be technically feasible; however, the substantially larger building footprint would result in increased vegetation clearance, greater habitat disturbance, higher visual impacts and a larger overall environmental footprint than the Preferred Alternative. It is therefore not recommended.
- Alternative 2, comprising a 3 000 m² main dwelling together with a 1 200 m² farm manager's dwelling, was rejected because the introduction of a second development node would result in unnecessary habitat fragmentation, increased impacts on the Critical Biodiversity Area, and direct impacts on Critically Endangered Knysna Sand Fynbos, resulting in an unacceptable environmental outcome.
- Alternative 3, which proposed relocating the main dwelling to the northern portion of the property adjacent to Kerk Laan (Bushy Way), was considered in response to comments received during the public participation process. Although this option would reduce the length of the internal access road, specialist investigations confirmed that the northern portion supports Critically Endangered Knysna Sand Fynbos. Development within this area would result in the permanent and irreversible loss of an irreplaceable ecosystem and would conflict with the objectives of the National Environmental Management: Biodiversity Act (Act 10 of 2004), the National List of Threatened Ecosystems (2022), the Western Cape Biodiversity Spatial Plan, and biodiversity conservation objectives for the Knysna Protected Environment. Accordingly, Alternative 3 is not considered environmentally acceptable.
- The No-Go Alternative would avoid all development-related environmental impacts and maintain the property in its current natural condition. However, it would prevent the applicant from exercising the lawful residential development rights associated with the property and would not provide any of the socio-economic benefits associated with the proposed development. While environmentally preferable in isolation, it is not considered a reasonable or balanced outcome when all environmental, social and economic factors are considered.
- Taking into account the findings of the specialist assessments, engineering investigations, public participation process, comments received from commenting authorities and interested and affected parties, the proposed mitigation measures contained in the Environmental Management Programme (EMPr), and the comparative assessment of all reasonable alternatives, it is concluded that the Preferred Alternative represents the most sustainable and defensible development option. It is therefore recommended that Environmental Authorisation be granted for the proposed development, subject to

appropriate conditions of approval and the implementation of all specialist recommendations and the approved EMPr.

2. Recommended Mitigation and Conditions of Authorisation

Cross-cutting Management Measures (Applicable to All Phases)

- An independent Environmental Control Officer (ECO) shall be appointed prior to the commencement of any site clearing or construction activities. The ECO shall monitor compliance with the approved Environmental Management Programme (EMPr), specialist recommendations and all conditions of the Environmental Authorisation. The ECO shall undertake regular site inspections and submit compliance reports to the Applicant and Competent Authority as required.
- The mitigation hierarchy must be applied throughout the project lifecycle by prioritising avoidance, minimisation, rehabilitation and, only where necessary, offsets. Disturbance must be limited to the approved development footprint and all temporary disturbance areas shall be rehabilitated immediately following construction.
- Based on the findings of the specialist studies, the integrated environmental assessment, the alternatives assessment and comments received during the public participation process, the Preferred Alternative, comprising the construction of a single 1 000 m² main dwelling within the south-western portion of Portion 76 of Farm Uitzicht No. 216, is considered the most appropriate and balanced development option.
- The preferred layout significantly reduces the development footprint compared to previous proposals, thereby minimising vegetation clearance, visual impacts, construction disturbance and associated environmental impacts. Although development will still occur within a Critical Biodiversity Area, the selected layout avoids direct impacts on the more sensitive northern portion of the property supporting Critically Endangered Knysna Sand Fynbos.
- All mitigation measures contained within the specialist reports and this EMPr shall be implemented throughout all phases of the development.

Pre-construction Phase

Timing of Construction

- Construction should preferably be undertaken outside the primary breeding season (1 June–30 November), where practical, to minimise disturbance to sensitive fauna.

Site Demarcation

- Clearly demarcate the approved development footprint, access route and all no-go areas before construction commences.
- Install temporary fencing and appropriate signage around environmentally sensitive areas.
- No construction activities, storage of materials or vehicle movement shall occur outside the approved footprint.

Botanical Search-and-Rescue

- A suitably qualified botanist shall undertake a search-and-rescue exercise for Species of Conservation Concern where required.

- Indigenous plants suitable for transplantation shall be relocated to an on-site nursery for use during rehabilitation.

Fauna Protection

- Prior to vegetation clearing, the development footprint shall be inspected for reptiles, amphibians and other low-mobility fauna.
- Any fauna encountered shall be relocated by a suitably qualified specialist where necessary.

Alien Invasive Species

- Prepare and implement an Alien Invasive Species Management Plan in accordance with the National Environmental Management: Biodiversity Act and CARA.

Construction Phase

Site Establishment and Earthworks

- Restrict all construction activities to the approved footprint.
- Minimise vegetation clearance and avoid unnecessary disturbance.
- Retain existing indigenous vegetation wherever possible.
- Protect all no-go areas throughout construction.

Foundations and Earthworks

- All earthworks shall comply with the recommendations contained in the Geotechnical Investigation.
- Earthworks shall follow natural contours as far as practical.
- Retaining structures shall be designed by a Professional Engineer where required.
- Excavations shall be stabilised to prevent collapse and erosion.

Roads and Stormwater

- The internal access road shall follow the approved alignment.
- Existing drainage patterns shall be maintained where practical.
- Stormwater shall be dispersed naturally to prevent concentration of flows.
- Erosion control measures shall be implemented immediately after earthworks.
- Rainwater harvesting systems shall be installed as part of the development.

Soil, Erosion and Pollution Control

- Topsoil shall be stripped, stockpiled separately and reused during rehabilitation.
- Stockpiles shall be protected from erosion.
- Dust suppression shall be implemented during dry and windy conditions.
- Cement mixing shall only occur within designated impermeable areas.
- Fuel, oils and chemicals shall be stored within bunded areas.
- Spill kits shall be available on-site at all times.
- No servicing of construction vehicles shall occur outside designated areas.

Biodiversity Protection

- No blanket clearing shall be permitted.
- Disturbance shall be confined to the approved footprint.
- Alien invasive vegetation shall be removed during construction.
- Disturbed areas shall be progressively rehabilitated using indigenous vegetation.
- An ECO shall monitor vegetation clearing throughout construction.

Waste Management

- Waste shall be separated where practical for recycling.
- General waste shall be stored in covered containers.
- Hazardous waste shall be disposed of at licensed facilities.
- No waste shall be buried or burned on-site.

Heritage

- Should any archaeological material, fossils or human remains be discovered during construction, all work shall cease immediately within the affected area.
- Heritage Western Cape shall be notified immediately, and the Fossil Finds Procedure shall be implemented.

Visual Management

- Construction materials shall be stored neatly.
- Construction areas shall be kept clean.
- Temporary construction impacts shall be minimised through good housekeeping.

Water Supply, Wastewater and Services

- Rainwater harvesting shall remain the primary water supply.
- Borehole water shall be tested before domestic use.
- Water conservation measures shall be implemented throughout operation.
- Wastewater shall be managed through the approved conservancy tank system.
- Conservancy tanks shall be inspected and emptied regularly by an authorised contractor.
- Stormwater shall be managed in accordance with Sustainable Drainage System (SuDS) principles.

Operational Phase

Biodiversity Management

- Indigenous vegetation shall be maintained.
- Alien invasive plants shall be controlled on an ongoing basis.
- No additional vegetation clearing shall occur outside the authorised footprint.

Waste Management

- Household waste shall be separated for recycling where possible.
- Waste shall be removed regularly by an authorised waste service provider.
- No dumping shall occur on-site.

Lighting

- External lighting shall be kept to the minimum required for safety.
- Downward-facing, low-intensity lighting shall be utilised to minimise impacts on fauna and the surrounding landscape.

Fire Management

- Rainwater storage and the swimming pool shall remain available as emergency firefighting water supplies.
- Firebreaks shall be maintained where necessary.
- Appropriate firefighting equipment shall be kept on-site.
- Membership of the local Fire Protection Association is recommended.

Monitoring

- The Applicant shall ensure continued implementation of the approved EMPr throughout the operational life of the development.
- Any environmental incidents shall be addressed immediately and corrective actions implemented.

3. EAP Recommendation

Based on the findings of the specialist studies, the integrated environmental assessment, the engineering investigations, the alternatives assessment and the comments received during the public participation process, the Environmental Assessment Practitioner (EAP) is of the opinion that the Preferred Alternative, comprising the construction of a single 1 000 m² main dwelling within the south-western portion of Portion 76 of Farm Uitzicht No. 216, represents the most appropriate and balanced development option.

The preferred alternative was identified following the assessment of all reasonable and feasible alternatives and reflects a substantial reduction in the proposed development footprint compared to previous iterations of the project. The reduced footprint limits vegetation clearance, visual intrusion, construction disturbance and associated environmental impacts while enabling the applicant to exercise the primary residential land use rights associated with the property.

It is acknowledged that the preferred development remains located within a Critical Biodiversity Area (CBA) and that the construction of the internal access road will result in unavoidable environmental impacts. However, the specialist studies concluded that these impacts can be reduced to acceptable levels through the implementation of the recommended mitigation measures and the approved Environmental Management Programme (EMPr).

Alternative 3, which proposed relocating the development to the northern portion of the property adjacent to Kerk Laan (Bushy Way), was carefully assessed following comments received from commenting authorities and interested and affected parties during the public participation process. Although this alternative offered certain practical advantages, including a shorter access route, the botanical specialist confirmed that the northern development area supports Critically Endangered Knysna Sand Fynbos. Development within this area would result in the permanent and irreversible loss of an irreplaceable ecosystem and would conflict with national biodiversity conservation objectives. Consequently, Alternative 3 is not supported.

The Environmental Assessment Practitioner is therefore satisfied that the Preferred Alternative represents the most appropriate balance between environmental protection, technical feasibility, visual integration, biodiversity considerations, engineering constraints and the applicant's lawful development rights.

The EAP acknowledges the biodiversity concerns raised by the Directorate: Biodiversity Conservation, SANParks and other commenting authorities. These concerns have been fully considered through the iterative Basic Assessment process and have resulted in substantial refinement of the proposal, including a significant reduction in the dwelling footprint, avoidance of the primary dune system, refinement of the layout, comprehensive specialist investigations and the assessment of multiple on-site alternatives. Having considered the environmental risks alongside the Applicant's lawful residential development rights, the EAP is satisfied that the Preferred Alternative represents the least environmentally damaging practicable alternative available on the property.

Accordingly, it is recommended that Environmental Authorisation be granted for the Preferred Alternative, subject to the implementation of all mitigation measures contained in the specialist studies, the approved Environmental Management Programme (EMPr), and any additional conditions that the Competent Authority may deem appropriate.

4. Recommended Conditions of Environmental Authorisation

Then include wording similar to the following:

The Environmental Assessment Practitioner (EAP), having considered the findings of the specialist studies, engineering investigations, the public participation process and the integrated environmental assessment, recommends that should Environmental Authorisation be granted, it should be subject to, but not limited to, the following conditions:

- The approved development shall be undertaken strictly in accordance with the approved layout contained in the Environmental Authorisation.
- The Environmental Management Programme (EMPr) shall form part of the Environmental Authorisation and shall be implemented throughout all phases of the development.
- An independent Environmental Control Officer (ECO) shall be appointed prior to commencement of any site clearing or construction activities and shall monitor compliance with the Environmental Authorisation, EMPr and specialist recommendations.
- All mitigation measures contained in the specialist studies shall be implemented.
- Search-and-rescue of Species of Conservation Concern shall be undertaken prior to vegetation clearing where required by the specialist.
- Alien invasive vegetation shall be controlled throughout the construction and operational phases.
- A Fossil Finds Procedure and Chance Finds Procedure shall be implemented during construction.
- Construction activities shall remain within the approved development footprint, and all no-go areas shall be clearly demarcated prior to commencement.
- Stormwater management, erosion control and rehabilitation measures shall be implemented in accordance with the EMPr and Geotechnical Report.
- All recommendations contained in the Botanical, Terrestrial Biodiversity, Aquatic Compliance Statement, Heritage Statement, Geotechnical Report and other specialist reports shall be regarded as binding conditions of implementation.