LORNAY
ENVIRONMENTAL CONSULTING

PRE-APPLICATION
BASIC ASSESSMENT REPORT

Proposed Residential dwellings and associated infrastructure
Portion 4 of the Farm 643, Stanford, Caledon RD

June 2026

Consultant:

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Lornay Environmental Consulting Pty Ltd**|** Reg 2015/445417/07

Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

Western Cape Government

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APRIL 2024

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

Proposed Residential dwellings and associated infrastructure on Portion 4 of the Farm 643, Stanford, Caledon RD

EXECUTIVE SUMMARY

Background

Portion 4 of Farm Middelburg No. 643 is situated to the west of the town of Stanford within the Overstrand Local Municipality, Western Cape Province. The property is bounded to the north by the Klein River and is accessed via Wortelgat Road. The property measures approximately 13.53 hectares and is characterised by largely fallow land that has not been under active cultivation for more than a decade. The vegetation is moderately transformed and comprises a mosaic of dense fynbos thickets interspersed with areas of open shrubland, typical of Agulhas Limestone Fynbos.

The surrounding land use is predominantly agricultural, with adjacent properties comprising a mix of low-density residential dwellings and active farming operations. The broader landscape retains a rural character, with gradual residential expansion occurring in the area.

The applicant, Cheddles (Pty) Ltd, appointed Lornay Environmental Consulting (Pty) Ltd as the independent Environmental Assessment Practitioner (EAP) to undertake a Basic Assessment process in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the Environmental Impact Assessment Regulations, 2014 (as amended). The competent authority is the Western Cape Government: Department of Environmental Affairs and Development Planning (DEA&DP).

Description of the Proposed Development

The proposed development will occupy an area of approximately 4 950 m² within the broader 13.53-hectare property and consists of two single residential dwellings, a manager's cottage, a gatehouse, and associated infrastructure, including a jetty. The development has been designed to integrate with the natural environment and to minimise impacts on the sensitive estuarine and biodiversity resources present on the property.

Residential Buildings

The development includes two single-storey residential dwellings designed to be visually and environmentally compatible with the surrounding landscape for use by the owners.

- **House 1** will be partially constructed within the disturbed footprint of an existing road, thereby minimising vegetation clearance. The total building footprint will be approximately 1 662 m² and will be located above the 5 m contour line. Associated recreational features, including a swimming pool, firepit, and pedestrian pathways, are proposed below the 5 m contour line. These elements will utilise previously disturbed areas and will collectively occupy a footprint of approximately 100 m².
- **House 2** will be located outside of existing road infrastructure and will require limited clearance of indigenous vegetation. The building footprint will be approximately 1 220 m², with access provided via an upgraded existing access road. The layout of House 2 has been refined through the alternatives assessment process to ensure that it is positioned outside the 50 m no-go buffer associated with confirmed Mute Winter Katydid habitat and above the 5 m contour line.

Manager's Cottage

A manager's cottage is proposed to accommodate on-site management and maintenance personnel. The cottage will occupy approximately 1 000 m² and will be located within a previously disturbed area. Its design will be consistent with the architectural principles applied to the main dwellings.

Gatehouse

A gatehouse (approximately 595 m²) is proposed at the main access point to the property to provide security and visitor management functions. The structure will be located within a previously disturbed area and will be designed in keeping with the character of the broader development.

Access Roads

Internal access roads will be constructed and/or upgraded, primarily utilising existing disturbed pathways to minimise vegetation clearance and disturbance to natural habitats. The roads will be kept as informal jeep tracks, similar to existing tracks on the property, and may include natural surfacing or grass blocks where necessary. The total length of internal access roads will be less than 1 000 m, with a maximum width of 4 m.

Jetty and Estuarine Access

A jetty with a footprint of approximately 53 m², together with an associated footpath, is proposed extending northward from the residential cluster toward the Klein River Estuary. These are the only development components that encroach into the EFZ of the Klein River Estuary, and their combined footprint has been confined to the minimum extent necessary to provide access to the river.

- A jetty with a development footprint of approximately 53 m² is proposed. The jetty is designed in line with the "Specific Conditions and Structure Specifications" as issued by Cape Nature in line with the Application to Enter into a Lease Agreement in terms of the Sea Shore Act, Act 1935 (Act No 21 of 1935).
- An unpaved pathway with a development footprint of approximately 320 m² will facilitate access to the proposed jetty. It is important to note that, the pathway will be less than 3m in width and less than 1000 m in length.

Associated Infrastructure

Water

To ensure reliable water availability and pressure regulation, storage tanks will be installed within existing disturbed area of approximately 26 m² situated on the western portion of the property. Water will be extracted from the borehole located near the entrance of the property, the water will be for household use, and therefore no authorisation is required in terms of National Water Act as it will fall under Schedule 1 – Reasonable Domestic Use.

Electricity

The dwellings will operate off the grid with the use of roof mounted solar installations.

Sewage

A minimum 6 000-litre sealed conservancy tank will be provided, sized to adequately accommodate effluent volumes from the residential units. The tank will be connected to the internal sewer drainage network of the buildings to collect

both sewage and greywater in a secure, watertight system. The contents of the conservancy tank will be periodically emptied by a licensed private waste contractor and disposed of at a registered municipal wastewater treatment facility.

Solid Waste

The solid waste will be collected onsite and disposed of at a registered facility by the operator as required.

Environmental Sensitivities

Terrestrial Biodiversity

Specialist studies confirmed that Portion 4 of Farm 643 supports a mosaic of natural to semi-natural terrestrial vegetation, largely influenced by historical agricultural disturbance. While the vegetation present does not constitute intact or pristine examples of the regionally mapped vegetation types, the botanical specialist confirmed that it remains ecologically functional and capable of supporting terrestrial biodiversity. The overall botanical impacts were assessed as low negative, subject to the implementation of recommended mitigation measures, including the restriction of vegetation clearance to the minimum necessary, rehabilitation of disturbed areas with locally indigenous fynbos plant species, and prohibition on the use of alien invasive plant species for landscaping.

Faunal Biodiversity

Of particular significance is the confirmed presence of occupied and suitable habitat for the Mute Winter Katydid (*Brinckiella aptera*), a listed Species of Conservation Concern under the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEM:BA). The faunal specialist identified this habitat as an area of Very High Sensitivity and recommended the establishment of a minimum 50 m no-go buffer surrounding all mapped katydid habitat. These areas are to be strictly avoided during construction and operation, with no infrastructure development, hard road surfaces, or landscaping activities permitted within the buffer to prevent habitat loss, fragmentation, and disturbance. The preferred development layout (Alternative 4) has been refined to ensure that House 2 and all associated infrastructure are positioned outside this no-go buffer.

Aquatic Biodiversity

According to the national web-based environmental screening tool (DFFE, 2026), the Combined Aquatic Biodiversity Theme Sensitivity of the site is classified as "Very High". This classification is triggered by the site's location within the mapped extent of the Klein River Estuary and within Aquatic Critical Biodiversity Areas (CBA 1) as designated by the Western Cape Biodiversity Spatial Plan (WCBSP, 2023).

An Aquatic Biodiversity Compliance Statement (ABCS) was prepared by Delta Ecology (Morton & van Zyl, 2026) to assess the aquatic biodiversity implications of the proposed development. Following a site verification assessment and ground-truthing, the ABCS confirmed that the proposed residential development footprint is located outside of any sensitive freshwater environments, outside of freshwater wetland and riverine systems regulated as inland watercourses under NEMA, and more than 32 m from the nearest freshwater feature. The Estuarine Functional Zone (EFZ) boundary, delineated approximately 45 m downslope from the majority of the residential dwellings' footprint, is associated with the Klein River Estuary and is regulated under the Integrated Coastal Management Act (Act No. 24 of 2008) (ICMA) and associated estuarine management frameworks rather than inland watercourse provisions. The aquatic biodiversity sensitivity of the development footprint has accordingly been verified as "Low."

The Klein River Estuary is a large temporary open/closed estuarine-lake system covering approximately 1 153 ha, classified as a national priority estuary and recognised as an Aquatic CBA 1 under the WCBSP (2023). The estuary holds a

Present Ecological State (PES) of C (Moderately Modified), a High Wetland Ecological Status (WES), and an Estuary Importance Score (EIS) of 93, ranking it 5th most important in South Africa in terms of botanical value, fish biodiversity, and bird biodiversity. These attributes underscore the importance of stringent environmental management for all activities undertaken in proximity to the estuary.

The only development components that encroach into the EFZ are the pedestrian footpath and the jetty. Based on the limited footprint and localised nature of the proposed jetty infrastructure, significant long-term impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided that construction and ongoing maintenance activities are undertaken in accordance with the recommended mitigation measures set out in the Aquatic Biodiversity Compliance Statement, the Klein River Estuarine Management Plan, and the Maintenance Management Plan (MMP) prepared for this development. Applicable buffer distances determined using the Buffer Zone Tool (Macfarlane & Bredin, 2017) are 25 m during construction and 15 m during the operational phase.

Alternatives

Alternative 1 (non-preferred)

Alternative 1 proposed the placement of two residential dwellings and associated infrastructure extending below the 5 m contour of the Klein River. Specialist assessments identified this alternative as environmentally and practically constrained due to increased flood risk and vulnerability to fluctuating riverine water levels; encroachment into sensitive riparian and aquatic zones; and increased long-term maintenance and safety risks, particularly under projected climate change conditions. This alternative was therefore not pursued further.

Alternative 2 (non-preferred)

Alternative 2 relocated the residential dwellings above the 5 m contour, thereby reducing flood risk. However, faunal specialist investigations confirmed that House 2 would be located within confirmed Mute Winter Katydid habitat, resulting in direct habitat loss for a Species of Conservation Concern. In addition, this alternative retained multiple jetties and slipways, increasing disturbance within the riverine and estuarine environment. Despite improvements in flood resilience, the biodiversity impacts associated with this alternative are considered unacceptable and it is therefore regarded as non-preferred.

Alternative 3 (non-preferred)

Alternative 3 represented an evolution of the layout in response to specialist findings. Key features included: relocation of House 2 outside the 50 m no-go buffer associated with confirmed Mute Winter Katydid habitat and above the 5 m contour line; concentration of access roads within existing disturbed areas; removal of additional jetties to result in a single jetty and slipway; and retention of the majority of the property in a natural or near-natural state. The botanical specialist confirmed, through an addendum assessment, that the Alternative 3 layout does not increase botanical or terrestrial biodiversity impacts and that the overall impact remains low negative, subject to mitigation. However, further design refinement led to the identification of Alternative 4 as the preferred option.

Alternative 4 (Preferred)

Alternative 4 represents the final preferred development layout, incorporating all specialist recommendations arising from the assessment of Alternatives 1 through 3. Key refinements relative to Alternative 3 include the removal of the slipway component, retaining only the single jetty (53 m²) for controlled low-impact access which will be in a form of an informal pathway to the Klein River Estuary. The development footprint under this alternative is approximately 4 950 m², representing the least environmentally impactful configuration that meets the applicant's objectives. All specialist studies

confirmed that Alternative 4 is acceptable from a biodiversity, aquatic, and animal species perspective, subject to the implementation of recommended mitigation measures.

No-Go Alternative

Under the No-Go Alternative, no development would occur on Portion 4 of Farm 643. This option would result in the least direct environmental impact, as the site would remain in its current undeveloped state. However, risks associated with improper land management or unregulated development exist under this scenario. In addition, this alternative does not meet the applicant's objectives for the establishment of a family-oriented residential development and would result in no formalised land management or environmental controls being implemented on the property.

Specialist Studies Conducted

The following specialist studies informed this Basic Assessment Report:

- **Terrestrial Biodiversity Impact Assessment** — assessed vegetation types, ecological sensitivity, and potential impacts on plant species and terrestrial biodiversity.
- **Terrestrial Biodiversity Addendum** — confirmed that the revised Alternative 4 layout remains acceptable from a botanical perspective, with low to very low impacts, subject to mitigation.
- **Faunal Impact Assessment** — identified the presence of animal species of conservation concern, including the Mute Winter Katydid, and informed the delineation of no-go areas and the refinement of the preferred development layout through the repositioning of House 2.
- **Aquatic Biodiversity Compliance Statement** (Morton & van Zyl, 2026 — Delta Ecology): verified the site sensitivity classification, delineated the EFZ of the Klein River Estuary, assessed the status of the Klein River Estuary, and provided mitigation measures and buffer zone determinations for all activities within proximity to the estuarine environment.

Application Process

This document constitutes the Final Basic Assessment Report (BAR) prepared to support the environmental authorisation application submitted to DEA&DP. The BAR has been informed by a comprehensive suite of specialist studies and incorporates a new preferred layout (referred to as Alternative 4) and the Maintenance Management for the long-term management of infrastructure within and adjacent to the Klein River Estuary EFZ.

Interested and Affected Parties (I&APs) have been provided with an opportunity to review the proposed development and to submit comments through the public participation process conducted in accordance with the EIA Regulations, 2014 (as amended). All comments received have been recorded and addressed in the Final BAR. Therefore, this document, as it currently stands incorporates all the information which was recommended from the Public Participation Process.

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
    Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	**GEORGE REGIONAL OFFICE:** **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)** (Central Karoo District & Garden Route District)
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan.

	• Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

Appendix List	
Appendix A | Locality	
Appendix A	Locality Map
Appendix B | Alternatives	
Appendix B1	Alternative Layout 1
Appendix B2	Alternative Layout 2
Appendix B3	Alternative Layout 3
Appendix B4	Alternative Layout 4 Preferred
Appendix C | Photo Report	
Appendix C	Photo Report
Appendix D | GIS Mapping	
Appendix D	BGIS Mapping
Appendix E | Public Participation	
Appendix E	Proof of PPP
Appendix F | EMPr	
Appendix F	Environmental Management Programme (EMPr)
Appendix G | Specialists	
Appendix G1a	Terrestrial Biodiversity Impact Assessment
Appendix G1b	Terrestrial Biodiversity Impact Assessment Addendum
Appendix G1c	Terrestrial Biodiversity Impact Assessment Addendum – Alternative 4
Appendix G2a	Faunal Impact Assessment
Appendix G2b	Faunal Impact Assessment Addendum
Appendix G3	Aquatic Compliance Statement
Appendix H | DFFE Site Screening	
Appendix H1	Screening Tool Report
Appendix H2	Site Sensitivity Verification Report (SSVR)
Appendix I | Service Confirmation	
Appendix I	Pending
Appendix J | Maintenance Management Plan (MMP)	
Appendix J	MMP

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		GEORGE OFFICE: REGION 3
	(City of Cape Town, West Coast District	(Cape Winelands District & Overberg District) X	(Central Karoo District & Garden Route District)

Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Cheddles Pty Ltd	
Name of contact person for Applicant/Proponent (if other):	Hedley Gerhardt	
Company/ Trading name/State Department/Organ of State:	Cheddles Pty Ltd	
Company Registration Number:	2023/506072/07	
Postal address:	6 Frere Road, Sea Point,	
	Cape Town	Postal code: 8000
Telephone:	( )	Cell: +27(0) 72 778 6392
E-mail:	hedleyg@gmail.com	Fax: ( )
Company of EAP:	Lornay Environmental Consulting	
EAP name:	Michelle Naylor	
Postal address:	Unit 5/1F Hemel & Aarde Wine Village,	
	Hermanus	Postal code: 7200
Telephone:	( )	Cell: +27(0) 83 245 6556
E-mail:	michelle@lornay.co.za	Fax: ( )
Qualifications:	MSc (Rhodes University)	
EAP registration no:	2019/698	
Duplicate this section where there is more than one landowner Name of landowner:	As above	
Name of contact person for landowner (if other):		
Postal address:		
		Postal code:
Telephone:	( )	Cell:
E-mail:		Fax: ( )
Name of Person in control of the land:	As above	
Name of contact person for person in control of the land:		
Postal address:		
		Postal code:
Telephone:	( )	Cell:
E-mail:		Fax: ( )

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Overstrand Municipality
Contact person:	Chester Arendse
Postal address:	Hermanus

		Postal code: 7200
Telephone	028 384 8320	Cell: N/A
E-mail:	carendse@overstrand.gov.za	Fax: N/A

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INCLUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	X	Expansion	
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				

The proposed site can be considered a combination of both a greenfield and brownfield site. While the majority of the farm remains undeveloped and has not been disturbed within the last ten years, indicating characteristics of a greenfield site, there are also existing internal roads and access paths present on the property. These features reflect limited historical disturbance and align with a brownfield context in those specific areas. The existing internal roads will be utilised as far as possible in the design process to minimise additional environmental impact.

~~3.~~	**~~For Linear activities or developments~~**	
~~3.1.~~	~~Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:~~	
~~3.2.~~	~~Development footprint of the proposed development for all alternatives.~~	~~m²~~
~~3.3.~~	~~Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.~~	
~~3.4.~~	~~Indicate how access to the proposed routes will be obtained for all alternatives.~~	
~~3.5.~~	~~SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives~~	
~~3.6.~~	**~~Starting point co-ordinates for all alternatives~~**	
	~~Latitude (S)~~	~~º~~ ~~‘~~ ~~“~~
	~~Longitude (E)~~	~~º~~ ~~‘~~ ~~“~~
	~~Middle-point co-ordinates for all alternatives~~	
	~~Latitude (S)~~	~~º~~ ~~‘~~ ~~“~~
	~~Longitude (E)~~	~~º~~ ~~‘~~ ~~“~~
	~~End point co-ordinates for all alternatives~~	
	~~Latitude (S)~~	~~º~~ ~~‘~~ ~~“~~
	~~Longitude (E)~~	~~º~~ ~~‘~~ ~~“~~
~~Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.~~		
4.	**Other developments**	

<table>
<tr><td>4.1.</td><td>Property size(s) of all proposed site(s):</td><td>135300 m^2
(13.53 ha)</td></tr>
<tr><td>4.2.</td><td>Developed footprint of the existing facility and associated infrastructure (if applicable):</td><td>0 m^2</td></tr>
<tr><td>4.3.</td><td>Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:</td><td>~ 5000 m^2
(0.5 ha)

<table><tr><th>Development component</th><th>Footprint (m^2)</th></tr><tr><td>House 1</td><td>1662</td></tr><tr><td>House 2</td><td>1220</td></tr><tr><td>Manager’s Cottage</td><td>1000</td></tr><tr><td>Gatehouse</td><td>595</td></tr><tr><td>Swimming pool and fire pit</td><td>100</td></tr><tr><td>Jetty</td><td>53</td></tr><tr><td>Informal access footpath</td><td>320</td></tr><tr><td>Total</td><td>4950</td></tr></table></td></tr>
<tr><td>4.4.</td><td colspan="2">Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).</td></tr>
</table>

Cheddles (Pty) Ltd (hereinafter referred to as the Applicant), has appointed Lornay Environmental Consulting (Pty) Ltd as the independent Environmental Assessment Practitioner (EAP) to undertake the Environmental Authorisation process in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended).

The proposed development comprises the establishment of a residential development and associated infrastructure on Portion 4 of the Farm Middelburg 643, located adjacent to the Klein River Estuary, north of Wortelgat Road, within the Overstrand Local Municipality, Western Cape. The site is bounded to the north by the Klein River, to the south by Wortelgat Road, and is traversed by an existing power line along its southern extent. The property falls within the Rural Risk Zone and Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality.

The proposed development components, as indicated on the preferred layout plan (Alternative 4), are described below together with their respective footprint areas:

Primary Residential Structures

Two primary residential dwellings are proposed within the central-northern portion of the site, positioned on higher-lying ground above the 5 m contour line and outside of the delineated Estuarine Functional Zone (EFZ) of the Klein River Estuary.

- **House 1**, situated in the upper-central portion of the site, has a proposed footprint of approximately **1662 m²** and includes the primary residential unit together with associated ancillary structures and a swimming pool.

- **House 2** is proposed to the east of House 1, similarly positioned outside of the EFZ, with a proposed footprint of approximately **1220 m².** Both dwellings are accessed via an internal road network connecting to the existing farm access tracks on the property.

Manager's Cottage

A manager's cottage with a proposed footprint of approximately **1000 m²** is situated in the south-western portion of the site, in close proximity to the existing access gate off Wortelgat Road. This structure is located entirely within the terrestrial environment, well removed from the Klein River Estuary and its associated buffer zones.

Gatehouse

A gatehouse with a proposed footprint of approximately **595 m²** is proposed at the primary entrance to the development off Wortelgat Road, forming part of the controlled access arrangement for the residential development.

Access Road

An internal access road will be constructed and / or upgraded, using existing disturbed pathways to minimise vegetation disturbance. The applicant will aim to retain the internal access roads as informal as possible, as per the current roads on site. Some natural surface material or grass blocks may have to be added in sections. All the access roads will have a combined length of less than **1000 m** and a maximum width of **4m**.

Associated Infrastructure

Associated infrastructure, including a swimming pool, fire pit, and footpaths, collectively accounts for an additional approximately **420 m²** of development footprint. These elements are located within the terrestrial portion of the site and have been positioned to avoid encroachment into the EFZ.

Jetty and Estuarine Access

A jetty with a footprint of approximately **53 m²,** together with an associated footpath, is proposed extending northward from the residential cluster toward the Klein River Estuary. These are the only development components that encroach into the EFZ of the Klein River Estuary, and their combined footprint has been confined to the minimum extent necessary to provide access to the river.

- A **jetty** with a development footprint of approximately **53 m²** is proposed. The jetty is designed in line with the "Specific Conditions and Structure Specifications" as issued by Cape Nature in line with the Application to Enter into a Lease Agreement in terms of the Sea Shore Act, Act 1935 (Act No 21 of 1935).

- An unpaved **pathway** with a footprint of approximately **320 m²** will facilitate access to the proposed jetty. It is important to note that, the pathway will be less than 3m in width and less than 1000 m in length.

Water

To ensure reliable water availability and pressure regulation, storage tanks will be installed within existing disturbed area of approximately **26 m²** situated on the western portion of the property. Water will be extracted from the borehole located near the entrance of the property, the water will be for household use, and therefore no authorisation is required in terms of National Water Act as it will fall under Schedule 1 – Reasonable Domestic Use.

Electricity

The dwellings will operate off the grid with the use of roof mounted solar installations.

Sewage

A minimum 6 000-litre sealed conservancy tank will be provided, sized to adequately accommodate effluent volumes from the residential units. The tank will be connected to the internal sewer drainage network of the buildings to collect both sewage and greywater in a secure, watertight system. The contents of the conservancy tank will be periodically emptied by a licensed private waste contractor and disposed of at a registered municipal wastewater treatment facility.

Solid Waste

The solid waste will be collected onsite and disposed of at a registered facility by the operator as required.

Overall Development Footprint

The total proposed development footprint, inclusive of all built infrastructure components, is summarised in the table below:

Development component	**Footprint (m^2)**
House 1	1662
House 2	1220
Manager's Cottage	1000
Gatehouse	595
Swimming pool and fire pit	100
Jetty	53
Informal access footpath - unpaved	320
Total	**4950**

The total proposed built infrastructure footprint amounts to approximately 4,950 m^2. Of this total, only the jetty (53 m^2) and its associated footpath encroach into the EFZ of the Klein River Estuary. All remaining infrastructure, representing approximately 98.9% of the total development footprint, is situated within the historically disturbed terrestrial environment outside of any sensitive aquatic or estuarine feature.

Environmental Constraints and Overlays

The layout plan reflects a number of environmental constraints that have directly informed the placement of all proposed structures. These include the delineated boundary of the Klein River Estuary EFZ along the northern boundary of the site; the Rural Risk Zone and Coastal Protection Zone EMOZ applicable to the property; a 50 m and 100 m Fauna Impact Zone associated with a Katydid population identified on the site; and the Route of Regional Scenic Significance along Wortelgat Road to the south. The preferred layout alternative has been designed to avoid or minimise encroachment into these sensitive areas, with all primary residential infrastructure positioned outside of the mapped environmental constraints.

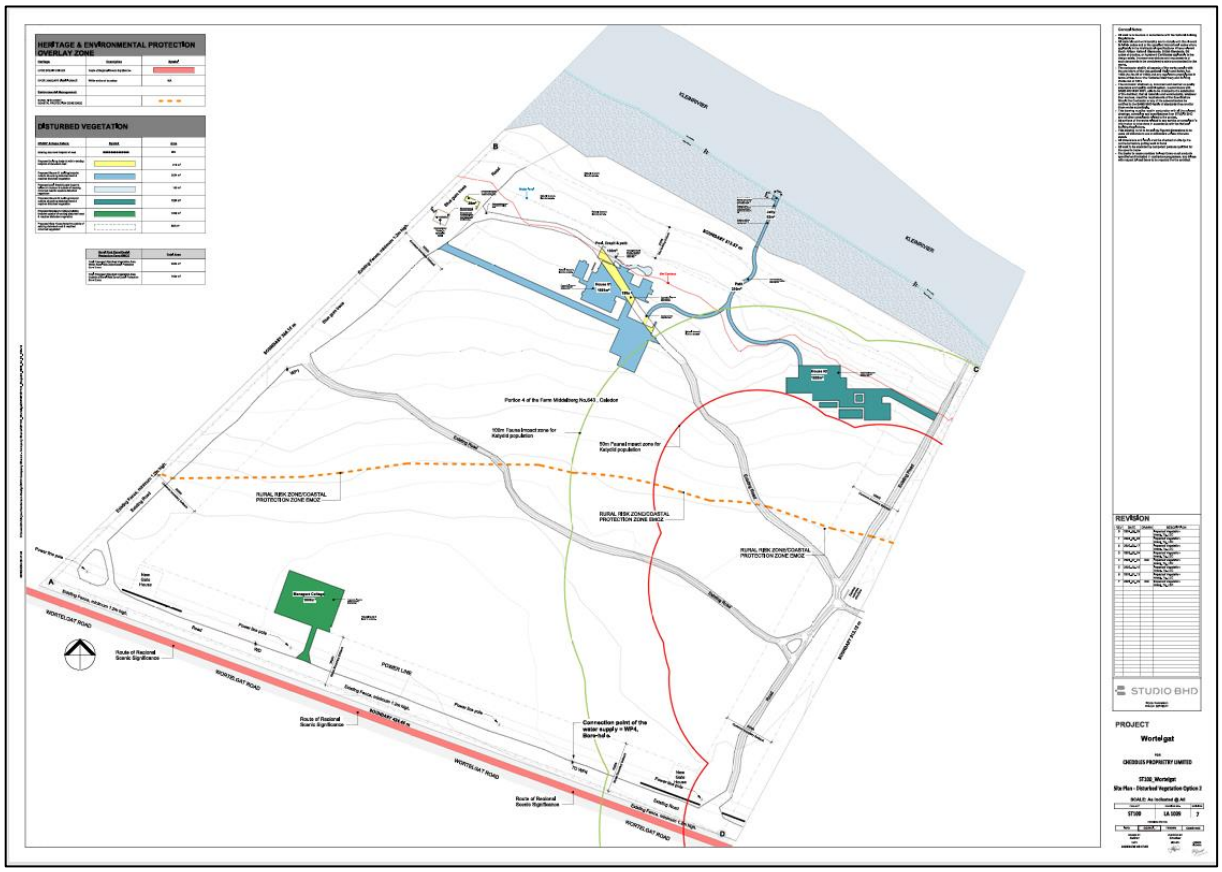

Figure 1: Proposed Site development plan – Preferred Alternative (Alternative 4).

Photo 1: Aerial view of the site, banks and Klein River. System typical of a river and not an estuary.

Photo 2: View of the existing firebreaks which also act as access routes, situated on the right and travelling from south to north of the property that will be upgraded.

Photo 3. View of the area proposed for House 2.

Photo 4. Overview of the existing access road. House 1 will be concentrated here which will connect both house 1 and House 2 access.

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.

Access off the Wortelgat Road is existing. Existing internal access roads will be used as far as possible to access specific areas on the site.

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	0	1	3	0	0	0	0	0	0	0	0	0	6	4	3	0	0	0	0	4

4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	34º	25′	56.81″
	Longitude (E)	19º	25′	56.05″

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	YES	NO X

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	YES X	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	NO X
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	YES	NO X
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	YES	NO X
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	YES	NO X
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	YES X	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	YES	NO X
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	YES	NO X

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.

Sea-Shore Act (Act 21 of 1935)

The proposed development includes application for the construction of a jetty at the edge of the Kleinrivier Estaury. A permit from Cape Nature in terms of the Seashore Act is required prior to the construction of these structures.

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.

Western Cape Spatial Development Framework (WCSDF, 2014)

Settlement Synthesis

The WCSDF (2014) sets out key settlement and rural development policies for the Western Cape, with a strong emphasis on concentrating growth within existing urban nodes, protecting high-value natural resources and landscapes, and ensuring that development outside the urban edge is compatible, sustainable, and of an appropriate scale and form.

The proposed development responds directly to the WCSDF's settlement synthesis principles in the following ways. Development has been concentrated within a previously disturbed and moderately transformed area of the property, thereby avoiding encroachment into sensitive natural habitats. The Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025) confirmed that the terrestrial vegetation within the proposed development footprint is of low ecological sensitivity, and that the Site Ecological Importance (SEI) of the site is LOW, supporting the suitability of the location for low- to moderate-scale development. The rural character and scenic integrity of the Stanford landscape have been maintained through a low-density design approach, the use of natural building materials, and the careful siting of all structures to minimise visual intrusion. All infrastructure is entirely self-sufficient, relying on off-grid technologies including borehole water supply, solar energy, and conservancy tanks, consistent with provincial policy for developments outside municipal service areas. The proposal supports the local rural economy through employment creation during the construction phase and ongoing property maintenance requirements.

Policy E2: Diversify and Strengthen the Rural Economy – Development Outside the Urban Edge

Policy E2 of the WCSDF (2014) provides that compatible and sustainable rural activities that are appropriate in a rural context, generate positive socio-economic returns, and do not compromise the environment or the municipality's ability to deliver on its mandate, can be accommodated outside the urban edge, subject to specified assessment criteria.

The proposed development satisfies the Policy E2 assessment criteria as follows. Environmental authorisation is being sought through a formal Basic Assessment process under NEMA, supported by multiple specialist assessments. The development is compatible with land use activities appropriate in its biodiversity context: the Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025) confirmed that the terrestrial development footprint does not support a threatened ecosystem or any plant species of conservation concern, and that residual impacts on terrestrial vegetation following the implementation of mitigation measures are expected to be LOW NEGATIVE in the short to long term. No biodiversity offset is required. The site does not constitute unique or high-value agricultural land, and the proposed development does not compromise existing or future farming activities. The proposal does not involve the exploitation of mineral resources. The development is consistent with the cultural and scenic landscape character of the Stanford rural setting. The development does not involve any extension to

municipal reticulation networks, relying entirely on off-grid services. No real costs or risks to the municipality's service delivery mandate are imposed.

Western Cape Biodiversity Spatial Plan (WCBSP, 2023)

The WCBSP (2023) is the primary biodiversity planning instrument for the Western Cape, identifying Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) that must be considered in land use planning and environmental impact assessment processes.

The WCBSP (2023) currently classifies the terrestrial portion of the proposed site as Critical Biodiversity Area 1 (CBA1 Terrestrial), based on the erroneous SA VEGMAP (2024) classification of the site's vegetation as Agulhas Limestone Fynbos. The Terrestrial Biodiversity Assessment (McDonald, 2025) demonstrates that this classification is incorrect. The vegetation on the site is an undescribed secondary shrubland of low ecological sensitivity, derived from historically disturbed agricultural land, and does not meet the criteria for classification as CBA1. The specialist concluded that the site should correctly be classified as Ecological Support Area 2 (ESA2) or Other Natural Area (ONA) at most, in accordance with the definitions and management objectives set out in the WCBSP Handbook (Pool-Stanvliet et al., 2017). Under the ESA2 management objective, the applicable guidance is to restore and manage to minimise impact on ecological processes and ecological infrastructure functioning, particularly soil and water-related services, and to allow for faunal movement objectives which the proposed development, with its comprehensive mitigation measures, is well positioned to meet.

With respect to aquatic biodiversity, the northern portion of the site falls within Aquatic CBA 1, associated with the Klein River Estuary. All primary residential infrastructure has been deliberately sited outside of the delineated EFZ and the associated Aquatic CBA 1. The only development components encroaching into the Aquatic CBA 1 are the proposed jetty (53 m²) and associated footpath, which have been confined to the minimum necessary footprint and are subject to stringent mitigation requirements as prescribed in the Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026).

Overstrand Municipality Spatial Development Framework (OMSDF, 2020)

The OMSDF (2020) promotes sustainable rural development sensitive to environmental and visual constraints. The site is situated outside the demarcated urban edge of Stanford, within the rural hinterland, where only compatible, low-impact activities are supported. The proposed development complies with the OMSDF in the following respects. It is low-density in character, with a total built footprint of approximately 4950 m², confined to a historically disturbed terrestrial environment confirmed by specialist assessment to be of low ecological sensitivity. The design and siting of structures maintain open space continuity and scenic quality, consistent with OMSDF objectives to preserve rural landscape character. All infrastructure is off-grid and self-sufficient, in line with the municipality's policies for rural development outside the municipal service delivery area. The Terrestrial Biodiversity Assessment confirms that the preferred development alternative results in LOW NEGATIVE residual impacts on terrestrial vegetation, supporting the OMSDF's objective of minimising transformation of rural land.

Overstrand Municipality Integrated Development Plan (IDP, 2025/2026)

The proposed development is consistent with the Overstrand IDP's strategic priorities in the following ways. It promotes sustainable land use through its environmentally responsive design and compliance with all applicable environmental legislation. The Terrestrial Biodiversity Assessment confirms that no biodiversity offset is required, that no plant species of conservation concern are present within the development footprint, and that residual impacts on terrestrial biodiversity are LOW NEGATIVE, supporting the IDP's objective of sustainable land management. The development supports local economic development through short-term employment creation during construction and ongoing property management. It ensures responsible resource use through entirely off-

grid systems for energy, water, and waste management, consistent with the IDP's focus on climate resilience and resource efficiency.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.

Guideline for the Review of Specialist Input in the EIA process (June 2005).

This guideline provides direction on the role and quality standards of specialist studies in environmental assessments, ensuring that findings are scientifically sound, relevant, and integrated into the decision-making process.

Guideline for Environmental Management Plans (June 2005)

This guideline outlines the structure and essential components of an Environmental Management Programme (EMPr), ensuring that mitigation measures and monitoring actions are clearly defined, implementable, and auditable.

Guideline on Alternatives (March 2013)

This guideline emphasises the importance of identifying, describing, and assessing reasonable and feasible alternatives in the EIA process.

Guideline on Need and Desirability (March 2013)

This guideline provides a framework for assessing the broader contextual justification for a proposed development, including its alignment with spatial planning, socio-economic priorities, and sustainable resource use. For this proposal, the guideline assisted in demonstrating that the development is contextually appropriate, aligns with local and regional planning instruments, and supports sustainable rural residential use while maintaining environmental integrity.

Western Cape Biodiversity Spatial Plan Handbook and Guidelines (2023)

The WCBSP provides a spatial biodiversity framework for the Western Cape, identifying Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) that guide land-use planning and environmental decision-making.

This guideline directly informed the site sensitivity analysis, ensuring that the proposed development footprint minimise vegetation clearance within CBAs, and maintains natural connectivity and ecological functioning in accordance with provincial biodiversity priorities.

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form

Agricultural Theme – High Sensitivity – The property and adjacent agricultural properties have not been farmed for many years, nor is the property suitable for intensive farming purposes. No rezoning is applicable to the proposal and therefore the property will retain its Agricultural Zoning. No further assessment is required under this theme.

Animal Species Theme - High Sensitivity – In accordance High Sensitivity of animal species identified in the DFFE Screening Tool, a Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment was undertaken by Venter (2025) to confirm site sensitivity and identify potential species of conservation concern that may occur

within the proposed development footprint. The Screening Report identified eleven (11) animal species of concern as potentially occurring on the property. These species include high-sensitivity birds species, as well as medium-sensitivity species such as amphibians, invertebrates, and reptiles (notably snakes). The Faunal Specialist Assessment verified the site sensitivity and confirmed the presence of three (3) animal species of conservation concern on-site. Confirmed species include the Mute Winter Katydid, Western Leopard Toad, and African Marsh Harrier, while additional high-likelihood SCC are considered present within the Potential Area of Influence (PAOI). The property also provides an important ecological linkage between the Klein River and the surrounding fynbos habitats, contributing to regional landscape connectivity.

Although the proposed development has a limited overall footprint, even low-intensity residential development has the potential to introduce long-term edge effects and localised disturbance within this ecologically sensitive setting. Under the original layout (Alternative 2), impacts were assessed as being of Medium to High significance, primarily due to direct overlap with confirmed katydid habitat and cumulative disturbance to watercourse-associated fauna.

In response to the faunal specialist's recommendations, the Preferred Alternative (Alternative 4) incorporates key design revisions, including the reduction of jetty infrastructure from two structures to a single jetty, as well as the relocation of House 02 outside the recommended 50 m buffer around the confirmed Mute Winter Katydid habitat. These design changes substantially reduce the extent of habitat disturbance and fragmentation.

It is therefore the specialist's opinion that the revisions incorporated in Alternative 4 significantly reduce the predicted faunal impacts. Consequently, residual impacts are reduced from Medium–High significance under Alternative 2 to Low–Medium significance under the Preferred Alternative (Alternative 4).

Aquatic Biodiversity Theme – Very high sensitivity – The Aquatic Biodiversity Theme Sensitivity was classified as "Very High" by the national web-based environmental screening tool (DFFE, 2026), triggered by the site's location within the mapped extent of the Klein River Estuary and its designation as Aquatic Critical Biodiversity Area 1 (CBA 1) under the WCBSP (2023). In response, an Aquatic Biodiversity Compliance Statement was prepared by Delta Ecology (Morton & van Zyl, 2026) in accordance with the Protocol for Specialist Assessment of Environmental Impacts on Aquatic Biodiversity (GN No. 320 of 20 March 2020).

Following field-based ground-truthing and an Initial Site Sensitivity Verification, the aquatic biodiversity sensitivity of the development footprint was verified as "Low." All primary infrastructure, including the two residential dwellings, manager's cottage, gatehouse, and ancillary structures are situated entirely within a historically disturbed terrestrial environment, more than 32 m from the nearest freshwater feature, outside of the Estuarine Functional Zone (EFZ), and landward of the coastal management line. No watercourse or wetland indicators regulated under NEMA were identified within the development footprint. The EFZ was delineated approximately 45 m downslope from the residential footprints, marked by a clear transition to dense *Phragmites australis* reedbeds. This assessment was submitted in formal response to the BOCMA letter dated 23 February 2026, confirming that the development is not located within or near a wetland.

The only development components encroaching into the EFZ are the proposed jetty (53 m^2) and associated access footpath. Given their limited and localised footprint, no significant long-term impacts on the ecological functioning of the Klein River Estuary are anticipated, provided construction is undertaken in accordance with the prescribed mitigation measures, the Coastal Protection Zone EMOZ of the Overstrand Local Municipality, and the provisions of the Klein River Estuarine Management Plan. A 25 m construction buffer and 15 m operational buffer have been determined and incorporated into the site layout accordingly.

Archaeological and Cultural Heritage Theme – Low sensitivity – No further Heritage Assessment will be implemented.

Civil Aviation Theme – Low sensitivity – the proposed activity is in line with the existing agricultural land use zoning in the area. Therefore, no additional impacts are expected to this theme. No further assessment is required.

Defense Theme – Low sensitivity – the proposed expansion is in line with the existing agricultural land use zoning in the area. Therefore, no additional impacts are expected to this theme. No further assessment is required.

Paleontology Theme – Very high – Portion 4 of Farm 643 is located within an area identified as having very high paleontological sensitivity. The development of a low-density residential dwelling in a rural agricultural setting may involve limited ground disturbance for building foundations, services, and landscaping. Given the small-scale and low-impact nature of the proposed residential development, a full Paleontological Impact Assessment (PIA) is not required. No significant excavation or earthworks beyond typical residential construction are planned, and much of the site has been previously disturbed. While the site is classified as very high sensitivity for paleontological resources, the proposed residential development is unlikely to cause significant impacts, provided that the chance-find procedure is implemented.

Plant Species Theme – Medium Sensitivity – The proposed development site has been classified as having medium sensitivity due to the likelihood occurrence of plants species of conservation concern. No plant species of conservation concern (SCC) were encountered in the study area. The principal reason for this is that the vegetation type is not Agulhas Limestone Fynbos and the list of sensitive species generated by the environmental screening tool do not exist on the property. Therefore the botanical specialist assesses the site as LOW sensitivity under this theme.

Terrestrial Biodiversity Theme – Very high Sensitivity – The site for the proposed residential development on Portion 4 of Farm 643 is located in an area identified as having very high terrestrial biodiversity sensitive, based on the vegetation type that is mapped for the site (Agulhas Limestone Fynbos). The secondary reason is that the site is mapped as CBA1 as per the WCBSP (2023). However, since the vegetation is not Agulhas Limestone Fynbos, it is contended here that the terrestrial biodiversity is LOW since Agulhas Limestone Fynbos is absent. Furthermore, the site should not be classified as CBA1.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs - (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;	The proposed development includes the establishment of a informal footpath which is approximately 320m^2 (length x width) as well as the construction of a jetty, both of these development components contribute to the total development footprint of approximately 373m^2 partially within 100m of the High Water Mark of the estuary and within 32m of the Klein river.

17	Development – (i) in the sea; (ii) in an estuary; (iii) within the littoral active zone; (iv) in front of a development setback; or (v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater; in respect of - (a) fixed or floating jetties and slipways; (b) tidal pools; (c) embankments; (d) rock revetments or stabilising structures including stabilising walls; or (e) buildings of 50 square metres or more; or (f) infrastructure or structures with a development footprint of 50 square metres or more	The proposed development includes the establishment of a pathway which is approximately 320m^2 as well as the construction of a jetty infrastructure within the estuary edge, both of these development components contribute to the total development footprint of approximately 373m^2 within 100m of the High Water Mark of the estuary.
19	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from (i) a watercourse	The construction of the jetty will require limited excavation, shaping, and stabilisation along the riverbank of the Klein River, resulting in the movement and deposition of more than 10 m³ of soil and sand within the riparian zone.
19A	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from (i) the seashore; (ii) the littoral active zone, an estuary or a distance of 100 metres inland of the highwater mark of the sea or an estuary, whichever distance is the greater; or (iii) the sea;	The establishment of a pathway and the construction of the jetty will require excavation and shaping along the bank of the Klein River, resulting in the movement and deposition of more than 5 m³ of soil and sand within 100 metres of the high-water mark. Additionally, the portions of the dwelling units falls within 100m of the High Water Mark of the Estuary.
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	The clearance of an area of 300 square metres or more of indigenous vegetation i. Western Cape i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004	More than 300 m^2 of indigenous vegetation will be cleared to accommodate the proposed development.
14	The development of infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs – (a) within a watercourse; (b) infront of a development setback; or (c) if no development setback has been adopted, within 32 metres of a	The proposed development includes the construction of a single jetty (53 m²) and informal access footpath (320 m²) which will be situated below the 5m contour (Estuarine Functional Zone).

	watercourse, measured from the urban edge of a watercourse; i. Western Cape i. Outside urban areas: (ff) Critical Biodiversity Areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where such development setback has been determined.	

Note:
- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.

Lising Notice 3; Activity 4*: The development of the road wider than 4 meters with a reserve of less than 13.5 meters. i. Western Cape i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas; (aa) Areas containing indigenous vegetation; (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or iii. Inside urban areas:*

Disturbed areas will be utilized as far as practicable for road construction. All proposed roads will have a maximum width of less than 4 metres and will not include a road reserve. As a result, the proposed development does not trigger Listing Notice 3, Activity 4.

List the applicable waste management listed activities in terms of the NEM:WA

~~Activity No(s):~~	~~Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**~~	~~Describe the portion of the proposed development to which the applicable listed activity relates.~~

~~List the applicable listed activities in terms of the NEM:AQA~~

~~Activity No(s):~~	~~Provide the relevant **Listed Activity(ies)**~~	~~Describe the portion of the proposed development to which the applicable listed activity relates.~~

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

The preferred alternative (Alternative 4) entails the small-scale domestic development on Portion 4 of the Farm Middelburg No. 643, located northwest of the town of Stanford within the Overstrand Local Municipality, Western Cape. The property is the only site under consideration and therefore constitutes both the preferred property alternative and the preferred site alternative. The dwellings will be for use by the owners of the farm (Applicant).

The property extends to approximately 13.5 ha (135,000 m²) and is situated outside the urban edge, currently zoned Agricultural Zone I. The property is bounded to the north by the Klein River Estuary, to the east and west by vacant

properties historically transformed for agricultural purposes, and to the south by similarly transformed agricultural land. The proposed development will cover a total built footprint of approximately 4,950 m² within the broader farm property, representing less than 3.7% of the total property extent. The development has been deliberately concentrated within previously disturbed or transformed areas to minimise the transformation of indigenous vegetation and disturbance to the natural environment.

Primary Residential Structures

Two primary residential dwellings are proposed within the central-northern portion of the site, positioned on higher-lying ground above the 5 m contour line and outside of the delineated Estuarine Functional Zone (EFZ) of the Klein River Estuary.

- House 1, situated in the upper-central portion of the site, has a proposed footprint of approximately **1662 m²** and includes the primary residential unit together with associated ancillary structures and a swimming pool.

- **House 2** is proposed to the east of House 1, similarly positioned outside of the EFZ, with a proposed footprint of approximately **1220 m².** Both dwellings are accessed via an internal road network connecting to the existing farm access tracks on the property.

Manager's Cottage

A manager's cottage with a proposed footprint of approximately **1000 m²** is situated in the south-western portion of the site, in close proximity to the existing access gate off Wortelgat Road. This structure is located entirely within the terrestrial environment, well removed from the Klein River Estuary and its associated buffer zones.

Gatehouse

A gatehouse with a proposed footprint of approximately **595 m²** is proposed at the primary entrance to the development off Wortelgat Road, forming part of the controlled access arrangement for the residential development.

Access Road

An internal access road will be constructed and / or upgraded, using existing disturbed pathways to minimise vegetation disturbance. The applicant will aim to retain the internal access roads as informal as possible, as per the current roads on site. Some natural surface material or grass blocks may have to be added in sections. All the access roads will have a combined length of less than **1000 m** and a maximum width of **4m**.

Associated Infrastructure

Associated infrastructure, including a swimming pool, fire pit, and footpaths, collectively accounts for an additional approximately **420 m²** of development footprint. These elements are located within the terrestrial portion of the site and have been positioned to avoid encroachment into the EFZ.

Jetty and Estuarine Access

A jetty with a footprint of approximately **53 m²,** together with an associated footpath, is proposed extending northward from the residential cluster toward the Klein River Estuary. These are the only development components

that encroach into the EFZ of the Klein River Estuary, and their combined footprint has been confined to the minimum extent necessary to provide access to the river.

- A jetty with a development footprint of approximately **53 m²** is proposed. The jetty is designed in line with the "Specific Conditions and Structure Specifications" as issued by Cape Nature in line with the Application to Enter into a Lease Agreement in terms of the Sea Shore Act, Act 1935 (Act No 21 of 1935).

- An unpaved pathway with a development footprint of approximately **320 m²** will facilitate access to the proposed jetty. It is important to note that, the pathway will be less than 3m in width and less than 1000 m in length.

Water

To ensure reliable water availability and pressure regulation, storage tanks will be installed within existing disturbed area of approximately **26 m²** situated on the western portion of the property. Water will be extracted from the borehole located near the entrance of the property, the water will be for household use, and therefore no authorisation is required in terms of National Water Act as it will fall under Schedule 1 – Reasonable Domestic Use**.**

Electricity

The dwellings will operate off the grid with the use of roof mounted solar installations.

Sewage

A minimum 6 000-litre sealed conservancy tank will be provided, sized to adequately accommodate effluent volumes from the residential units. The tank will be connected to the internal sewer drainage network of the buildings to collect both sewage and greywater in a secure, watertight system. The contents of the conservancy tank will be periodically emptied by a licensed private waste contractor and disposed of at a registered municipal wastewater treatment facility.

Solid Waste

The solid waste will be collected onsite and disposed of at a registered facility by the operator as required.

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

Portion 4 of the Farm Middelburg No. 643 is zoned Agricultural Zone I in terms of the Overstrand Municipality Zoning Scheme. This zoning permits agricultural land uses as the primary function of the property, while also allowing certain associated uses via consent use. The property owners are entitled to both a main dwelling and a manager's dwelling as primary rights.

Although the main and manager's dwellings may, in principle, be of unlimited size, the total development footprint must remain compatible with the agricultural nature of the property and the applicable municipal planning provisions.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

The property is currently zoned Agricultural Zone I, which permits agricultural land uses and allows for the establishment of at least one single residential dwelling as a primary right. The proposed development comprising two

residential dwellings and a Manager's Cottage does not conflict with the existing land use zoning of the property, as the zoning scheme makes provision for additional residential units on agricultural land subject to municipal approval processes via consent use.

No previous or conflicting development rights have been granted for the site that would restrict the proposed project. Accordingly, there is no overlap or inconsistency between the current proposal and any existing approvals. Where additional authorisations may be required such as consent uses (e.g., in relation to the jetty under the Seashore Act), these will be obtained in parallel with this application to ensure full compliance.

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

Extract from Western Cape Spatial Development Framework (WCSDF) (2014)

3*.3.7 SETTLEMENT SYNTHESIS*

"The key concepts related to the settlement policies are illustrated in Figure 58. In summary these are to:

I. Develop regional planning frameworks to manage the tension between the protection of high value resources and landscapes and urban growth in the growth nodes (i.e. Cape Metro, George/Mossel Bay and Saldanha Bay/Vredenburg functional regions)

II. Ensure that densification, infill and brownfield regeneration in these areas is a non-negotiable first action in the growth nodes

III. Invest in regional service centre towns to support and integrate with the rural hinterlands, prioritising investment in housing, health and education in these towns rather than dispersing investment to villages and hamlets

IV. Develop regional rural development frameworks to align settlement planning with large scale infrastructure investments (oil and gas, dams, regional movement routes etc).

V. Use ICT and periodic social services to reduce the need for rural dwellers to travel to services.

VI. Support investment of Provincial resources and finance in existing settlements, in line with a clear understanding of their regional role and potential and limit unproductive or potentially abortive investment in poorly located, isolated new developments.

The proposed development aligns with the Western Cape Provincial Spatial Development Framework (2014):

- The proposed residential development is located outside the urban edge, within a property zoned Agricultural Zone I. The development footprint has been carefully concentrated within previously disturbed or transformed areas, reducing the impact on high-value natural and agricultural resources. Existing disturbed areas will be utilised as far as possible for the proposed development. By focusing on low-density development within already transformed areas, the proposal aligns with the WCSDF principle of protecting high-value landscapes while accommodating limited residential growth.

- While the development site is outside a designated growth node and does not contribute to densification or infill, the proposal demonstrates sensitivity to the existing rural land-use pattern. The small-scale, low-density nature of the development ensures that it does not pre-emptively compromise opportunities for future densification within nearby urban areas. This approach aligns indirectly with the WCSDF policy by avoiding unplanned expansion into sensitive areas.

- Stanford, as the nearest regional service centre, provides housing, health, education, and other services. By locating the development in proximity to Stanford, the project supports integration with the regional service

centre and reduces the need for residents to seek services in more distant locations. This targeted proximity aligns with the WCSDF goal of strengthening existing service hubs rather than dispersing new settlements in isolated locations.

- The development does not require major new infrastructure investments beyond upgrading internal access roads, minor utility connections, and small-scale water-based structures. The site's use of existing pathways and previously disturbed areas ensures that the project leverages current infrastructure without creating high-cost, low-productivity investment demands. This is consistent with the WCSDF principle of aligning rural development with efficient infrastructure use.

- While the development is residential in nature, the small scale and integration with Stanford's service provision ensures that travel needs for essential services are minimized. The project does not encourage isolated settlement and allows residents to access existing educational, health, and retail services efficiently.

- The proposed development is modest in scale (two residential dwellings, a manager's cottage, and minor recreational infrastructure) and is sited on an already partially transformed portion of the property. By concentrating development within previously disturbed areas and avoiding unnecessary expansion into pristine agricultural or ecological zones, the project limits the risk of unproductive or abortive investment. It ensures that provincial resources, such as permitting oversight and environmental management support, are used effectively and responsibly.

4.2	The Integrated Development Plan of the local municipality.

The Overstrand Municipality Integrated Development Plan (IDP) 2025/26 Review provides the strategic and policy framework guiding development within the municipal area. The IDP places emphasis on sustainable development, environmental protection, responsible spatial planning, and the efficient use of existing infrastructure, particularly within rural and environmentally sensitive areas.

The proposed development has been assessed against the strategic intent and development principles of the Overstrand IDP and is considered to be broadly aligned with its objectives, subject to the implementation of appropriate environmental mitigation measures.

Environmental Sustainability and Biodiversity Management

The IDP identifies environmental sustainability and biodiversity protection as key priorities under its strategic focus on sustainable service delivery and environmental governance. It recognises the ecological sensitivity of the Overstrand area, including riverine systems and species of conservation concern, and promotes development that is informed by environmental assessments and specialist input.

In response to these objectives, the proposed development has been refined to incorporate the findings and recommendations of the specialist studies. The adoption of Alternative 4 reflects a direct response to the IDP's emphasis on avoiding and minimising impacts on sensitive environments. This includes:

- The relocation of one residential unit outside the identified habitat of the Mute Winter Katydid,

- The establishment of a 50 m buffer zone around the species' location, and

- The reduction of jetty and slipway infrastructure from two to one, thereby limiting disturbance to the riverine environment.

These measures demonstrate alignment with the IDP's intent to balance development with the protection of critical biodiversity and ecological systems.

Spatial Planning and Rural Land Use

The IDP promotes context-appropriate development that respects the rural character of non-urban areas and discourages unnecessary land fragmentation and urban sprawl. It further supports land-use practices that are compatible with surrounding uses and that do not compromise long-term environmental sustainability.

The proposed development is limited in scale, does not involve subdivision of the property, and retains the existing agricultural zoning of Portion 4 of Farm 643. As such, it does not introduce an intensive or incompatible land use and remains consistent with the rural land-use objectives outlined in the IDP.

Infrastructure Efficiency and Resource Use

The IDP emphasises the importance of efficient use of existing infrastructure to reduce environmental disturbance and avoid unnecessary expansion of services. In line with this principle, the proposed development utilises the existing access via Wortelgat Road, thereby minimising the need for new road construction and additional vegetation clearance.

This approach supports the IDP's objective of promoting development that makes responsible use of existing infrastructure while limiting environmental impacts.

4.3.	The Spatial Development Framework of the local municipality.

Location outside the urban edge

The development site is located outside the demarcated urban edge of Stanford. The OMSDF encourages that developments beyond the urban edge should be small-scale, environmentally sensitive, and respectful of the rural character of the area. By proposing only two residential dwellings, a manager's cottage, and limited recreational infrastructure (swimming pool, firepit, pathways), the project maintains a low-density profile, in line with OMSDF guidance for rural development.

Compliance with landscape zones

The OMSDF identifies three broad landscape zones: coastal belt, coastal plain, and mountainous areas, with policies promoting sustainable land use and conservation. The site is part of the coastal plain adjacent to the Klein Rivier. The proposed development concentrates construction within previously disturbed or transformed areas, thereby minimizing impacts on the natural landscape, conserving open space, and maintaining visual integrity from surrounding areas. Recreational structure (jetty) is designed to follow environmental guidelines to protect the ecosystem.

Environmental and visual sensitivity

The OMSDF stresses that rural development should avoid significant disturbance to natural habitats and visual corridors. The development plan:

- Limits vegetation clearance through the use of exiting disturbed areas.
- Designs buildings to be single-storey with architectural features compatible with the rural character, ensuring minimal visual intrusion on the surrounding agricultural landscape.

Sustainable rural development principles

The OMSDF encourages development that is sustainable, supporting local needs without compromising environmental quality. The project:

- Concentrates development within transformed areas to avoid unnecessary land conversion.

- Integrates with existing infrastructure and road networks to avoid high-cost, low-efficiency investments.
- Provides limited on-site management via a manager's cottage to support operational sustainability and site oversight.

Integration with surrounding land uses

The OMSDF promotes development that complements existing agricultural and rural land uses. The site is surrounded by properties transformed for agriculture, and the small-scale, low-impact residential development will not disrupt the prevailing land-use pattern. By keeping the development footprint minimal and strategically located, the proposal respects the continuity of rural operations and landscape aesthetics.

4.4.	The Environmental Management Framework applicable to the area.

The Overstrand Public Viewer and the Overstrand Municipality Spatial Development Framework (SDF, 2020) were consulted as part of this application. According to the Environmental Management Overlay Zone layers, approximately half of the property falls within the Coastal Protection Zone (CPZ), as illustrated in **Figure 2**. This designation is linked to the property's location abutting the Klein River along its northern boundary and introduces additional considerations for environmental sensitivity and the protection of riparian areas.

The property is situated along the banks of the Klein River, more than 32 metres away from the edge of the watercourse, but within 100 m of the High-Water Mark (HWM). The proposed residential dwellings will be located above the 5-metre contour, while the jetty and estuarine access (pathway) are proposed below the 5-metre contour, overlooking the Klein River Estuary. As a result, an application in terms of the Seashore Act will be required for the water-based access structures.

Importantly, no ecological corridors, urban conservation areas, or conservation-worthy areas have been mapped within the boundaries of the property. While the site is therefore subject to environmental management considerations under the Integrated Coastal Management Act due to its proximity to the Klein River and its rural setting, it is not formally identified as part of a critical biodiversity area or conservation priority network.

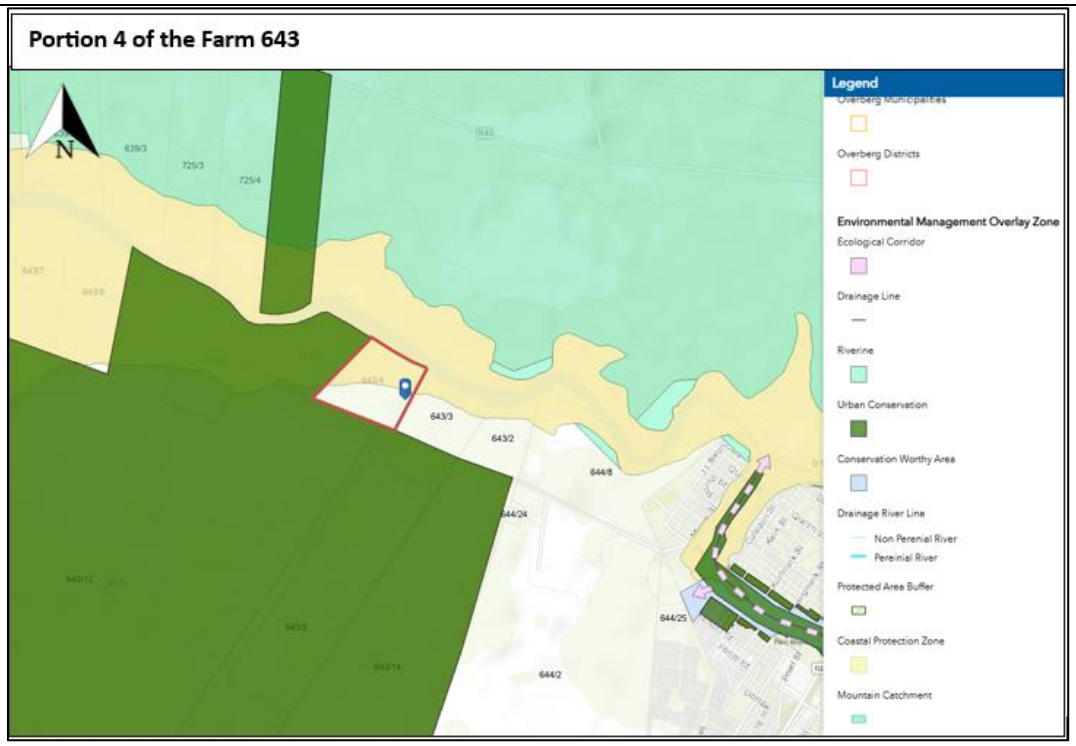

Figure 2: illustrates the Environmental Management Framework overlays as they apply to the subject property.

5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.

The proposed development has been materially influenced by comments received from a number of relevant authorities and specialists during the first round of Public Participation and Draft Basic Assessment Report (BAR) review processes. The key comments received and their influence on the development are addressed below.

Cape Nature (letter dated 23 February 2026)

Cape Nature's comments have had the most significant influence on the proposed development, particularly with respect to aquatic biodiversity and estuarine management. Cape Nature did not support the motivation that no aquatic biodiversity specialist study was required, noting that the Klein River Estuary is a national priority estuary that would be directly impacted by the proposed jetty and slipway. In direct response to this comment, a comprehensive Aquatic Biodiversity Compliance Statement was commissioned and prepared by Delta Ecology (Morton & van Zyl, 2026) in accordance with the Protocol for Specialist Assessment of Environmental Impacts on Aquatic Biodiversity (GN No. 320 of 20 March 2020). The findings of this assessment have been fully incorporated into the BAR and the Environmental Management Programme (EMPr).

Cape Nature further indicated that it does not support private slipways, noting that the proposed slipway would have a more significant impact on the estuary banks than a jetty through the creation of a hard structure capable of increasing erosion and altering flow. Cape Nature also noted that a public slipway is available in Stanford, approximately 2 km from the subject property, which can be used for boat launching. In response to this objection, a slipway has therefore been removed in the current preferred layout (Alternative 4) and replaced by a pathway providing access to the jetty but will be subject to further consideration by the DEA&DP Coastal Management Sub-Directorate and CapeNature in terms of the applicable Sea Shore Act provisions and CapeNature's draft jetty policy.

With respect to the jetty, CapeNature's draft policy supports a maximum of one jetty per property. In response to this, the preferred layout (Alternative 4) has been revised to provide for a single jetty only, a reduction from the two jetties initially proposed. This revision is explicitly supported by Cape Nature. The jetty must comply with all specifications set out in CapeNature's draft jetty policy, the Klein River Estuarine Management Plan, and the Coastal Protection Zone EMOZ of the Overstrand Local Municipality.

Cape Nature noted that the Faunal Species Assessment identified 11 Species of Conservation Concern (SCCs) on site, including Black Harrier (*Circus maurus*), Southern Adder (*Bitis armata*), and Mute Winter Katydid (*Brinkiella aptera*), and recommended that all mitigation measures identified in the faunal assessment be included as essential mitigation within the EMPr. In response, all recommended faunal mitigation measures have been incorporated into the EMPr, including the designation of a 50 m high-sensitivity buffer zone from identified Katydid habitat, pre-construction walk-throughs, strict management of construction activities, and the avoidance of the katydid habitat buffer in the siting of House 2. Cape Nature also recommended that consideration be given to the conservation of the property through a stewardship agreement, and this recommendation has been noted and will be explored by the applicant in consultation with Cape Nature following the granting of environmental authorisation.

Cape Nature requested that records of plant SCCs on iNaturalist be reviewed and the botanical report amended accordingly. It is important to highlight that the botanical specialist assessment findings is sufficient and has therefore informed the proposal.

Department of Environmental Affairs and Development Planning, DEA&DP (letter dated 23 February 2026)

The DEA&DP reiterated its earlier position, as stated in correspondence dated 22 April 2025, that given the development's proximity to the Klein River Estuary and its location within the Coastal Protection Zone, additional specialist input may be required. The DEA&DP confirmed that comment from its Coastal Management Sub-Directorate, CapeNature, and the local and district municipality must be obtained. In response, all required authority comments have been sought and are included in the BAR and the Proof of PPP. The Aquatic Biodiversity Compliance Statement has been commissioned to address the aquatic biodiversity concerns raised.

The DEA&DP required confirmation of whether the recommendations of the Faunal Specialist, including the assignment of approximately 70% of the retained natural habitat to a formal conservation status through a stewardship agreement, will be implemented, and whether Cape Nature supports these recommendations. The applicant confirms its commitment to exploring the establishment of a stewardship agreement or equivalent conservation instrument for the undeveloped portions of the property, and Cape Nature's comment on this matter has been noted and will be pursued post-authorisation.

The DEA&DP noted that the WCBSP classification of the terrestrial development footprint as CBA1 cannot be amended without following CapeNature's formal WCBSP verification protocol. This requirement has been acknowledged, and it should be confirmed that the CBA1 terrestrial designation, as per the WCBSP (2023), is treated as applicable for the purposes of this assessment pending the outcome of any formal reclassification process. The findings of the Terrestrial Biodiversity Assessment (McDonald, 2025), which demonstrate that the vegetation is not Agulhas Limestone Fynbos but an undescribed secondary shrubland of low ecological sensitivity.

The DEA&DP also required that the Site Development Plan (SDP) of the preferred alternative include all buffer and no-go areas recommended by specialist findings, and that the updated SDP be incorporated into the EMPr. This has been addressed in the revised layout plan for Alternative 4, which reflects, the 50 m Katydid habitat no-go buffer, and all other specialist-recommended setback requirements. Additionally, using the Buffer Zone Tool (Macfarlane & Bredin, 2017), a construction buffer of 25 m and an operational buffer of 15 m were determined by the freshwater specialist for the Klein River Estuary. These buffers have been incorporated into the site layout to ensure that construction and

operational activities do not encroach on the estuarine environment, except where explicitly required for the footpath and jetty.

Overstrand Municipality (letter dated 23 February 2026)

The Overstrand Municipality's Environmental Management and Conservation Division (EM&C) advised that, based on the specialist assessments conducted, Alternative 3 (now amended and referred to as Alternative 4 in the revised layout) would be the most suitable option, as it avoids ecologically sensitive areas and integrates all specialist recommendations. The preferred layout has been revised accordingly. The EM&C's conditions have been incorporated into the development design and the EMPr, including:

- The requirement that all permanent structures and service infrastructure be maintained above the 5 m contour and more than 100 m from the High-Water Mark of the Klein River;
- That development remain outside the 50 m no-go buffer surrounding mapped Katydid habitat;
- That vegetation clearing be strictly limited to the development footprint;
- That at least 70% of the property be retained under natural vegetation cover;
- That an alien vegetation control programme be implemented across the property; and
- That disturbance to mature wild olive trees and other structurally significant indigenous vegetation be avoided.

The requirement that the jetty and slipway be designed and constructed to minimise watercourse disturbance, with no infilling, excavation, or pollution within the river, has been incorporated as a condition of the EMPr and is consistent with the findings of the Aquatic Biodiversity Compliance Statement. Also important to note, a slipway no longer forms part of the development components, rather a pathway has been proposed to provide access to the proposed jetty.

Overberg District Municipality (letter dated 23 February 2026)

The Overberg District Municipality supported the placement of the proposed development behind both the Coastal Management Line and the 5 m contour, while noting that the development remains within the designated Rural Risk Zone. The municipality recommended that suitable mitigation measures be implemented to safeguard infrastructure against extreme flood events, and this requirement has been incorporated into the site design, with all primary residential infrastructure sited above the 5 m contour line. The municipality noted the botanical specialist's findings regarding the vegetation type and emphasised that the protection of indigenous habitat remains important, recommending the development and implementation of an alien vegetation management plan for the entire property. These requirements have been duly considered and incorporated into the Preferred Layout Alternative. The BAR and the proposed layout also make reference to the Rural Risk Zone and discuss the development intent, demonstrating that the amended layout (Alternative 4) aligns with the primary objectives of the coastal management line in accordance with the requirements of the National Environmental Management: Integrated Coastal Management Act (NEM:ICMA).

Breede-Olifants Catchment Management Agency, BOCMA (letter dated 23 February 2026)

BOCMA requested confirmation of whether any wetlands occur within or near the property and directed that all relevant sections and regulations of the National Water Act (Act No. 36 of 1998) be adhered to. In direct response to this request, the Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026) formally confirms that no freshwater wetlands or watercourses regulated as inland watercourses under NEMA are present within or adjacent to the proposed development footprint, and that the development is not located within or near a wetland. The EFZ boundary is associated with the Klein River Estuary and falls within the coastal environment regulated under the ICMA, rather than under NEMA's inland watercourse provisions. All BOCMA's general conditions regarding sewage disposal, water abstraction, stormwater management, and the prohibition of water pollution have been incorporated into the EMPr. The closed conservancy tank has been designed to comply with the requirements of Sections 22 and 40 of the National Water Act, and BOCMA will be furnished with a signed copy of the service contractor agreement as required.

6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.

The Western Cape Biodiversity Spatial Plan (WCBSP, 2023) provides a spatial framework to prioritise Biodiversity Priority Areas for conservation action, including protected area expansion, ecological infrastructure maintenance, and informed land-use decision-making. The guidelines emphasise the value of biodiversity and ecological infrastructure in the province, while recognising their vulnerability to development pressures. To guide responsible planning, the WCBSP maps Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), which are considered essential for conserving biodiversity patterns and maintaining ecological processes. In accordance with the WCBSP Handbook (2023), the desired management objective for CBA1 areas is to maintain land in a natural or near-natural state, with no further loss of natural habitat, with only low-impact, biodiversity-sensitive land uses considered appropriate.

According to the WCBSP (2023), the terrestrial and aquatic portions of the proposed site are mapped as Critical Biodiversity Area 1 (CBA1 Terrestrial and CBA1 Aquatic) (**Figure 3-1**). It is noted that the 2017 WCBSP previously classified a small portion of the site as ESA2, with the remainder unclassified, while the 2023 WCBSP updated this to predominantly CBA1 Terrestrial, with the portion along the Klein River Estuary mapped as CBA1 Aquatic.

With respect to the terrestrial CBA1 designation, the Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025) confirmed through field-based ground-truthing that the vegetation present on the site does not correspond with the Agulhas Limestone Fynbos vegetation unit that underpins the CBA1 Terrestrial classification. The site is underlain by shale and mudstone of the Ceres Subgroup, Bokkeveld Group not coastal limestone and the vegetation is more appropriately characterised as an undescribed secondary shrubland formation, more akin to Eastern Rûens Shale Renosterveld, which has developed following historical agricultural disturbance and prolonged absence of fire. No plant Species of Conservation Concern or species characteristic of Agulhas Limestone Fynbos were recorded during the field survey. The botanical specialist concluded that the CBA1 Terrestrial classification does not accurately reflect the ecological condition of the site and that a more appropriate designation would be ESA2 or Other Natural Area (ONA) at most.

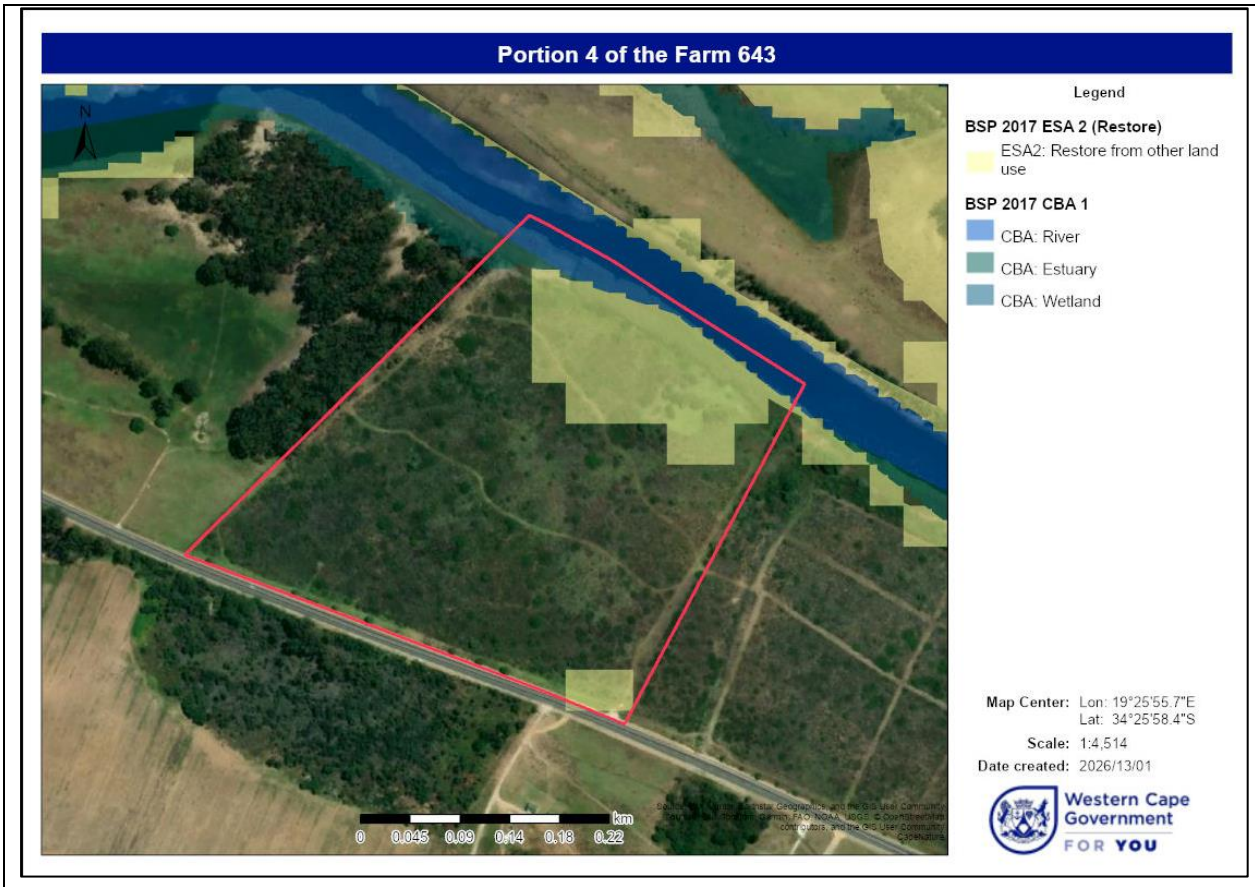

Figure 3-1: 2017 WCBSP maps the small portion of the site as ESA2, whereby the rest of the property remain unclassified.

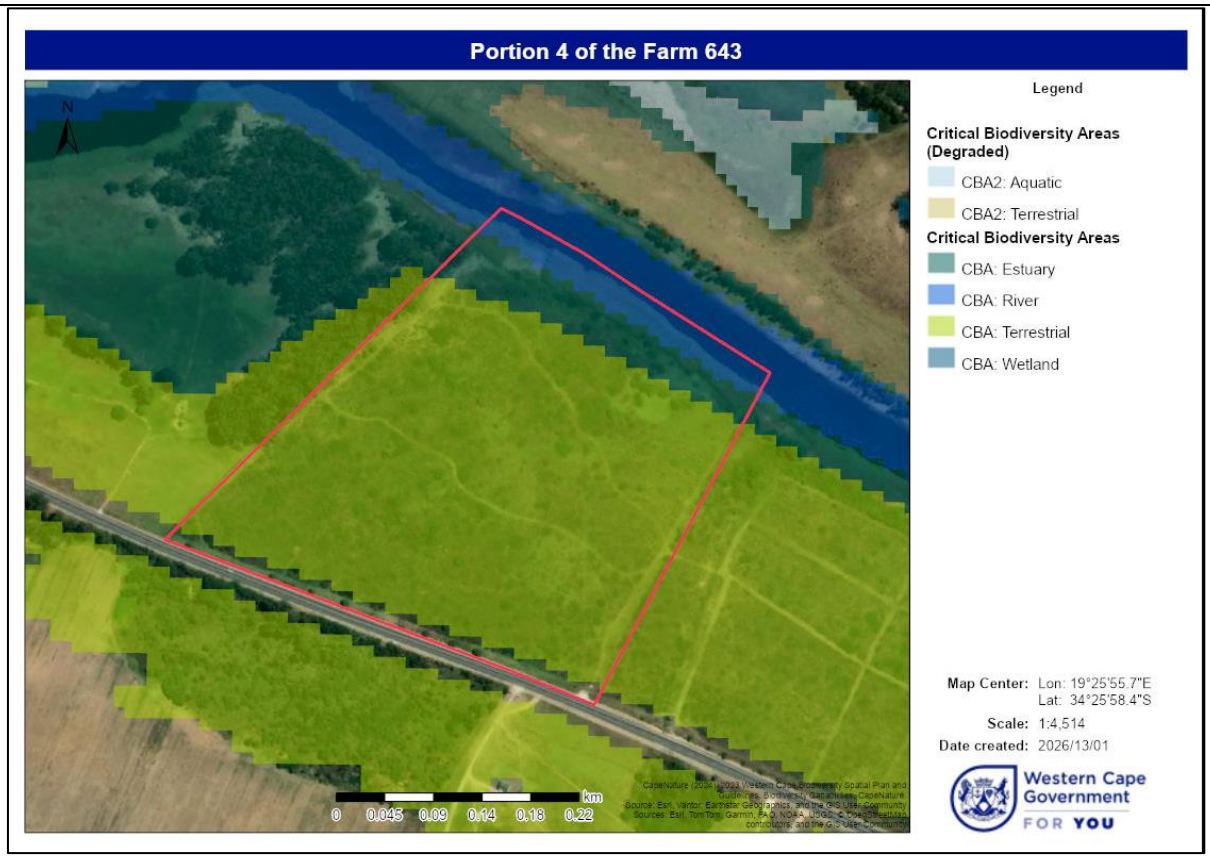

Figure 3-2: 2023 WCBSP shows that the site is mostly mapped as CBA1 (terrestrial) with the small portion situated along the Klein River that is mapped as CBA1.

Notwithstanding the disputed terrestrial classification, the development has been planned conservatively in accordance with the CBA1 management objectives, treating the site as sensitive and applying the avoidance and mitigation hierarchy accordingly.

With respect to the CBA1 Aquatic designation, the Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026) confirmed that the Klein River Estuary, which borders the northern portion of the property, is correctly designated as an Aquatic CBA1, as it is recognised as a national priority estuary with a Present Ecological State of C (Moderately Modified), an Estuary Importance Score of 93, and is rated as "Highly Important" nationally (Clark et al., 2015). All primary infrastructure has been sited outside of the Aquatic CBA1, with only the single jetty (53 m²) and associated access footpath encroaching into the Estuarine Functional Zone (EFZ), subject to a comprehensive suite of mitigation and management measures.

The southern portion of the site, which falls within the Coastal Protection Zone and is mapped as CBA1/ESA in the WCBSP (2017), forms part of a functional ecological corridor linking the Klein Rivier with surrounding fynbos habitats (refer to **Figure 3-2**). The faunal specialist confirmed that several Species of Conservation Concern (SCC) utilise this broader landscape, and that the property contributes to faunal movement and dispersal, particularly for species such as the Western Leopard Toad, the Mute Katydid, and foraging habitat for the African Marsh Harrier.

The development footprint of approximately 4950 m² represents less than 3.7% of the total 13.5 ha property extent. All primary residential infrastructure comprising House 1 (1661 m²), House 2 (1,220 m²), and the Manager's Cottage (1,000 m²) has been concentrated within historically disturbed and moderately transformed portions of the property, following existing road alignments and access tracks wherever possible, to minimise the transformation of natural

habitat. This approach is directly consistent with the WCBSP principle that development within or adjacent to CBA1 areas must avoid further loss of natural habitat and be restricted to low-impact land uses.

The faunal assessment confirmed the presence of 11 Species of Conservation Concern (SCCs) on the site, including the Mute Winter Katydid (*Brinkiella aptera*), Black Harrier (*Circus maurus*), Southern Adder (*Bitis armata*), and African Marsh Harrier (*Circus ranivorus*). A confirmed record of the Mute Winter Katydid along the eastern boundary of the site directly influenced the placement of House 2. A 50 m high-sensitivity no-go buffer zone was established around the mapped Katydid habitat, and the layout of House 2 was redesigned to remain outside this buffer, in direct compliance with the WCBSP principle of avoiding impacts on sensitive biodiversity features. An additional 100 m fauna impact zone was designated and is reflected on the new preferred site development plan (Alternative 4).

All primary residential structures have been cited above the 5 m contour line and outside of the EFZ, more than 32 m from the nearest freshwater feature and landward of the coastal management line, consistent with the WCBSP objective of maintaining the ecological integrity of the Klein River Estuary's Aquatic CBA1. The number of jetties has been reduced from two to one, and the slipway has been completely removed in direct response to Cape Nature's comment, further reducing the overall footprint of the development within the estuarine environment.

In response to the recommendations of the Faunal Specialist and the comments of the DEA&DP and Cape Nature, the applicant commits to retaining at least 70% of the property under natural vegetation cover to maintain ecological connectivity and support faunal movement across the landscape. The undeveloped portions of the property, which form part of a functional ecological corridor linking the Klein River Estuary with surrounding fynbos and shrubland habitats, will be managed in accordance with the WCBSP's ecological support and connectivity objectives. The applicant will explore, in consultation with CapeNature, the feasibility of formalising the conservation management of the undeveloped portions of the property through a stewardship agreement or equivalent conservation instrument, consistent with the WCBSP's objectives for CBA1 and ESA areas.

An alien vegetation management plan will be developed and implemented for the entire property, targeting the removal of invasive alien plant species including *Acacia cyclops*, *Carpobrotus edulis*, *Eucalyptus cladocalyx*, and *Schinus terebinthifolius*, in accordance with the National Environmental Management: Biodiversity Act (NEMBA) and the WCBSP's objective of restoring and maintaining natural habitat within and adjacent to priority biodiversity areas.

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.

The Integrated Coastal Management Act (ICMA, Act 24 of 2008) seeks to promote the sustainable use, conservation, and management of the coastal environment. It does so by identifying and regulating activities within specific zones of the coastal protection area, the coastal public property, and the coastal access land, among others. The purpose of these zones is to ensure that development along coastal areas does not compromise ecological integrity, public access, or the long-term resilience of coastal ecosystems.

In the case of Portion 4 of Farm 643, half of the property is located within the Coastal Protection Zone (CPZ) due to its proximity to the Klein River. The CPZ is intended to safeguard sensitive riparian systems, protect ecological infrastructure, and minimise risks associated with inappropriate development in sensitive coastal areas. Although some infrastructure will be situated within 100m of the High-Water Mark of the Klein River, the proposed development aligns with this intention by situating the main residential dwellings above the 5-metre contour line, outside of sensitive riparian habitat, thereby reducing direct impacts on the riverine system. By limiting development to already disturbed or transformed areas, the project avoids unnecessary intrusion into intact natural habitats within the CPZ. **The definition of this portion of the Klein River as part of the sea is questionable since the area does not experience tidal influence.**

The portion of the pool and fire pit, as well as the jetty and pathway fall within the ambit of the ICMA as water-based access infrastructure, their location will be within the 5m contour. The intention of the ICMA in this regard is not to prohibit such uses outright but to regulate them to ensure that they are designed, located, and managed in a manner that does not compromise the ecological functioning of the riverine systems. Consistent with this, the project recognises that the jetty will require a permit in terms of the Seashore Act, and they will be developed in line with Cape Nature specifications.

8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.

The screening tool report has not changed from the one submitted with the NOI.

9.	Explain how the proposed development will optimise vacant land available within an urban area.

The property is not situated within an urban area.

10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.

The proposed development has been designed to optimise the use of existing resources and infrastructure by leveraging previously disturbed areas on the property. Internal access roads and building footprints are aligned with historic pathways and previously transformed zones, reducing the need for new land clearing and minimizing construction-related impacts. By using these existing alignments, the development limits soil disturbance, preserves natural drainage patterns, and reduces construction costs associated with creating entirely new infrastructure.

11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).

Associated infrastructure:

Water

To ensure reliable water availability and pressure regulation, storage tanks will be installed within a designated area of approximately **26 m²** situated on the western portion of the property, within the footprint of an existing disturbed road. Water will be extracted from the borehole for household use, and therefore no authorisation is required in terms of National Water Act.

Electricity

Off the grid options will be included in the design and roof mounted solar panels will be used to cover the electrical requirements of the site.

Sewage

Sewage generated from the proposed development will be managed through a closed prefabricated conservancy tank system. The conservancy tank will be installed within an already disturbed area situated on the western portion of the property, located above the 5 m contour line to ensure safety from flooding and to maintain compliance with coastal and watercourse setback requirements.

A minimum 6 000-litre sealed conservancy tank will be provided, sized to adequately accommodate effluent volumes from the residential units. The tank will be connected to the internal sewer drainage network of the buildings to collect

both sewage and greywater in a secure, watertight system. The contents of the conservancy tank will be periodically emptied by a licensed private waste contractor and disposed of at a registered municipal wastewater treatment facility

Solid Waste

The solid waste will be collected onsite and disposed of at a registered facility.

12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.

The need and desirability of the proposed development have been evaluated in accordance with the Department's *Guideline on Need and Desirability (March 2013)* and the principles of *Integrated Environmental Management (IEM)* as set out in the National Environmental Management Act (NEMA) (Act No. 107 of 1998).

Need for the Proposed Development

The preferred site for the proposed development is Portion 4 of Farm 643, situated west of Stanford. This property was identified as the only feasible site for the proposed activity, as it is under the ownership and control of the applicant. No alternative land parcels are available within the applicant's ownership that could reasonably accommodate the proposed development. The absence of alternative sites therefore significantly constrains site selection options, rendering this property the only viable location for achieving the project objectives. In this context, the preparation of a comparative site selection matrix was not considered applicable.

From a broader socio-economic perspective, the Overstrand area continues to experience demand for housing and small-scale development opportunities that support local livelihoods, land-based investment, and the diversification of rural land use. While the proposed development is limited in scale, it contributes to this need by enabling appropriate, low-intensity residential use within an existing rural landscape, without triggering large-scale transformation or urban sprawl.

The proposed activity further responds to the need for landowners to utilise their property in a manner that is economically viable while remaining compliant with environmental legislation. In this regard, the development seeks to balance land-use rights with environmental responsibility, as envisaged by NEMA.

Desirability of the Proposed Development

The desirability of the proposed development is informed by its location, scale, layout design, and responsiveness to environmental constraints. The site is located within a rural setting that offers a tranquil living environment, which aligns with the intended development outcomes and is compatible with the character of the surrounding landscape.

Importantly, the desirability of the development has been significantly enhanced through the refinement of the layout to Alternative 4, which directly responds to the findings and recommendations of the specialist studies. The preferred layout avoids sensitive biodiversity features, including the habitat of the Mute Winter Katydid, through the relocation of one residential unit outside the identified habitat and the establishment of a 50 m buffer zone. In addition, the reduction of jetty infrastructure from two to one represents a substantial improvement over earlier alternatives and demonstrates a clear commitment to minimising impacts on the riverine environment. Moreover, the slipway has been completely removed from the proposed development component therefore no boat launching will take place and vehicle access will be permitted beyond the dwellings.

From a land-use perspective, the property remains zoned for agricultural use and will not be subdivided, thereby maintaining consistency with surrounding land uses and avoiding fragmentation of the rural landscape. The scale of the proposed activity is considered appropriate to the receiving environment and does not introduce land uses that are incompatible with existing activities in the area.

The site further benefits from existing infrastructure, including an established access route via Wortelgat Road, which runs along the southern boundary of the property. Utilising this existing access significantly reduces the need for new road construction and limits additional vegetation clearance and soil disturbance. This approach aligns with the NEMA principles of resource efficiency, avoidance of unnecessary environmental degradation, and sustainable development.

Alignment with NEMA Principles

The proposed development, particularly in its refined form (Alternative 4), demonstrates alignment with the key principles of NEMA by:

- → Avoiding and minimising environmental impacts where reasonably practicable;
- → Promoting development that is socially and economically beneficial while remaining environmentally responsible;
- → Ensuring that sensitive ecological features are protected through informed planning and specialist-driven mitigation measures; and
- → Supporting sustainable land use that does not compromise the ecological integrity of the area or the needs of future generations.

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

N/A

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

N/A

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

DEA&DP Landuse

DOA: Elsenburg

DEA&DP: Coastal Management

Cape Nature

Cape Nature: Seashore Act

BOCMA

Overstrand Municipality

Overberg District Municipality

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

N/A

5. if any of the State Departments and Organs of State did not respond, indicate which.

Department of Agriculture

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

Name/ Organization	Comment	Response
Overstrand Municipality ***(Letter dated: 23/02/26)***	Overstrand Municipality advised that Alternative 3 layout would be the most suitable development option	Comment is noted. However, it should be noted that the new preferred alternative has been updated, and the new preferred alternative is Alternative 4 which responds to al the concerns raised by the organs of state and is in line with the relevant specialist recommendations.
	The municipality indicated that the property falls within the Costal Protection EMOZ and Rural Risk Zone and that the following conditions should be adhered to: • After construction, any exposed ground area must be stabilized using ground covering plants or mulches to minimize the risk of erosion. • Any new development must be designed and positioned within reason to limit potential flood damage and risk to human life, including but not limited to positioning buildings in suitably acceptable elevated portions of properties. • Planting or harboring of declared alien invasive vegetation on property is prohibited. • Discharge of grey water or domestic effluent within any natural system is prohibited. • No land user within this EMO may utilize the vegetation in a vlei, marsh or within the flood area of watercourse in a manner that may cause deterioration or damage to the natural resources.	Comment is noted. These conditions have been integrated into the BAR and the EMPr.

	• Disposal of cigarette butts, ash or other hazardous material in any place or manner other than a receptable designated for such items.	
Breede-Olifants Catchment Management Agency ***(Letter dated: 23/02/26)***	BOCMA noted that all relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to	Comment is noted. The proposed major construction activities as well as the operational activities of the development shows adherence to NWA legislations. As indicated in the Aquatic Compliance Statement, the northern portion of the site falls within the extent of the Klein River estuary. No additional aquatic features mapped within the remainder of the site.
	The desktop assessment indicates that the property is located along the Klein River and is mapped as an estuary. Conformation whether any wetlands occur within or near the property must be provided.	The National Geo-Spatial Information (NGI) River line vector data (2019) indicates the Klein River associated with the estuary along the northern border of the site, no additional rivers are located within the 100 m regulated proximity of the study site. Additionally, no watercourse or wetland indicators were identified within the proposed site.
Overberg District Municipality ***(Letter dated: 23/02/26)***	The Municipality supports the placement if the proposed development behind the Coastal Management Line (CML) and the 5m contour. However, the applicant should take note that the proposed residential dwellings remain located within the designated Rural Risk Zone (RRZ). These regulatory zones play a critical role in guiding appropriate development within coastal areas, ensuring that environmental sensitivities and potential risks are adequately managed. The primary objectives of the coastal management (setback) line include: • Protecting costal public property, private asserts, and public safety; • Identifying and conserving features within the coastal protection zone; • Preserving the aesthetic, ecological, and cultural integrity of the costal landscape.	Comment is acknowledged. The coastal risk zones and coastal management lines have been duly considered and incorporated into the Preferred Layout Alternative. The BAR and the proposed layout also make reference to the Rural Risk Zone and discuss the development intent, demonstrating that the amended layout aligns with the primary objectives of the coastal management line in accordance with the requirements of the National Environmental Management: Integrated Coastal Management Act (NEM:ICMA).
	ODM also acknowledged the Botanical specialist conclusion that the vegetation type on the property does not constitute Agulhas Limestone Fynbos but rather an undescribed shrubland. The protection of indigenous habitat remains important, and mitigation measures that limit the extent of development and prevent further degradation of the receiving environment should be prioritised. In accordance with the National Environmental Management: Biodiversity Act, 2004, and the Conservation of Agricultural Resources Act, 1983, landowners are responsible for the management and control of invasive species on their properties. An alien vegetation management plan should therefore be developed and implemented for the entire property to avoid further impacts on sensitive ecosystems.	Noted. The specialist studies undertaken for this assessment identified the no-go areas, buffer areas which need to be incorporated and considered to safeguard the surrounding environment as well as to protect the ecological integrity of the site and the adjacent Klein river estuary. All these have been taken into consideration in the current preferred layout (Alternative 4).
Cape Nature ***(Letter dated: 23/02/26)***	Cape Nature notes the motivation of the screening tool that no specialist study is required for the aquatic biodiversity theme, as only the jetty, slipway, fire pit and swimming pool are located below the 5 m contour within the EFZ. This motivation is not supported, as the Klein River Estuary is a national	The Aquatic Compliance Statement was undertaken and confirms that the development is not located within or near a wetland. It is noted that the National Geo-Spatial Information (NGI) River line vector data (2019) indicates the Klein River associated with the estuary along the northern border of the site, no

	priority estuary and it will be impacted upon by the jetty and slipway. It is also likely that authorisation will be required in terms of the National Water Act which would require input from an aquatic biodiversity specialist.	additional rivers are located within the 100 m regulated proximity of the study site. Additionally, no watercourse or wetland indicators were identified within the proposed site. Therefore, a Water Use License is not required.
	With regards to 3/643, Cape Nature notes that there was extensive engagement between CapeNature and the project team regarding the classification of the vegetation type, including a site visit. There was also engagement between the environmental assessment practitioner and SANBI. Cape Nature also that the vegetation occurring on site should be aligned to an existing vegetation type or otherwise would need to be recognised by SANBI as a new vegetation type. Should the interpretation be that secondary vegetation that arises after disturbance which is not representative of the original critically endangered or endangered vegetation type prior to disturbance be interpreted as not triggering Listing Notice 3 Activity 12, this must be officially accepted and applied and would need to be more clearly defined in order to qualify.	It is important to note that half of the property falls within the Rural Risk Zone EMOZ and the proposed development component incorporates the establishment of a jetty infrastructure.
	Although no plant species of conservation concern identified onsite, Cape Nature note that there are records of plant SCCs on iNaturalist, despite the statement in the botanical assessment that there are no other records for the site other than those from the botanical study. We therefore recommend that these records need to be reviewed and the report amended as required.	Comment is noted. It is also important to note that iNaturalist was consulted by the appointed botanical specialist.
	An extensive species list is provided of the species recorded on site during the three diurnal and nocturnal field site visits in August and within the five habitats encompassing mammals, birds, reptiles, amphibians and invertebrates. A total of 11 SCCs were recorded. Bontebok (*Damaliscus pygargus pygargus*) is listed as vulnerable however they were introduced to the property. The site is however within the natural distribution range of the species (Cowell & Birss 2017). Cape Nature is aware that there was a captivity permit for bontebok on 3/643 and wish to query if they are the same animals. The list of five additional SCCs considered likely to occur on site in addition to those flagged in the screening tool includes four species which are included in the list of species recorded, therefore it should be one additional species.	Noted.
	We wish to note that it is proposed by members of the Stanford community to encourage all landowners downstream of Stanford to clear their properties of reeds as a flood risk mitigation measure. CapeNature has concerns regarding the ecological impacts of this action as the reedbeds are important faunal habitat e.g. African Marsh Harrier. Although not part of the application, we recommend that the faunal specialist should provide input on this proposal and it should be	It is important to note that the control of reeds has been incorporated into the MMP as one of the method statements.

	included as a required mitigation measure/restriction for consideration for authorisation.	
	The primary buildings associated with the proposed development are located outside of the EFZ and therefore also behind the coastal management line. The proposed development is however located within the coastal protection zone and therefore the regulations for the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Municipality must be adhered to. The Klein River Estuarine Management Plan must also be adhered to	The proposal adheres to the Klein River Estuarine Management Plan.
	CapeNature objects to the proposed slipway. Cape Nature further recommend that the Department of Environmental Affairs and Development Planning (DEA&DP) Coastal Management component should provide comment on the proposed jetty and slipway.	The slipway is completely removed from the development component proposed on the subject property. However, a pathway is proposed to provide access to the proposed jetty infrastructure.
	The proposed jetty and slipway must be assessed in the aquatic biodiversity specialist study which we recommended above. It must be ensured that the location of the proposed jetty will have minimal impact on the hydrology and ecological function of the system. The specialist should ideally have expertise in estuarine systems. The potential impact of reed clearing should also be assessed in the aquatic biodiversity study.	An Aquatic Biodiversity Compliance Statement has been undertaken and involves the assessment of the proposed jetty and pathway. It is important to note that the slipway no longer forms part of the development components, a pathway is proposed instead.
DEA&DP: Development Management ***(Letter dated: 23/02/26)***	DEAD&DP notes that the latest google earth imagery potential vegetation clearance may have been undertaken along the boundary of the site next to the development footprint designated for the manager's cottage. This may constitute unlawful commencement of a listed activity . Clarity must be provided in this regard.	The area is approximately less than 100m^2
	The Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment Report dated December 2025, compiled by Wildlife Conservation Decision Support includes a recommendation that consideration should be given to assign all retained natural habitat (approximately 70% of site) to a formal conservation status, such as a stewardship agreement, to ensure long-term ecological management, and to secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements. Since it is stated that the development is deemed acceptable under strict conditions, including the long-term ecological management of undeveloped areas, confirmation is required whether these specialist recommendations will be implemented. In addition, comment must be obtained from CapeNature whether the recommendations are supported.	Cape Nature acknowledged the recommended mitigation measures. See Cape Nature's comment attached above.
	CapeNature has developed a WCBSP verification protocol. Only CapeNature can provide official confirmation whether a change in the mapping is warranted or not. Furthermore, there is a formal process that must be followed to obtain this confirmation. Unless the required confirmation is obtained, the mapping must be considered and remains applicable. In addition, comment must be obtained from CapeNature regarding the Terrestrial Biodiversity Impact Assessment findings.	See Cape Nature's comment attached above.

	As stated in the correspondence dated 22 April 2025, this Directorate reiterates that given the development's proximity to the Kleinrivier Estuary additional specialist input may be required. Especially given that the proposed development footprint is within the coastal protection zone, which is generally not supported. Hence, should any authority that has jurisdiction in respect of any aspect of the proposed development request that further specialist studies be conducted, and where the request is supported by this Directorate, this must take precedence (i.e. comment from this Department's Coastal Management Sub-Directorate, CapeNature and the local and district municipality).	Concerns and recommendations raised by the relevant authorities have been taken into account in the new updated SDP (Alternative 4).
	Written confirmation must be obtained from a registered service provider that they have available capacity to regularly empty the conservancy tank and written confirmation is required from the municipality of sufficient capacity at the Wastewater Treatment Works to service the proposed development.	The service confirmation report is still pending and will be included in the final submission of the BAR.
	Similarly, written confirmation must be obtained from a registered service provider that they have available capacity to provide the required solid waste removal services and the municipality must confirm that there is sufficient capacity at the landfill site to service the proposed development.	The service confirmation report is still pending and will be included in the final submission of the BAR.
	Confirmation is required from the Breede-Olifants Catchment Management Agency ("BOCMA") whether the proposed development triggers any water uses that will require approval in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If a Water Use Licence Application ("WULA") is required, proof of submission of the application to the BOCMA and a copy of the WULA Information must be included in the BAR.	Subsequent to the correspondence from BOCMA, a confirmation of the nearby wetlands or watercourses was required. The Aquatic Biodiversity Compliance Statement was commissioned and confirmed that the development is not located within or near a wetland. However, the delineated EFZ edge is associated with the Klein River Estuary and therefore falls within the coastal environment regulated in terms of the Integrated Coastal Management Act and associated estuarine management frameworks. Ground-truthing confirmed that the proposed residential development footprint is located outside of freshwater wetland and riverine systems typically regulated as inland watercourses under NEMA.
	The Site Development Plan ("SDP") of the preferred alternative must include any buffer / no-go areas that will be incorporated, as recommended by the specialist findings, especially if is the remainder of the site will be conserved. The updated SDP must also be included the Environmental Management Programme ("EMPr"), as per regulatory requirements.	The amended SDP includes the recommended buffers/no go areas, (see Appendix B4 – Alternative 4; Preferred Site Development Plan).
	In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMPr and submit Environmental Audit Reports to the Competent Authority. The Environmental Audit Report must be prepared by an independent person (other than the Environmental Assessment Practitioner and Environmental Control Officer) and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014. It is recommended on page 170 of the draft BAR that	Noted. The recommended frequency will be adhered to.

	independent environmental audits be conducted every six months during the construction phase, with one final construction audit at conclusion of construction. The recommended frequency must be included in the relevant section/s of the EMPr. Note that this frequency will be included as a condition should Environmental Authorisation be granted. The applicant must therefore confirm that the recommended frequency can be adhered to, since failure will be deemed as a non-compliance.	
	Since Activity 19A of Listing Notice 1 is triggered by the proposed development, it is recommended that a Maintenance Management Plan ("MMP") forms a component of the Environmental Management Programme. Should the Department agree to the proposed MMP, future maintenance work specified within the MMP would not require an Environmental Authorisation prior to the undertaking thereof.	The MMP has been compiled and is attached as Appendix J.
	Comment from, but not limited to the following Organs of Statement must be obtained: • CapeNature • BOCMA • Overstrand Municipality • Overberg District Municipality • Department of Agriculture	See attached comments from Cape Nature, BOCMA, Overstrand Municipality, Overberg District Municipality. However, comments from DEA&DP: CMU and Department of Agriculture are still pending.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	YES	NO X
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
N/A			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
N/A			

2. Surface water

2.1.	Was a specialist study conducted?	YES	NO X
2.2.	Provide the name and/or company who conducted the specialist study.		
Aquatic Compliance Statement – Delta Ecology – Morton and van Zyl.			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

Aquatic Compliance Statement

The desktop assessment identified the Klein River Estuary as the primary aquatic feature associated with the site, mapped within the northern portion of the property according to the SANBI National Wetland Map Version 5 (NWM5, 2018) and the National Freshwater Ecosystem Priority Areas (NFEPA, 2011) datasets. The estuary is classified as a national priority water resource and falls within an Aquatic Critical Biodiversity Area (CBA 1) as designated by the Western Cape Biodiversity Spatial Plan (WCBSP, 2023). No additional watercourses or wetlands were identified within the remainder of the site or within the 100 m regulated proximity of the proposed development footprint.

The site sensitivity was initially flagged as "Very High" by the national web-based environmental screening tool (DFFE, 2026) due to the property's location within the mapped extent of the Klein River Estuary and its associated estuarine functional zone (EFZ). Following ground-truthing and field verification, however, the aquatic biodiversity sensitivity of the development footprint was verified as "Low", as the proposed residential infrastructure is situated entirely within a historically disturbed terrestrial environment, more than 32 m from the nearest freshwater feature, and outside of any freshwater wetland or riverine system regulated under the National Environmental Management Act (NEMA).

The presence of the Klein River Estuary and its associated EFZ has directly influenced the development layout in the following ways:

- **Siting of residential infrastructure:** The two primary dwellings (House 1 and House 2), the manager's cottage, and the gatehouse have been positioned entirely outside of the EFZ and landward of the coastal management line, with the EFZ edge delineated approximately 45 m downslope from the majority of the residential footprint area and upstream of the 5 m contour line.

- **Buffer zone application:** Using the Buffer Zone Tool (Macfarlane & Bredin, 2017), a construction buffer of 25 m and an operational buffer of 15 m were determined for the Klein River Estuary. These buffers have been incorporated into the site layout to ensure that construction and operational activities do not encroach on the estuarine environment, except where explicitly required for the footpath and jetty.

- **Jetty placement and design:** The proposed jetty (53 m²) is the only built infrastructure component that encroaches into the EFZ. Its placement has been confined to the minimum footprint necessary, and it must be designed and constructed in accordance with the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) provisions of the Overstrand Local Municipality and CapeNature's specifications. Given the limited and localised nature of the jetty, significant long-term impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided that all recommended mitigation measures are implemented.

- **Access and footpath routing:** The proposed footpath is the only other development component that enters the EFZ. Its routing has been planned to minimise disturbance to the estuarine environment.

- **Compliance with the Klein River Estuarine Management Plan:** All activities within and adjacent to the estuary must adhere to the provisions and management objectives of the Klein River Estuarine Management Plan, which has shaped the overall approach to infrastructure positioning and operational management on the property.

- **Operational management measures:** The presence of the estuary has necessitated a comprehensive set of mitigation and management measures relating to stormwater management, sewage disposal (conservancy tank), vegetation management (use of indigenous fynbos species, prohibition of invasive alien plants), lighting design (directed away from the estuarine environment), and construction practices (dry-season construction preference, erosion and sediment controls).

In summary, the presence of the Klein River Estuary has been a central consideration in the planning and layout of the proposed development. The development footprint has been deliberately located outside of the sensitive estuarine environment, with only the minimum necessary infrastructure (the jetty and footpath) encroaching into the EFZ, and subject to stringent mitigation requirements.

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	NO X
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
Section 63 of the Integrated Coastal Management Act (ICMA, Act No. 24 of 2008) provides the regulatory framework for development within the Coastal Protection Zone (CPZ). Its purpose is to safeguard the natural functioning of coastal			

ecosystems, maintain the ecological integrity of coastal and estuarine environments, and prevent risks associated with inappropriate development in proximity to sensitive coastal features. The relevant provisions of Section 63 were carefully considered during the planning and design of the proposed development on Portion 4 of Farm Middelburg 643, Stanford, and have materially influenced the layout and scope of the proposed development as described below.

Section 63(1)(a): The extent to which the applicant has in the past complied with similar authorisations

Not applicable. The applicant has not previously held similar authorisations in respect of this or comparable properties.

Section 63(1)(b): Whether coastal public property, the coastal protection zone or coastal access land will be affected, and if so, the extent to which the proposed development is consistent with the purpose for establishing and protecting those areas

The proposed development is situated on privately owned land adjacent to the Klein River Estuary, within the Coastal Protection Zone as defined under the ICMA (Act 36 of 2014), as amended. The site is bordered to the north by the Klein River Estuary and its associated Estuarine Functional Zone (EFZ). The development does not fall within designated Coastal Public Property, and there are no formalised public coastal access routes traversing the property. The proposed development will not result in the closure or obstruction of any recognised coastal access route, nor will it introduce any barrier to existing public access rights along the Klein River Estuary.

The primary built infrastructure, comprising the two residential dwellings, the manager's cottage, and the gatehouse, has been sited entirely outside of the EFZ and landward of the coastal management line, in a manner consistent with the purpose for which the Coastal Protection Zone is established under Section 17 of the ICMA. Only the proposed jetty (53 m²) and associated footpath encroach into the EFZ, and their placement has been confined to the minimum footprint necessary. These structures are intended for private use by the landowner and do not conflict with broader public access objectives. The development has accordingly been planned to remain consistent with the purpose for establishing and protecting coastal public property, the Coastal Protection Zone, and coastal access land.

Section 63(1)(c): The estuarine management plans, coastal management programmes, coastal management lines and coastal management objectives applicable in the area

The following coastal and estuarine management instruments are applicable to the proposed development and have been taken into account during the planning process:

The Klein River Estuarine Management Plan is directly applicable, as the northern portion of the site falls within the extent of the Klein River Estuary, which is recognised as a national priority estuary with an Estuary Importance Score of 93, rated as "Highly Important" (Clark et al., 2015). The provisions and management objectives of this plan must be adhered to at all times for all activities undertaken within and adjacent to the estuary. This requirement has informed the siting of all infrastructure outside of the EFZ, except for the jetty and footpath, which must be designed and constructed in strict accordance with the plan's objectives.

The Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality is applicable to the entire development. All activities, and in particular the design and construction of the jetty, must comply with the specifications and requirements stipulated within the applicable EMOZ provisions and must be designed in line with CapeNature's specifications. This requirement has directly influenced the design approach for the jetty infrastructure.

The coastal management line applicable to the site has been incorporated into the development layout, with all primary residential infrastructure confirmed as landward of this line.

Section 63(1)(d): The likely socio-economic impact if the listed activity is authorised or is not authorised

The proposed development is expected to generate positive short-term socio-economic benefits through employment creation during the construction phase, including vegetation clearance, civil works, and building construction. In the longer term, the development will contribute to the local economy through rates revenue to the Overstrand Local Municipality and the ongoing employment of property management and maintenance staff. Should authorisation not be granted, these socio-economic benefits would not be realised, and the applicant would be deprived of the lawful use and enjoyment of privately owned land in a manner consistent with its zoning and applicable land use rights.

Section 63(1)(e): The likely impact of the proposed activity on the coastal environment, including cumulative effects together with those of existing activities

The Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026) confirmed that the proposed residential infrastructure is situated entirely within a historically disturbed terrestrial environment, more than 32 m from the nearest freshwater feature, and outside of any freshwater wetland or riverine system regulated as an inland watercourse under NEMA. The aquatic biodiversity sensitivity of the development footprint was verified as "Low." The Klein River Estuary has a Present Ecological State (PES) of C, indicating a Moderately Modified system, and is already subject to cumulative pressures including reduced freshwater inflow, eutrophication, and the effects of surrounding agricultural land use (Van Niekerk et al., 2019).

The only development components with the potential for direct impact on the coastal environment are the proposed jetty and associated footpath, both of which encroach into the EFZ. These impacts are anticipated to be localised and temporary in nature during construction and may include disturbance of estuarine reedbed habitat dominated by *Phragmites australis* (Common Reed), temporary increases in sedimentation, and localised disruption of ecological functioning within the immediate construction footprint. Given the limited and localised nature of the jetty infrastructure (53 m^2), significant long-term impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided that construction is undertaken in the dry season where feasible, and that all recommended mitigation measures outlined in the Compliance Statement are implemented. These measures include, among others, the demarcation of the 25 m construction buffer prior to works commencing, the installation of temporary sediment control structures, the prohibition of direct stormwater discharge into the estuary, and the rehabilitation of all disturbed areas upon completion of construction.

Section 63(2)(a): Whether the development is situated within coastal public property and is inconsistent with the objective of conserving and enhancing coastal public property

The proposed development is located on privately owned land. The development footprint does not fall within designated Coastal Public Property, and the proposal does not impede or compromise any public access rights. The development is accordingly not inconsistent with the objective of conserving and enhancing Coastal Public Property for the benefit of current and future generations.

Section 63(2)(b): Whether the development is situated within the Coastal Protection Zone and is inconsistent with the purpose for which the Coastal Protection Zone is established under Section 17

The proposed development is situated within the Coastal Protection Zone and is subject to the requirements of the Coastal Protection Zone EMOZ of the Overstrand Local Municipality. The primary residential infrastructure has been sited outside of the EFZ and landward of the coastal management line. Only the jetty and footpath encroach into the EFZ, and these have been designed and positioned to minimise impacts on the estuarine environment. The development is therefore considered consistent with the purpose for which the Coastal Protection Zone is established under Section 17 of the ICMA, subject to compliance with all applicable mitigation and management requirements.

Section 63(2)(c): Whether the development is situated within coastal access land and is inconsistent with the purpose for which coastal access land is designated under Section 18

The proposed development is not situated within designated coastal access land, and this consideration is accordingly not applicable.

Section 63(2)(d): Whether the development is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot be satisfactorily mitigated

Based on the findings of the Aquatic Biodiversity Compliance Statement, significant long-term or irreversible impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided that all recommended mitigation measures are implemented and that the development is undertaken in accordance with the applicable estuarine management requirements. The impact of the jetty and footpath on the estuarine environment is considered reversible and manageable through the application of the mitigation hierarchy.

Section 63(2)(e): Whether the development is likely to be significantly damaged or prejudiced by dynamic coastal processes

The primary residential infrastructure is located above the 5 m contour line and outside of the EFZ, in a position that is not considered vulnerable to inundation or damage from dynamic coastal or estuarine processes under current conditions. The applicant is cognisant, however, that the extent and functioning of the estuarine system may change over time as a result of altered catchment land use or climate change, as noted in the Compliance Statement.

Section 63(2)(f): Whether the development would substantially prejudice the achievement of any coastal management objective

The development has been planned in accordance with the applicable coastal management instruments, including the Klein River Estuarine Management Plan and the Coastal Protection Zone EMOZ of the Overstrand Local Municipality. Subject to compliance with all recommended mitigation measures and management requirements, the proposed development is not considered likely to substantially prejudice the achievement of any applicable coastal management objective.

Section 63(2)(g): Whether the development would be contrary to the interest of the whole community

The proposed development comprises low-density residential use on privately owned land, consistent with the property's zoning and applicable land use rights. It does not restrict public access to any coastal resource, does not result in the loss of a sensitive freshwater environment, and is subject to a comprehensive suite of environmental mitigation and management measures designed to protect the Klein River Estuary. The development is accordingly not considered to be contrary to the interests of the broader community.

3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.

Portion 4 of the Farm 643 is located to the west of Stanford town and is adjacent to the upper reaches of the Klein Rivier. The northern portion of the property falls within the Coastal Protection Zone (CPZ), the Coastal Management Line (CML), and the 5m contour is located on the watercourse side of the property. The 5 m contour was surveyed on site in 2024.

It is acknowledged by the EAP that the presence of the 5 m contour in this scenario demarcates the Estuarine Functional Zone (EFZ), however it is noted that the property is located on the upper, narrow reaches of the Klein River and does not experience tidal fluctuations or saltwater intrusion. The banks are indicative of a riparian zone and not typical

estuarine systems, and it is therefore debateable whether this reach can be accurately defined as an estuary. Regardless, listed activities relating to the HWM have been applied for and assessed in this application.

The objectives and principles of estuary management planning particularly the protection of estuarine processes, water quality, ecological functioning, and public interest have directly informed the design and siting of the proposed development. In alignment with these principles, the layout has been structured to avoid unnecessary disturbance within the estuarine environment.

With regards to the proposed development on the property, the property falls within the Coastal Protection Zone bulk infrastructure associated with the proposed development has been positioned above the 5 m contour and more than 100 m landward of the High-Water Mark of the Klein Rivier Estuary.

3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.

Half of the property is mapped as a Coastal Protection Zone (CPZ), the development is located within 100m of the High-Water Mark of the estuary. Additionally, all the residential dwelling proposed will be located above the 5m contour (Estuarine Functional Zone) of the Kleinriver estuary, with limited infrastructure below the 5m contour.

The bulk infrastructure is located above the 5m contour and more than 100 m from the river edge.

Only the portion of the pool and fire pit, as well as the jetty and pathway fall below the 5m contour.

4. Biodiversity

4.1.	Were specialist studies conducted?	YES x	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		

Faunal Impact Assessment - Jan Venter – Wildlife Conservation Decision Support

Terrestrial and Botanical Impact Assessment – Dave Mc Donald.

4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.

Terrestrial Biodiversity Impact Assessment

Vegetation

A range of systematic conservation planning tools and biodiversity informants were consulted to assess the ecological sensitivity of Portion 4 of Middelburg 643, Stanford. These included the National Vegetation Map of South Africa (VEGMAP, SANBI 2024), the National Web-based Environmental Screening Tool, the Western Cape Biodiversity Spatial Plan (CapeNature, 2024), and the National Red List of Ecosystems (SANBI, 2022). These sources were used in conjunction with site-specific field surveys undertaken by the appointed specialist.

According to the South African Vegetation Mapping (2024), the site is mapped as Agulhas Limestone Fynbos, which is listed as Critically Endangered in the Revised National List of Ecosystems that are Threatened and In Need of Protection (2022). This mapping also forms the basis for the Western Cape Biodiversity Spatial Plan's classification of the site as a Critical Biodiversity Area 1 (CBA1), and for the National Red List of Ecosystems classification of the site as Critically

Endangered. The National Screening Tool similarly indicates Medium sensitivity for the plant species and, Very High for terrestrial biodiversity theme based on this underlying vegetation classification.

Field verification conducted on 5 October 2025, corroborated by consultation with regional vegetation expert Mr Sean Privett, established that the site contains no limestone substrate and that the vegetation does not conform to Agulhas Limestone Fynbos in substrate, structure, or species composition. Instead, the vegetation similar to Eastern Rûens Shale Renosterveld even though it does not fit easily into the described concept of this vegetation type. The specialist confirmed that the vegetation has low botanical and terrestrial biodiversity sensitivity and that no plant species of conservation concern were recorded. Because the conservation planning products depend on the incorrect VEGMAP classification, their associated sensitivity ratings do not reflect the actual ecological conditions on the property.

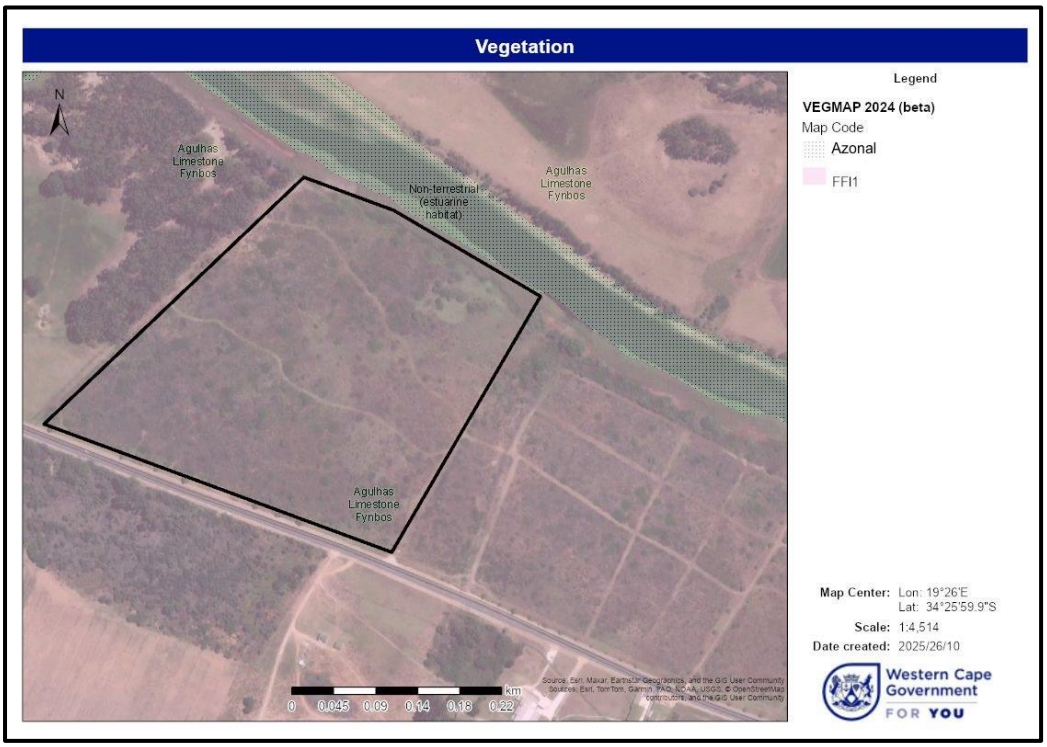

Figure 4: The vegetation type for the study area (black outline) as given in VEGMAP. This classification and hence mapping is incorrect. ***Source;*** (McDonald, 2025).

Vegetation found in the study area

According to the botanical specialist, the vegetation on the subject property comprises two primary vegetation sub-types, which correspond to distinct ecological gradients across the property.

The first sub-type occurs within the low-lying riparian floodplain of the Kleinrivier. Along the riverbank, the vegetation is characterised by dense stands of Common Reed (Phragmites australis), forming a continuous fringe along the watercourse. The adjacent floodplain is strongly dominated by *Stenotaphrum secundatum* (buffalo grass), which establishes a dense grassy sward interspersed with emergent shrubs and trees. These shrubs occur either as scattered individuals or as multi-stemmed thickets comprising species such as *Gymnosporia buxifolia, Plecostachys serpyllifolia*, *Senecio halimifolius*, *Searsia glauca*, and *Searsia rehmanniana*. Some of these thickets include taller species such as *Olea europaea subsp. cuspidata* and *Melianthus* major, reflecting a structurally diverse riparian zone that is seasonally inundated when river levels rise.

Photo 6: The low-lying part of the property close to the Kleinrivier. This area is flooded when the river level is high. *Source;* McDonald (2025).

Photo 7: The reed, Phragmites australis fringes the riverbank. The dense shrub in the centre of the image is *Gymnosporia buxifolia*. *Source*; McDonald (2025).

Photo 8. A spreading shrub of *Searsia glauca* (blue khunibush). *Source;* McDonald (2025).

Photo 9. *Melianthus major* with brown inflorescences forming part of a thicket with tall *Olea europaea subsp. cuspidata* (wild olive). *Source;* McDonald (2025).

Further upslope, beyond the floodplain, the vegetation transitions into a distinctly different shrubland sub-type. This upland area is dominated by dense to mid-dense stands of mid-high to tall shrubs, with *Passerina corymbosa, Gnidia squarrosa,* and *Muraltia spinosa* forming the co-dominant upper stratum. The lower stratum includes a combination of low shrubs—such as multiple Helichrysum species and a mixture of indigenous and exotic grasses, including Briza maxima and *Bromus diandrus*. Within this matrix shrubland, occasional dense thickets of *Searsia crenata* or *Searsia glauca* occur, sometimes accompanied by *Gymnosporia buxifolia*. Scattered *Olea europaea subsp. cuspidata* trees are also present throughout this upland area.

The specialist further notes that portions of this upland shrubland are moribund, with patches of tall shrubs showing signs of senescence and die-back. This condition is typical of fire-dependent shrubland systems where ecological rejuvenation is hindered by the absence of natural fire cycles.

Photo 10. Dense stands of *Passerina corymbosa* occur over large areas of the property. *Source;* McDonald (2025).

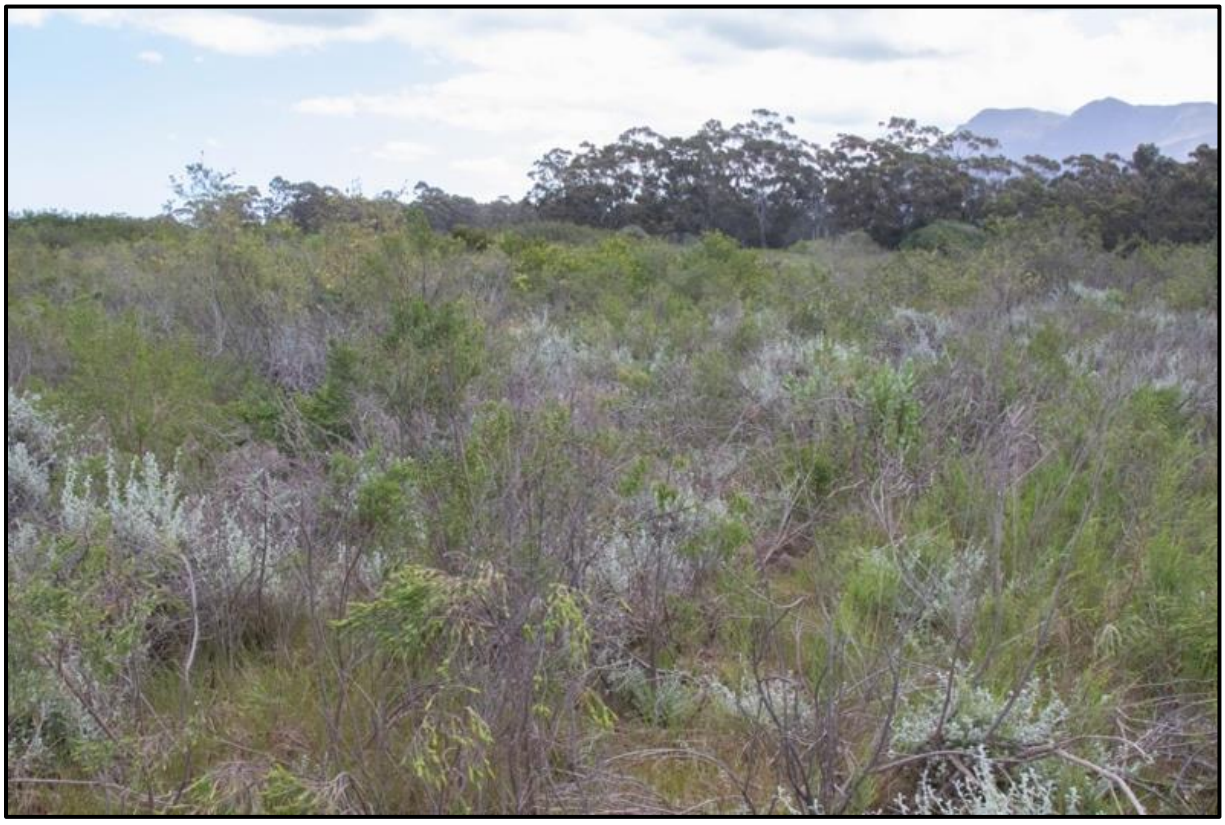

Photo 11. The light grey plants are *Helichrysum spp*. in the understorey of the dense shrubland. *Source*; McDonald (2025).

Photo 12. *Gnidia squarrosa* is co-dominant in places in the dense mid-high to tall shrubland. *Source*; McDonald (2025).

The birds and animals observed onsite

The specialist recorded relatively few bird and animal species during the site survey, reflecting both the dense nature of the vegetation and the limited open foraging areas. Bird species detected acoustically included Bokmakierie, Cape Robin-Chat and Karoo Prinia. An adult Angulate Tortoise (*Chersina angulata*), a South African endemic was observed, confirming the presence of resident vertebrate fauna within the system.

Although no small antelope were seen, the specialist notes that their presence is plausible given the habitat structure. Signs of Cape Porcupine (*Hystrix africaeaustralis*) activity were recorded in the form of characteristic digging marks where individuals had foraged for roots and bulbs. The porcupines themselves were not observed due to their nocturnal behaviour.

Photo 13. Angulate Tortoise (*Chersina angulata*). Source; McDonald (2025).

Photo 14. A hole dug by a porcupine in search of edible bulbs and corms. *Source;* McDonald (2025).

Plant Species Theme Sensitivity

The National Web-based Environmental Screening Tool classifies the site as having Medium sensitivity under the "Relative Plant Species Theme." However, field assessments conducted by the botanical specialist do not support this rating. The sensitivity rating generated by the Screening Tool is based on the assumption that the site supports Agulhas Limestone Fynbos, a Critically Endangered vegetation type. Field verification confirmed that this classification is incorrect as no limestone-derived vegetation occurs on the property, and the vegetation present is more consistent with a form of Eastern Rûens Shale Renosterveld, although not fully aligned with its typical description.

Based on on-site surveys, the specialist concluded that the vegetation exhibits Low botanical and terrestrial biodiversity sensitivity. No plant species of conservation concern were recorded during the assessment. The suite of sensitive species listed by SANBI for the Screening Tool pertains exclusively to Agulhas Limestone Fynbos, none of which were found on the property. In accordance with the Screening Tool protocol, sensitive species names are not published in this report. Overall, the field results demonstrate that the Screening Tool's Medium sensitivity rating is not reflective of the actual ecological conditions on site.

Relative Terrestrial Biodiversity Theme Sensitivity

The National Screening Tool classified the terrestrial biodiversity theme as Very High sensitivity, based again on the assumption that the property supports Agulhas Limestone Fynbos and falls within a Critical Biodiversity Area 1 (CBA1). The specialist's verification shows that this vegetation type is absent, and therefore the foundation for the high sensitivity rating is incorrect.

In light of the actual vegetation present and the absence of Agulhas Limestone Fynbos, the specialist determined that the terrestrial biodiversity sensitivity of the site is Low, and the property should not be classified as CBA1.

Western Cape Biodiversity Spatial Plan

The specialist disputes the current Western Cape Biodiversity Spatial Plan (CapeNature, 2024) classification of the subject property as Critical Biodiversity Area 1 (CBA1). Given the absence of Agulhas Limestone Fynbos and the field evidence of low botanical sensitivity, the specialist considers the CBA1 designation incorrect for this property and contends that the site's appropriate classification would be no higher than Ecological Support Area 2 (ESA2), and potentially Other Natural Area (ONA).

The specialist confirmed that no plant species of conservation concern were recorded within the study area. This is primarily because the vegetation present is not Agulhas Limestone Fynbos, meaning that the list of sensitive species generated by the National Screening Tool does not apply to the site. Based on field observations, the Site Ecological Importance (SEI) was recalculated rather than relying on the Western Cape Biodiversity Spatial Plan's incorrect CBA1 classification. Using the standard methodology—where Biodiversity Importance (BI) is derived from Conservation Importance (LOW) and Functional Integrity (MEDIUM), and Receptor Resilience (RR) is assessed as LOW—the SEI was determined to be LOW. This reflects the site's low ecological sensitivity and limited capacity to support species or habitats of high conservation value. According to the interpretation guidelines for a LOW SEI rating, the site can accommodate medium-impact development, provided that appropriate minimisation and restoration measures are implemented.

Impact Assessment (Specialist Summary)

The specialist assessed the No-Go Alternative and two development alternatives, with Alternative 1 representing the non-preferred option (development below the 5 m contour), Alternative 2 (development above the 5 m contour using

existing roads and paths where possible) and Alternative 3. Both development scenarios (Alternative 1 and 2) include the construction of jetties and slipways, whereas Alternative 3 is only limited to one jetty and slipway.

For the No-Go Alternative, the specialist notes that the site would remain largely unchanged, with the existing vegetation remaining undisturbed and ecological processes continuing without direct anthropogenic interference. As a result, no direct impacts on terrestrial or riparian vegetation would occur.

Under Alternative 1, which involves development below the 5 m contour, the specialist finds that the proposed construction of residences, jetties, and slipways would generate a low negative impact during the planning, design, and development phase. This is due to the loss of low-sensitivity terrestrial vegetation and riparian vegetation situated within the flood-prone zone of the Klein River. The development footprint would result in local, short-term vegetation loss and increase the risk of compromising the area's ability to withstand flooding. Although the impact is rated as medium significance before mitigation, recommended measures—such as restricting development to above the 5 m contour, limiting infrastructure within the riparian zone, using existing access routes, and clearing invasive alien plants—would reduce risks but still result in a medium negative residual impact. During the operational phase, the continued presence of infrastructure in the floodplain would maintain a medium negative impact, with mitigation opportunities limited. The decommissioning phase is not applicable, as the development lifespan exceeds 25 years.

For Alternative 2, the specialist concludes that impacts would be substantially reduced. Vegetation clearing would be limited to the undescribed shrubland above the 5 m contour and small areas of riparian vegetation where jetties or slipways are planned. Prior to mitigation, this alternative would produce a medium negative impact; however, by avoiding the estuarine functional zone (demarcated by the 5m contour), using existing roads, limiting water-based infrastructure to one jetty and one slipway, and removing alien invasive plants, the residual impact is reduced to low negative. During the operational phase, some ongoing loss of vegetation may occur due to fire management and human presence, but these impacts remain low in significance and can be managed effectively. The specialist emphasises the importance of avoiding disturbance to mature wild olive trees where possible. As with Alternative 1, the decommissioning phase is not applicable.

The new preferred layout (Alternative 4) represents a further refinement of Alternative 3 and directly incorporates the findings and recommendations of the Faunal specialist. The layout was specifically revised to ensure improved avoidance of species sensitive areas as identified by the Faunal specialist.

The revised layout (Alternative 4) is further supported by the botanical specialist (refer to **Appendix G1b**), who highlighted that the findings of the faunal assessment confirmed the presence of an endangered katydid species within a specific habitat area on the property. In response to this finding, the preferred development layout was amended to avoid all development within the katydid's habitat, thereby eliminating direct habitat loss and disturbance to the species. As a result of this revision, the previously preferred layout (Alternative 3) has evolved and the new preferred layout is **Alternative 4.**

The conclusions of the Addendum to the Terrestrial Biodiversity Assessment, confirm that the revised layout does not introduce any additional botanical or general terrestrial biodiversity impacts beyond those already assessed. Following careful consideration of the revised layout, it is concluded that the significance of impacts on botanical and terrestrial biodiversity remains unchanged, and continues to be rated as Low Negative, as previously determined in Table 5 of the main report.

Faunal Impact Assessment

Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment Report (Faunal Impact Assessment) was undertaken. The desktop study included the use of iNaturalist and Global Biodiversity Information Framework (GBIF)

records as well as reports, field guides and scientific literature. These records were used to determine the species recorded in the area and the presence of potential SCC, with particular emphasis on the SCC listed by the screening tool.

Three site visits were performed 16th of August 2025 and again on 25 and 26 of August species and signs of presence (sounds, tracks, scats etc), observed were recorded. Surveys consisted of meandering search effort on foot by 11 skilled observers, combined with point surveys (10 min search effort) performed by two of these observers within the development site and surrounds (**Figure 5**). The PAOI was set considering main SCC likely to be present on or close to the development footprint (**Figure 6**).

Description of habitat onsite

The faunal specialist describes the habitat on Portion 4 of Farm 643, Stanford, as being predominantly covered by Agulhas Limestone Fynbos, a Critically Endangered vegetation type as listed under the National Environmental Management: Biodiversity Act (Act 10 of 2004) and the Revised National List of Ecosystems That Are Threatened and in Need of Protection (2022). Through a combination of desktop analysis using Google Earth imagery and on-site verification, the specialist identified and mapped five distinct faunal habitat types within the study area. These include Open Fynbos scrubland, Dense Fynbos scrubland, Phragmites reedbeds, Eucalyptus habitat, and Kikuyu grass habitat (**Figure 9**). Each of these habitat types contributes differently to the site's ecological diversity and supports varying assemblages of fauna associated with the Agulhas Limestone Fynbos ecosystem.

The Open Fynbos Habitat, located mainly in the north-eastern section of the property (Locations 1, 7, 8, and 9), is characterised by sandy soils with a well-developed grassy ground layer interspersed with low fynbos shrubs. This habitat supports a variety of small mammals, reptiles, and invertebrates, providing open foraging and movement areas for fauna associated with fynbos ecosystems.

The Dense Fynbos Habitat, which covers the majority of the property (Locations 2, 5, 6, 7, 10, 11, 12, 13, and 14), consists of dense fynbos scrub vegetation, typically under 2.5 metres in height. The soils are sandy, and the vegetation is dominated by indigenous shrubs with sparse grass cover. Occasional small trees occur within this habitat, offering structural diversity and suitable shelter for bird and small mammal species.

The Phragmites Habitat, occurring along the mudflats of the Klein Rivier in the north-eastern part of the property (Locations 3 and 4), is dominated by reedbeds that form part of the riparian ecosystem. This area provides critical foraging and breeding habitat for aquatic and semi-aquatic species, particularly waterbirds and amphibians, and contributes significantly to the ecological connectivity between terrestrial and riparian environments.

The Eucalyptus Habitat (Location 5) is found in the north-western corner of the property and consists of a stand of tall Eucalyptus trees with several dead stumps. This area represents a transformed habitat, offering limited ecological value, although some bird species may utilise the tall trees for perching or nesting.

The Kikuyu Grass Habitat occurs in scattered patches across the site and is characterised by dense stands of Kikuyu grass interspersed with low fynbos shrubs under 1.5 metres tall. This habitat type reflects past disturbance and vegetation modification and supports fewer faunal species compared to natural fynbos areas.

Animal species recorded onsite

During the site survey, a number of faunal species was recorded across these habitat types, including mammals, birds, reptiles, amphibians, and invertebrates. These also includes 3 animal species of conservation concern confirmed onsite during site investigation, including confirmed records of the Mute Winter Katydid, Western Leopard Toad, and African Marsh Harrier, with additional high-likelihood SCC present in the PAOI.

The Mute Winter Katydid, listed as Vulnerable, was the most significant faunal finding of the survey. A total of 43 individuals were recorded during targeted nocturnal and diurnal searches (refer to **Figure 9**), with a population density estimated at approximately 1.17 individuals per hectare. The species was concentrated in the central and eastern portions of the property, primarily within dense Agulhas Limestone Fynbos habitat, which is itself a Critically Endangered vegetation type. This habitat forms an important ecological core within the site, and its disturbance would have led to local population losses. Consequently, one of the originally proposed dwellings (House 2) was relocated to ensure a minimum 50-metre buffer around the confirmed katydid habitat is established. The report further recommended that at least 70% of the property remain undeveloped and under natural cover, with ongoing alien vegetation management to maintain habitat integrity.

The Western Leopard Toad, an Endangered amphibian, was confirmed through a verified iNaturalist record of a roadkill individual along the main access road adjacent to the property (**Figure 8**). The surrounding wetland and riparian zone, dominated by Phragmites reedbeds, provides suitable breeding and foraging habitat for this species. Although no breeding sites were found directly within the proposed footprint, the proximity to suitable habitat necessitated careful management of the development interface with the wetland.

The proposed development is small in footprint, but even low-intensity residential use introduces irreversible disturbance and long-term edge effects in a sensitive landscape. Without mitigation, impacts would have been Medium to High significance under Alternative 2. With the recommended suite of mitigation measures which have been fully implemented through specialist recommendations, impacts are reduced to Low - Medium under the current preferred Alternative 4.

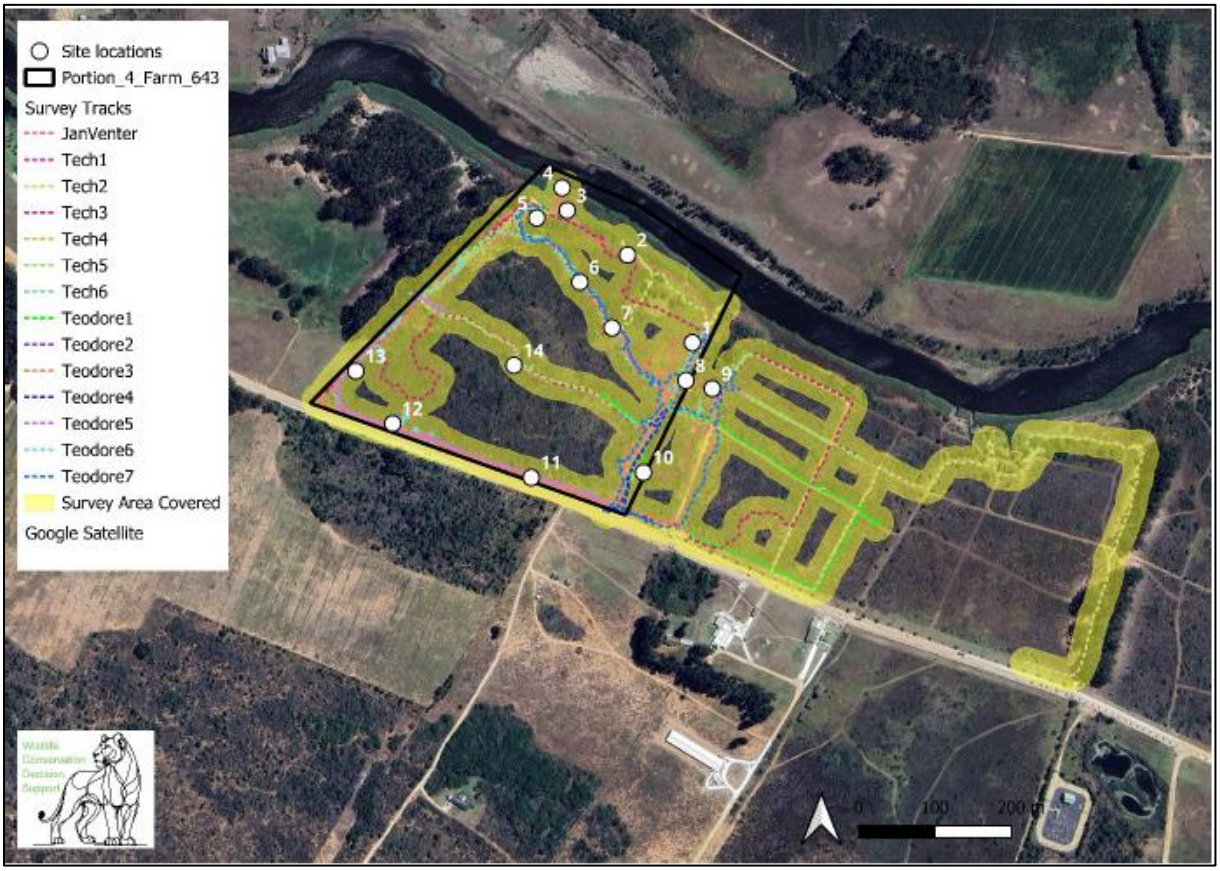

Figure 5: A map indicating the areas within the property investigated during the site visit. *Source;* (Venter, 2025).

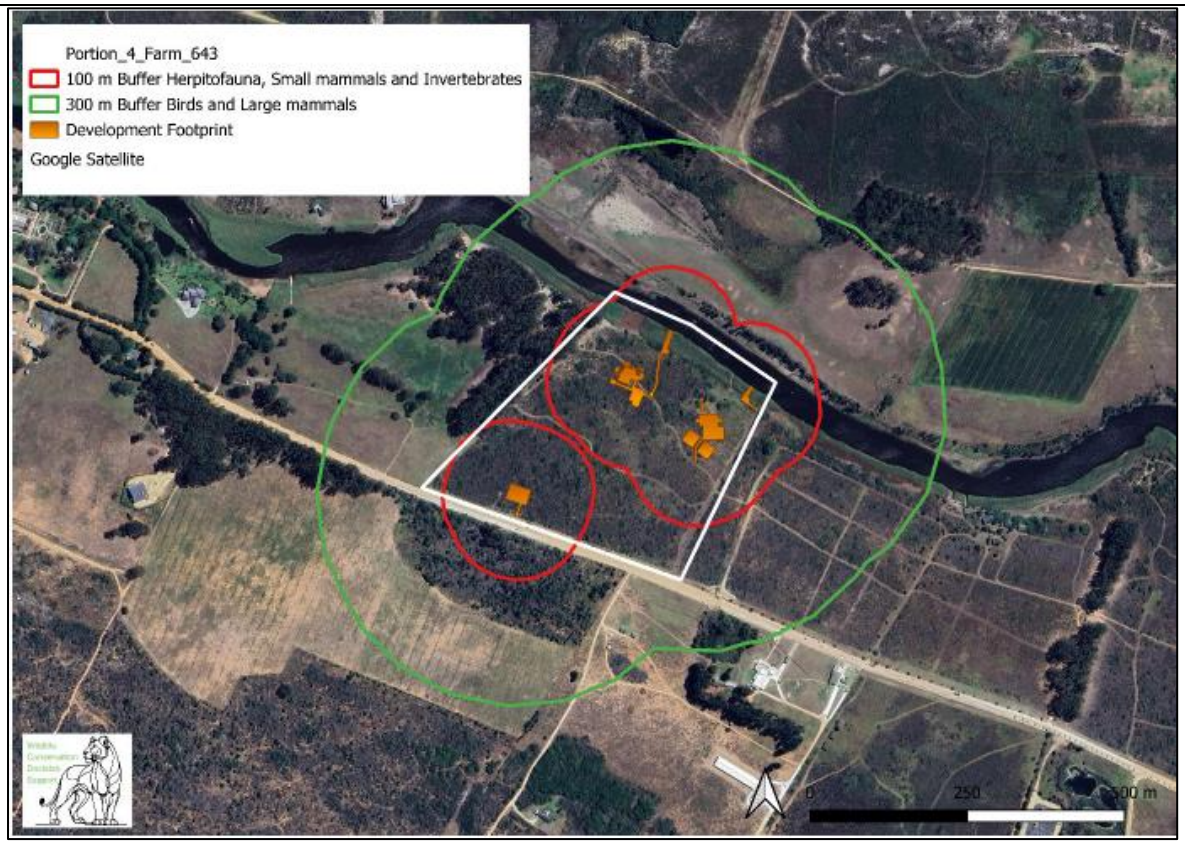

Figure 6: The PAOI for the preferred alternative was set considering main SCC likely to be present on or close to the development footprint. *Source;* (Venter, 2025).

Figure 7: The broad faunal habitats in the study area.

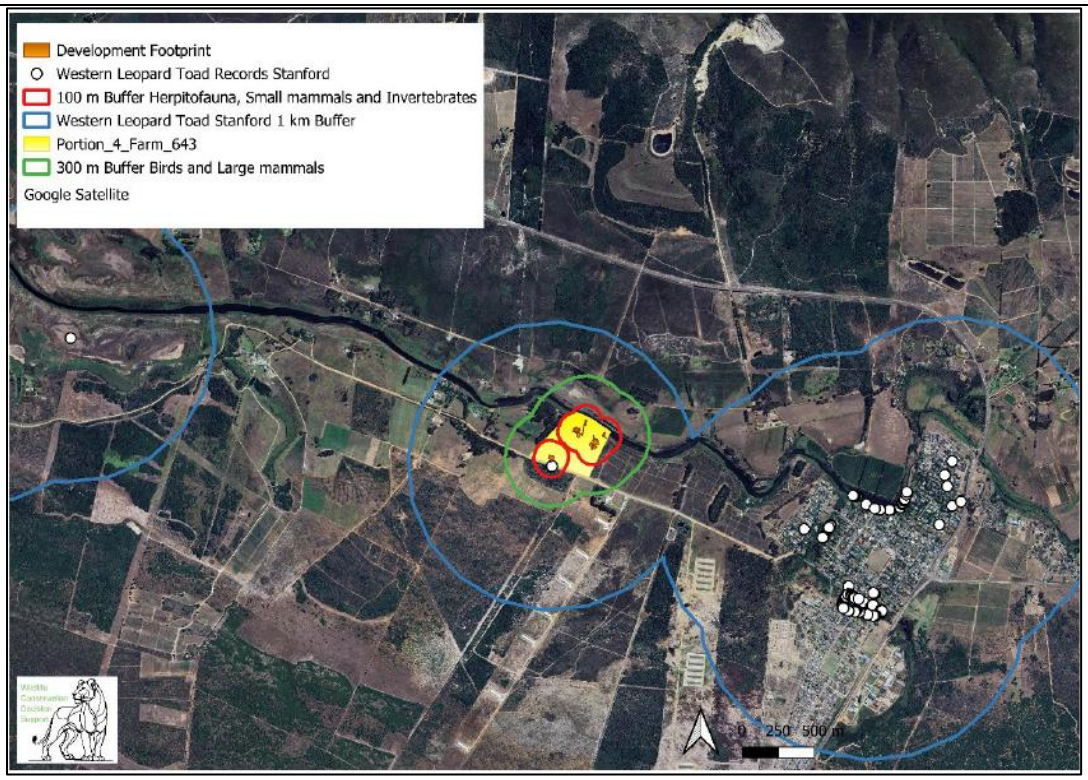

Figure 8: Western Leopard Toad records in the Stanford area in relation to the location of Portion 4 of Farm 643. *Source*; (Venter, 2025).

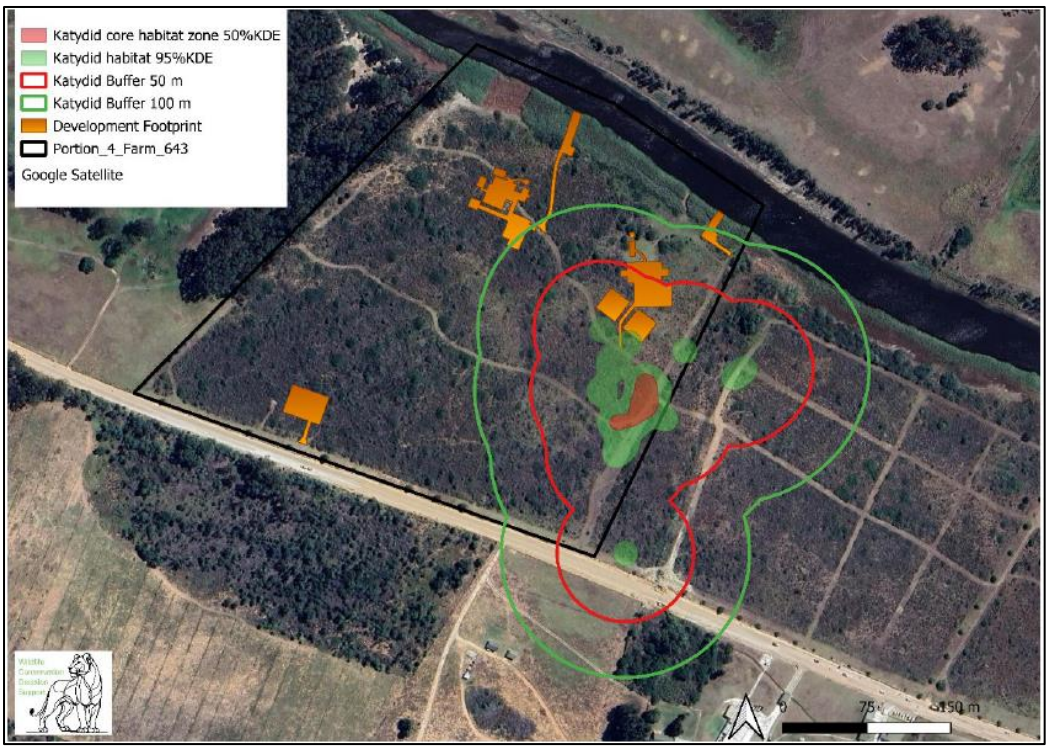

Figure 9: The modelled distribution of the B. aptera population on the property. As a precautionary measure a 50 m buffer around the 95%KDE represents a high-risk sensitive zone and the 100 m a medium risk sensitive zone for the species. *Source*; (Venter, 2025).

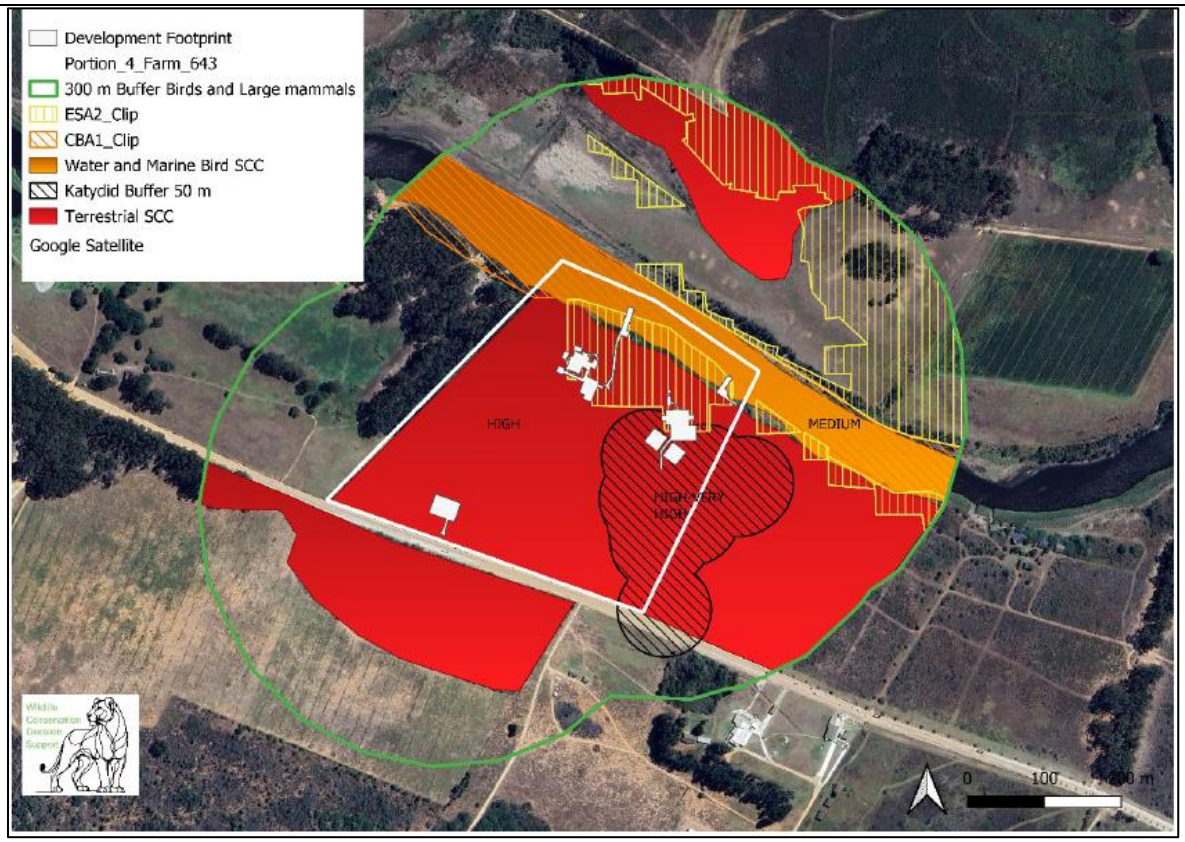

Figure 10: The SEI of the SCC faunal habitats on Portion 4 of Farm 643, Stanford. *Source;* (Venter, 2025).

Impact Assessment

The faunal specialist assessed the potential impacts of the proposed development on the animal species, themes, and habitats occurring on Portion 4 of Farm 643. The assessment considered the No-Go Alternative as well as three development alternatives Non-Preferred (Alternative 1 and Alternative 2) and Alternative 3 with particular emphasis on Species of Conservation Concern (SCC) and faunal landscape connectivity, as detailed in the faunal impact rating table (pages 56–72 of the Terrestrial Animal Species Assessment).

The new preferred Alternative (Alternative 4) represents the best practical development option, as it completely avoids the area of high sensitivity for animal species of conservation concern, particularly the Mute Winter Katydid (*Pseudosaga muta*), through the establishment of a 50 m buffer zone. It is also important to note that the updated site development plan (Alternative 4) was informed by the freshwater specialist's compliance statement, which includes further recommendations that will result in minimal impacts near the estuary edge. These are supported by the recommended buffers proposed by the freshwater specialist.

Collectively, the mitigation measures and revised site layout ensure that residual impacts on faunal species and their associated habitats are reduced to an acceptable level, subject to the implementation of the conditions outlined in this report.

The faunal impact assessment indicates that the site supports a disproportionately high concentration of SCC for its size, including confirmed records of the Mute Winter Katydid, Western Leopard Toad (*Sclerophrys pantherina*), and African Marsh Harrier (*Circus ranivorus*), with additional SCC likely present in the broader area of potential impact (PAOI). The property also provides a functional ecological corridor, maintaining landscape connectivity between the Klein Rivier and the surrounding fynbos habitats.

It is therefore the specialist's opinion that the revisions incorporated in Alternative 4 significantly reduce the predicted faunal impacts. Consequently, residual impacts for the updated layout (Alternative 4 – Preferred) is still Low-Medium after mitigation.

4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.

Terrestrial Biodiversity Impact Assessment (Botanical Impact)

The study area is mapped as a Critical Biodiversity Area (CBA1) as per Western Cape Biodiversity Spatial Plan (WCBSP, 2023); however, the botanical specialist disputes the current Western Cape Biodiversity Spatial Plan classification of Portion 4 as Critical Biodiversity Area 1 (CBA1). Given the absence of Agulhas Limestone Fynbos and the field evidence of low botanical sensitivity, the specialist considers the CBA1 designation incorrect for this property and contends that the site's appropriate classification would be no higher than Ecological Support Area 2 (ESA2), and potentially Other Natural Area (ONA). Moreover, the absence of plant species of conservation concern associated with Agulhas Limestone Fynbos, none of which were recorded during the survey, the specialist concluded that the actual plant species sensitivity is Low. The sensitive species listed in the screening tool are not relevant to the vegetation present onsite and were not encountered during site survey.

Based on botanical field observations, the Site Ecological Importance (SEI) was recalculated rather than relying on the Western Cape Biodiversity Spatial Plan's incorrect CBA1 classification. Using the standard methodology—where Biodiversity Importance (BI) is derived from Conservation Importance (LOW) and Functional Integrity (MEDIUM), and Receptor Resilience (RR) is assessed as LOW the SEI was determined to be LOW.

Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment (Faunal Impact)

The faunal assessment utilised the Western Cape Biodiversity Spatial Plan (WCBSP, 2017) to evaluate the sensitivity of the site. The property is located within the Coastal Protection Zone, and the southern portion of the site, situated in close proximity to the Klein Rivier, falls within CBA1 and ESA areas according to the WCBSP (2017). This classification reflects the site's ecological importance due to its adjacency to the river and its role in supporting regional biodiversity.

The faunal specialist highlights that maintaining landscape connectivity in this context is particularly important for the persistence of faunal species that rely on the Agulhas Limestone Fynbos and the Kleinrivier Estuary for foraging and breeding. Several terrestrial animal species, including Species of Conservation Concern (SCC), were recorded during site surveys, underscoring the ecological sensitivity of this portion of the property. In addition to animal species recorded onsite, the Mute Katydid, a total of 43 individual species were observed in the central portion of the property, predominantly within the short grass adjacent to shrub areas (refer to **Figure 9**). No records of the Mute Katydid were encountered in proximity to the Klein Rivier.

Further to the animal species observed during site investigation, other animal species of conservation concern includes Western Leopard Toad. The faunal specialist notes the confirmed record of this species adjacent to the property; however, none were recorded in the development footprint.

The botanical specialist report notes that the property should not be regarded as a Critical Biodiversity Area (CBA) as identified in the Western Cape Biodiversity Spatial Plan (2023). Although the WCBSP (2023) maps the site as a CBA, the botanist confirms that the vegetation on the property does not reflect Agulhas Limestone Fynbos, nor were any plant Species of Conservation Concern or species typically associated with this vegetation type recorded during the site survey. It is based on the assumption that the CBA designation in the WCBSP (2023) likely stems from the South African Vegetation Map (2024), which classifies the subject property as Agulhas Limestone Fynbos, a critically endangered

vegetation type. However, field verification indicates that species characteristic of this vegetation unit are absent from the site.

4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.

According to the Western Cape Biodiversity Spatial Plan (WCBSP, 2023), the property is mapped as a Critical Biodiversity Area 1 (CBA1). However, site-based botanical verification confirmed that the vegetation present does not correspond with the Agulhas Limestone Fynbos vegetation unit that underpins the CBA1 classification. No plant Species of Conservation Concern or species characteristic of this vegetation type were recorded during the survey. Based on this, the botanical specialist concluded that the mapped CBA1 category does not reflect the actual ecological condition of the site and that the appropriate ecological categorisation is more aligned with ESA2 or possibly Other Natural Area (ONA).

Despite the discrepancy between mapped and verified vegetation sensitivity, the proposed development needed to consider the ecological functions associated with the broader BSP categories, particularly the maintenance of ecological connectivity and biodiversity processes. The southern portion of the site, which falls within the Coastal Protection Zone and is mapped as CBA1/ESA in the WCBSP (2017), and as stated by the faunal specialist, this forms part of a functional ecological corridor linking the Klein Rivier with surrounding fynbos habitats. The faunal specialist confirmed that several animal Species of Conservation Concern utilise this broader landscape, and that the property contributes to faunal movement and dispersal, particularly for species such as the Western Leopard Toad, the Mute Katydid and foraging grounds for the African Marsh Harrier.

Under earlier layout iterations (Alternative 2), the proposed development would have resulted in localised habitat loss and fragmentation, particularly through the placement of House 02 within confirmed Mute Winter Katydid habitat, as well as disturbance to riparian-associated habitats and reedbeds below the 5 m contour due to the proposed placement of two jetties and slipways. These impacts were assessed by the faunal specialist as being of Medium to High significance.

The evolved Alternative 3 was specifically informed by the WCBSP principles and specialist recommendations to avoid and minimise impacts on sensitive ecological features. Key design revisions included the relocation of House 02 outside the confirmed Mute Winter Katydid population area through the implementation of a 50 m buffer, and the reduction of jetty infrastructure from two structures to a single jetty. In addition, development has been concentrated within previously disturbed areas as far as possible. The vegetation affected is described as modified or degraded vegetation of low Site Ecological Importance, resembling Eastern Rûens Shale Renosterveld but not conforming to the formal vegetation unit description.

Similar to Alternative 3 layout, the new preferred Alternative 4 completely removes the slipway and replaces it with the pathway that will provide access to the proposed jetty infrastructure. Additionally, this Alternative was also informed by the freshwater specialist, of which additional mitigation measures have been applied to minimise impact along the estuarine environment. Of these mitigation measures applied, a buffer of 25 m during Construction and 15 m during the operation of the proposed dwellings was determined for the Klein River Estuary.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.

The site is not located within a protected area.

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.

The presence of several faunal species, including Species of Conservation Concern (SCC), both on and adjacent to the property played a significant role in shaping the proposed development layout, footprint, and mitigation measures. Specialist surveys recorded the Mute Katydid within the central portion of the site, confirmed Western Leopard Toad

activity adjacent to the property, and identified the area as a foraging corridor for African Marsh Harrier. These findings highlighted the ecological sensitivity of the site, specifically the northern portion of the site adjacent to the Klein Rivier.

The direct footprint of the three proposed dwellings and associated infrastructure (approximately 4950 m²) will transform a limited section of the fynbos, while increased human activity could introduce edge effects such as artificial lighting, noise, and potential alien plant spread. However, these impacts, as highlighted by the faunal specialist could be minimised through the iterative design process guided by the Biodiversity Spatial Plan and the specialist findings. These include the relocation of one dwelling outside the confirmed katydid population area, retention of a 50 m buffer along the wetland edge, reduction of jetties from two to one, and the commitment to retain at least 70% of the site as a natural conservation buffer. The retained natural areas will continue to function as part of the broader ecological corridor between the upland and river habitats, thereby sustaining the site's role within the CBA1/ESA2 network.

In addition, the recommended mitigation measures have been integrated into the evolution of the Site Development Plan, including the reduction of jetties from two to one and the removal of the proposed slipway. The updated Site Development Plan (Alternative 4), informed by specialist recommendations, now incorporates the required environmental buffers and design refinements necessary to safeguard the estuarine environment and associated biodiversity features.

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
The geographical context of the proposed development site has played an important role in shaping the design and layout of the project. It is important to note that, Portion 4 of Farm 643 is located on the upper reaches of the Klein River, however some of the property falls within the Coastal Protection Zone (CPZ). The riparian habitats represent sensitive geographical features, which require that development activities to be carefully managed to avoid direct interference with natural processes. However, the subject property, being in the upper reaches of the Klein River is not affected by coastal dynamic process, and tidal influence. The topography of the site is characterised by a gentle slope towards the Klein River, with the 5-metre contour line providing a clear geographical threshold for sensitive areas. This contour has strongly influenced the siting of infrastructure. All residential dwellings and the Manager's Cottage have been placed above the 5-metre contour, ensuring that they are outside the riparian zone and buffered from flood risks. Conversely, the jetty structure is proposed below this contour due to their functional requirement. The property's location outside the urban edge, within a rural setting dominated by agricultural land uses, has also influenced the development to adopt a low-density, rural-compatible character. The scale, siting, and orientation of buildings have been designed to blend with the surrounding rural landscape, minimising visual intrusion and preserving the overall geographical character of the area.

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	NO X
6.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		

The presence of sensitive heritage resources has not significantly influenced the proposed development, as no heritage sites or features of cultural, archaeological, or palaeontological significance were identified within or adjacent to the development footprint. Although the project will alter the existing landscape, including the loss of the currently undescribed vegetation type during the construction phase, this change does not impact any known heritage resources. As a result, no heritage-related constraints required modification of the layout or design, and the development can proceed without posing a risk to heritage features.

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.

The development proposed is small scale single residential use by the landowner, mitigation measures can be implemented for the construction phase in the unlikely event that finds are uncovered. Based on the scope of the development, it does not trigger the requirements set out under the National Heritage Resources Act (NHRA), which are described as below.

Section 38 of the Act states as follows:

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length ***– Not applicable***

(b) the construction of a bridge or similar structure exceeding 50m in length; ***– Not applicable***

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m^2 in extent; or ***– Not applicable***

(ii) involving three or more existing erven or subdivisions thereof; or ***– Not applicable***

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or ***– Not applicable***

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority; ***– Not applicable***

*(d) the re-zoning of a site exceeding 10 000 m2 in extent; or***– Not applicable**

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. ***– Not applicable***

Given the above it is confirmed that no further Heritage application is required or applicable.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.

The area surrounding the proposed site is therefore best described as a mixed-use rural landscape, where economic activity is primarily rooted in agriculture and tourism. The property is situated to the west of Stanford town, within a predominantly rural setting. The broader area is characterised by a mixture of agricultural land, and low-density residential development. Agriculture, including viticulture, livestock grazing, and mixed farming, remains a key economic driver in the region, with farmsteads and cultivated fields forming much of the surrounding landscape. Stanford itself is a small but growing settlement that is known for its heritage value, eco-tourism, and artisanal economy. The town attracts visitors for its natural surroundings, access to the Klein River and Walker Bay, and its reputation as part of the Overberg's agri-tourism and wine routes. Tourism and hospitality ranging from guesthouses to restaurants and nature-based activities play a significant role in sustaining the local economy alongside agriculture.

The local community is diverse, with employment opportunities largely tied to farming operations, conservation initiatives, small-scale enterprises, and service industries supporting tourism and residential needs. Seasonal employment linked to agricultural harvesting and tourism peaks is also common. Socially, Stanford has both long-established rural households and newer residents drawn by lifestyle and eco-tourism opportunities.

8.2.	Explain the socio-economic value/contribution of the proposed development.

The proposed development holds several socio-economic values and contributions to the community and the broader area of Overstrand Municipality in the following ways:

- → One of the significant contributions is the creation of employment opportunities, both directly and indirectly. The development will have both short-term and long-term economic impacts on the surrounding area. It will create employment opportunities during the construction phase, which contribute positively to the local economy, even though small scale.
- → The development will contribute to skills development for the builders.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.

N/A

8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.

It is highly unlikely that the proposed development will have any significant negative impacts on people's health and well-being. Nevertheless, considerations such as noise, dust, and visual character have been taken into account in the planning and execution of the project to minimise potential disturbances in the vicinity.

- → Construction activities and the temporary increase in human presence during the construction phase may contribute to elevated noise levels on a local scale. However, this potential impact is expected to be limited, as adjacent properties are currently vacant and the site is located in a rural setting. The impact on nearby residents will therefore be minimal and short-lived.
- → Localised dust generation may occur during earthworks and construction activities. While this could temporarily affect travellers along nearby road (Wortelgat road), the scale of the development consisting of only two houses and a manager's cottage means that the overall impact will be very small and of short duration. Mitigation measures will be implemented to further reduce this impact.

→ Given the small scale and low intensity of the development, no significant alteration to the visual character or sense of place of the broader area is anticipated. The rural setting will largely be maintained, and the proposed structures are consistent with the surrounding land use character.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred property and site alternative.

The preferred property and the only site proposed for the development is Portion 4 of the Farm 643, which is located in the rural setting outside Stanford town. The property covers an area of approximately 13.53 ha in extent, situated along the upper reaches of the Klein River, outside the urban edge and is currently zoned Agricultural Zone I. There are no existing structures on the property, however, two access roads, which have been used in the past exist and will be utilised and integrated into the site development plan to provide access to the proposed development in the property. The site is accessible via Wortelgat Road.

Portion 4 of the Farm 643 is the only preferred site option for the proposed development and no other alternative site options have been investigated since the applicant owns the property. As a result, there is no other reason far beyond than this subject property. The proposed development takes cognisance of the rural setting wherein this development is proposed. The properties in the surroundings consist of single residential dwellings, with fewer properties that are being farmed, whereas the other are involved in agricultural processing. The intent of this application is that the owner wants to establish two single residential dwellings, a manager's cottage, internal access tracks within the previously demarcated access roads that were utilised in the past, as well as a jetty and slipway. All the major infrastructure such as residential dwellings, including the manager's cottage will be situated above the 5m contour and more than 32m away from the Klein River.

The proposed development will cover a total built footprint of approximately 4,950 m² within the broader farm property, representing less than 3.7% of the total property extent. The development has been deliberately concentrated within previously disturbed or transformed areas to minimise the transformation of indigenous vegetation and disturbance to the natural environment.

Primary Residential Structures

Two primary residential dwellings are proposed within the central-northern portion of the site, positioned on higher-lying ground above the 5 m contour line and outside of the delineated Estuarine Functional Zone (EFZ) of the Klein River Estuary.

- House 1, situated in the upper-central portion of the site, has a proposed footprint of approximately **1662 m²** and includes the primary residential unit together with associated ancillary structures and a swimming pool.

- **House 2** is proposed to the east of House 1, similarly positioned outside of the EFZ, with a proposed footprint of approximately **1220 m².** Both dwellings are accessed via an internal road network connecting to the existing farm access tracks on the property.

Manager's Cottage

A manager's cottage with a proposed footprint of approximately **1000 m²** is situated in the south-western portion of the site, in close proximity to the existing access gate off Wortelgat Road. This structure is located entirely within the terrestrial environment, well removed from the Klein River Estuary and its associated buffer zones.

Gatehouse

A gatehouse with a proposed footprint of approximately **595 m²** is proposed at the primary entrance to the development off Wortelgat Road, forming part of the controlled access arrangement for the residential development.

Access Road

An internal access road will be constructed and / or upgraded, using existing disturbed pathways to minimise vegetation disturbance. The applicant will aim to retain the internal access roads as informal as possible, as per the current roads on site. Some natural surface material or grass blocks may have to be added in sections. All the access roads will have a combined length of less than **1000 m** and a maximum width of **4m**.

Associated Infrastructure

Associated infrastructure, including a swimming pool, fire pit, and footpaths, collectively accounts for an additional approximately **420 m²** of development footprint. These elements are located within the terrestrial portion of the site and have been positioned to avoid encroachment into the EFZ.

Jetty and Estuarine Access

A jetty with a footprint of approximately **53 m²,** together with an associated footpath, is proposed extending northward from the residential cluster toward the Klein River Estuary. These are the only development components that encroach into the EFZ of the Klein River Estuary, and their combined footprint has been confined to the minimum extent necessary to provide access to the river.

- A jetty with a development footprint of approximately **53 m²** is proposed. The jetty is designed in line with the "Specific Conditions and Structure Specifications" as issued by Cape Nature in line with the Application to Enter into a Lease Agreement in terms of the Sea Shore Act, Act 1935 (Act No 21 of 1935).
- An unpaved pathway with a development footprint of approximately **320 m²** will facilitate access to the proposed jetty. It is important to note that, the pathway will be less than 3m in width and less than 1000 m in length.

Water

To ensure reliable water availability and pressure regulation, storage tanks will be installed within existing disturbed area of approximately **26 m²** situated on the western portion of the property. Water will be extracted from the borehole located near the entrance of the property, the water will be for household use, and therefore no authorisation is required in terms of National Water Act as it will fall under Schedule 1 – Reasonable Domestic Use**.**

Electricity

The dwellings will operate off the grid with the use of roof mounted solar installations.

Sewage

A minimum 6 000-litre sealed conservancy tank will be provided, sized to adequately accommodate effluent volumes from the residential units. The tank will be connected to the internal sewer drainage network of the buildings to collect both sewage and greywater in a secure, watertight system. The contents of the conservancy tank will be periodically emptied by a licensed private waste contractor and disposed of at a registered municipal wastewater treatment facility.

Solid Waste

The solid waste will be collected onsite and disposed of at a registered facility by the operator as required.

Provide a description of any other property and site alternatives investigated.

No other property or site alternatives that have been investigated.

Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.

The preferred site for the proposed development is Portion 4 of the Farm 643, situated west of Stanford. This property was identified as the only feasible alternative because it is under the ownership of the applicant, and no other land parcels are available within their ownership or control. The absence of alternative sites therefore restricts the options available, making this property the only viable choice for meeting the development objectives. Given the singular nature of the available landholding, the preparation of a comparative site selection matrix was not considered applicable in this case.

The motivation for selecting this property is further strengthened by the broader context of the Overstrand area, where there is a need to accommodate housing and small-scale development opportunities. The proposed site also offers unique locational attributes, such as being located within a rural setting that provides a tranquil living environment, which aligns with the intended development outcomes.

From a practical perspective, the property is already zoned for agricultural use and will not be subdivided, which maintains consistency with existing surrounding land use. Additionally, the site benefits from existing infrastructure, including an established access road (Wortelgat Road) that traverse along the southern boundary of the property and will serve as the main access point to the development. This significantly reduces the need for extensive new road construction and limits the clearance of indigenous vegetation that would otherwise have been required if a less accessible site were selected.

Provide a full description of the process followed to reach the preferred alternative within the site.

Portion 4 of the Farm 643 is zoned for agricultural land use, which, in terms of the Municipal Planning By-Law, entitles the landowner to establish a main dwelling as a primary right. In addition, provision is made for a manager's dwelling, provided that a manager is formally appointed to oversee or conduct agricultural activities on the property. Should the land not be actively farmed, this right cannot be exercised. This regulatory framework directly influenced the process of identifying the most appropriate development option within the site. In accordance with the planning provisions, a formal land-use planning application (consent use) will be required for the establishment of an additional dwelling unit.

The property is jointly owned by two brothers, each of whom wishes to construct a single residential dwelling on the site. To accommodate this, the preferred alternative involves exercising the right to establish the primary dwelling while simultaneously applying for consent use to permit an additional dwelling unit. In terms of the Municipal Planning By-Law, the landowner is entitled to establish a main dwelling as a primary right; however, an additional dwelling may only be considered through a consent use application and may not exceed 250 m². This approach enables both owners to meet their housing needs while remaining fully compliant with the applicable planning and land-use regulations.

In identifying this preferred alternative, consideration was given to balancing the land-use rights of the owners with the requirements of the municipal planning framework, as well as environmental sensitivities. The presence of an existing access route (via Wortelgat Road) and the rural setting of the property further supported this option, as it minimises the

need for new infrastructure, avoids unnecessary disturbance to the surrounding environment, and remains compatible with the character of the area.

Accordingly, the preferred alternative was determined to be the most feasible and sustainable option, providing a practical solution for the co-owners while aligning with legal, planning, and environmental requirements.

Provide a detailed motivation if no property and site alternatives were considered.

No property or site alternatives were considered for this development because the subject property, Portion 4 of Farm Middelburg No. 643, is the sole property owned by the applicants under Cheddles (Pty) Ltd. The development is intended to fulfil a specific personal and family vision, whereby the two brothers aim to establish two residential dwellings for their own use, a manager's cottage for on-site management, and associated recreational infrastructure such as a slipway and the jetty. The applicants' intention is to create a development that is in harmony with the rural character and tranquil setting of the area, reflecting both the natural environment and the historical context of the farm.

Given the ownership constraints and the personal nature of the development, no alternative properties were available for consideration. Furthermore, the design has been carefully optimised to minimise environmental impact, by concentrating infrastructure within previously disturbed areas, avoiding sensitive riparian and aquatic habitats, and limiting vegetation clearance. This approach ensures that the project is both feasible and aligned with the ecological, visual, and rural context of the site, while fulfilling the specific objectives of the property owners.

List the positive and negative impacts that the property and site alternatives will have on the environment.

The proposed development will contribute to:

Alternative 1 (Non-preferred)

Positive impacts

→ There are no notable positive environmental impacts associated with this alternative.

Negative impacts

→ Both proposed residential dwellings fall below the 5 m contour, placing permanent infrastructure at significant risk of flooding during high-rainfall or storm-surge events.
→ Development below the 5 m contour may alter natural hydrological functioning, disrupt watercourse processes, and reduce the natural buffer zone that protects riparian habitats.
→ Increased disturbance to sensitive riparian vegetation, with associated loss of ecological integrity and habitat function.
→ Direct habitat loss for Species of Conservation Concern (SCC), particularly the Mute Winter Katydid (VU), with approximately 43 individuals recorded on the central portion of the property.
→ Fragmentation of habitat and reduced faunal connectivity between the estuary and upland areas.
→ Disturbance and displacement of riparian birds due to increased human presence and jetty usage.
→ Increased mortality risk for amphibians and reptiles as a result of vehicles, domestic pets, and intentional persecution.
→ Long-term edge effects associated with outdoor lighting, garden establishment, and the potential introduction or spread of alien plant species

Alternative 2 (Non preferred)

Positive impacts

→ The proposed residential dwellings are located above the 5 m contour, significantly reducing flood risk and improving long-term safety and climate-resilience of the development.
→ The proposed layout largely utilises previously disturbed or impacted areas, reducing the extent of new disturbance relative to Alternative 1.

Negative impacts

→ Some vegetation clearance will still be required, although the development mostly utilises the previously impacted areas onsite.
→ Direct habitat loss for Species of Conservation Concern (SCC), particularly the Mute Winter Katydid (VU), with approximately 43 individuals recorded on the central portion of the property.
→ Visual impacts associated with the introduction of new dwelling units.
→ Fragmentation and reduced faunal connectivity between riverine and upland habitats.
→ Disturbance and displacement of riverine bird species due to increased human activity and use of slipways and jetties.
→ Increased mortality risk for amphibians and reptiles resulting from vehicles, pets, and persecution.
→ Long-term edge effects including lighting impacts, landscaping and gardening disturbance, and potential alien plant invasions.

Alternative 3 – Non-Preferred

Positive impacts

→ All residential dwellings are located above the 5 m contour, substantially reducing flood risk and ensuring greater long-term resilience to climate change.
→ Development footprints are concentrated within previously disturbed areas, minimising additional vegetation clearance and habitat transformation.
→ House 2 has been relocated outside the confirmed Mute Winter Katydid habitat, avoiding direct impacts on this Species of Conservation Concern. A 50 m buffer is maintained along these species, protecting their habitats.
→ Additional access has been provided to house 1 to reduce vehicle traffic within the katydid proximity.
→ Jetty infrastructure has been reduced from two structures to a single jetty, limiting disturbance to riverine processes and bird habitat.

Negative impacts

→ Limited and localised vegetation clearance will still occur within areas of low Site Ecological Importance.
→ Low-level disturbance to fauna may occur due to increased human presence, including noise and movement within the developed portions of the site.
→ Residual edge effects, such as low-intensity lighting, landscaping, and potential alien plant invasion, may persist but can be effectively managed through mitigation measures.

Alternative 4 (Preferred)

Positive impacts

→ All proposed residential dwellings and associated infrastructure are located above the 5 m contour, thereby significantly reducing flood risk and improving the long-term climate resilience of the development.
→ The development footprint has been refined through an iterative design process to avoid environmentally sensitive areas and minimise ecological disturbance.
→ House 2 has been relocated outside the confirmed Mute Winter Katydid habitat, thereby avoiding direct impacts on this Species of Conservation Concern (VU).

→ A 50 m buffer has been retained around the confirmed katydid habitat and along the wetland/riparian edge, contributing to the protection of sensitive ecological features and ecological functioning.
→ The development footprint is concentrated within previously disturbed and low ecological sensitivity areas, thereby limiting additional habitat transformation and vegetation clearance.
→ Jetty infrastructure has been reduced from two structures to a single jetty, reducing disturbance to estuarine and riverine habitat as well as limiting impacts on bird species.
→ The proposed slipway has been removed from the layout, further reducing disturbance to the estuarine environment and associated aquatic processes.
→ At least 70% of the property will remain undeveloped and retained as a natural conservation buffer, maintaining ecological connectivity between the upland and riverine habitats.
→ The retained natural areas will continue to support ecological functioning within the CBA1 and ESA2 network and maintain faunal movement corridors across the site.
→ The preferred layout incorporates specialist mitigation measures and environmental buffers, resulting in a substantially reduced ecological impact footprint relative to the previous alternatives.

Negative impacts

→ Limited and localised vegetation clearance will still be required within portions of the site to accommodate the proposed development footprint and associated services infrastructure.
→ Some habitat transformation and disturbance within low ecological sensitivity areas will occur as a result of construction activities and increased human presence.
→ Residual disturbance to fauna, including birds, amphibians, and reptiles, may occur due to increased human activity, noise, lighting, and domestic pets.
→ Long-term edge effects, including low-intensity lighting, landscaping activities, and the potential spread of alien invasive plant species, may persist if not effectively managed.
→ Temporary construction-related impacts, such as noise, dust generation, and localised disturbance to fauna and vegetation, are likely during the construction phase.
→ Visual impacts associated with the introduction of residential structures within a natural landscape setting will remain, although reduced through the refined site layout and retention of natural vegetation buffers.

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

N/A

Provide a description of any other activity alternatives investigated.

N/A

Provide a motivation for the preferred activity alternative.

N/A

Provide a detailed motivation if no activity alternatives exist.

N/A

List the positive and negative impacts that the activity alternatives will have on the environment.

N/A

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Provide a description of the preferred design or layout alternative.

Alternative 4 (Preferred)

The preferred layout alternative (Alternative 4) was developed through an iterative environmental design process informed by specialist studies, the Biodiversity Spatial Plan, and site-specific ecological constraints. The layout was specifically refined to avoid sensitive ecological features, minimise habitat transformation, and reduce potential impacts on the estuarine and terrestrial environments.

All proposed residential dwellings and associated infrastructure are located above the 5 m contour, thereby reducing flood risk and improving the long-term resilience of the development to climate change and storm surge events. The proposed development footprint has been concentrated within previously disturbed and lower ecological sensitivity areas to minimise additional vegetation clearance and habitat fragmentation.

The layout was directly informed by the findings of the faunal specialist and the Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026), which confirmed that the national web-based environmental screening tool (DFFE, 2026) classified the Combined Aquatic Biodiversity Theme Sensitivity of the site as "Very High", triggered by the site's location within the mapped extent of the Klein River Estuary and the Western Cape Biodiversity Spatial Plan (WCBSP, 2023) Aquatic Critical Biodiversity Areas (CBA 1). Following ground-truthing and site verification, however, the specialist confirmed that the residential development footprint is situated outside of any sensitive freshwater environments, and the aquatic biodiversity sensitivity of the development footprint was verified as "Low". The Estuarine Functional Zone (EFZ) associated with the Klein River Estuary was delineated approximately 45 m downslope from the majority of the residential footprint and upstream of the 5 m contour line, providing a meaningful physical and topographic separation between the built environment and the estuarine system. All primary built infrastructure is located more than 32 m from the nearest freshwater feature and remains landward of the coastal management line, though within the coastal protection zone regulated under the Integrated Coastal Management Act (ICMA).

As part of the design refinement process, House 2 was relocated outside the confirmed habitat area of the Mute Winter Katydid (a Species of Conservation Concern), and a 50 m ecological buffer has been maintained around the confirmed habitat area as well as along the wetland/riparian edge. These measures ensure the protection of sensitive biodiversity features and maintain ecological functioning on the site.

The preferred alternative also includes a significant reduction in estuarine infrastructure relative to earlier alternatives (Alternative 1 – 3), with the number of proposed jetties reduced from two to one and the proposed slipway removed entirely from the new preferred layout. These changes substantially reduce the extent of disturbance to the estuarine environment, aquatic habitats, and associated bird species identified in the specialists' reports. The single retained jetty (53 m²), together with a defined footpath connecting the residential area to the estuarine environment, are the only two development components that encroach into the EFZ. The aquatic biodiversity specialist confirmed that, given the limited footprint and localised nature of the jetty infrastructure, significant long-term impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided construction is undertaken in accordance with the recommended mitigation measures and applicable estuarine management requirements. The jetty must be designed and constructed in accordance with CapeNature's specifications and the requirements of the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality.

The inclusion of a single defined footpath to the estuary, rather than the broader and less defined access patterns considered in earlier alternatives, further consolidates estuarine access to a single low-impact corridor, reducing the risk

of incidental disturbance to the EFZ and surrounding natural vegetation. A 25 m construction buffer and 15 m operational buffer, as determined by the freshwater specialist using the Buffer Zone Tool (Macfarlane & Bredin, 2017), will be maintained around the Klein River Estuary throughout the construction and operational phases of the development.

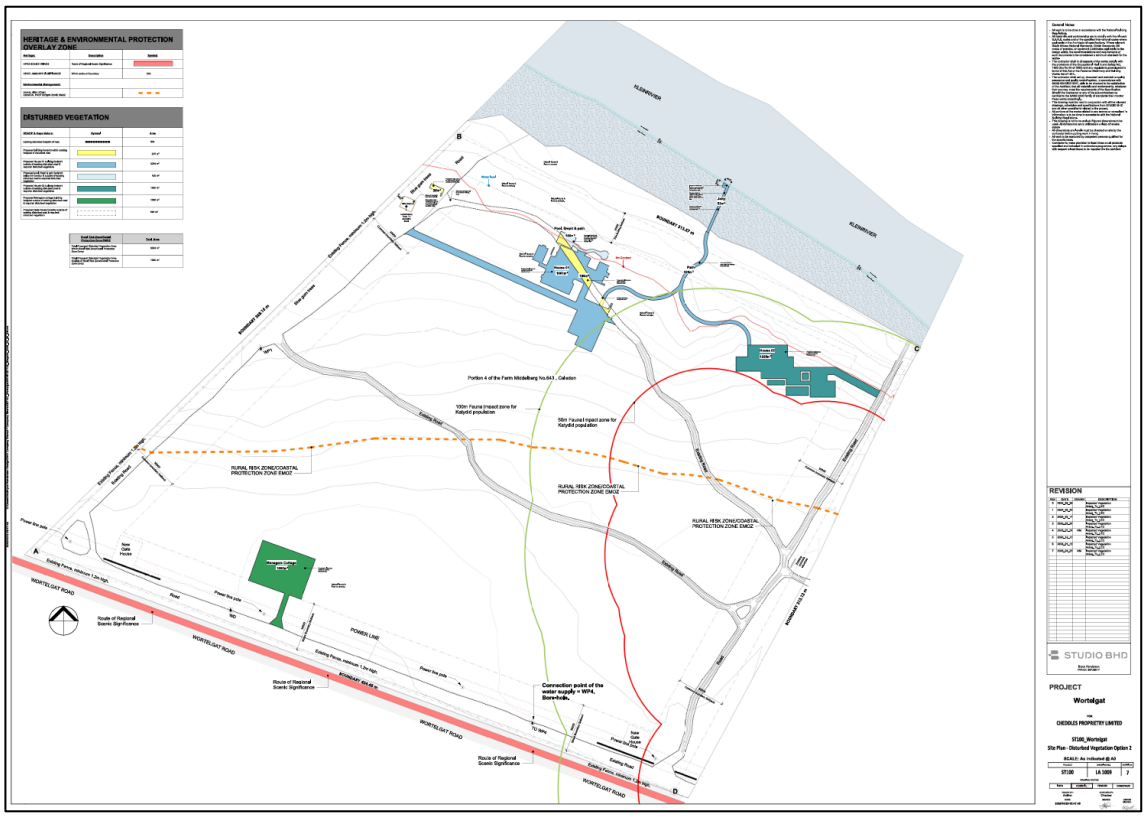

Figure 11: Preferred Site development plan (Alternative 4).

Provide a description of any other design or layout alternatives investigated.

Alternative 1 (Non-preferred)

Alternative 1 proposes the construction and placement of two single residential dwellings on Portion 4 of Farm 643, both of which extend slightly above the 5 m contour of the Klein River. The siting of the proposed dwellings and associated infrastructure in close proximity to the river raises a number of concerns, both from an environmental and a risk perspective.

The primary issue associated with this alternative is the vulnerability of the proposed structures to natural hazards such as flooding and fluctuating water levels within the river, during rainfall seasons. The 5 m contour serves as an important buffer zone that accommodates seasonal changes in water levels and storm events, and development within this zone is inherently at risk of inundation. Locating residential dwellings, within this area could lead to long-term maintenance and safety challenges, particularly under conditions of climate change, and increased flood intensity. This would not only pose risks to property and infrastructure but could also result in significant costs for the owners in the future.

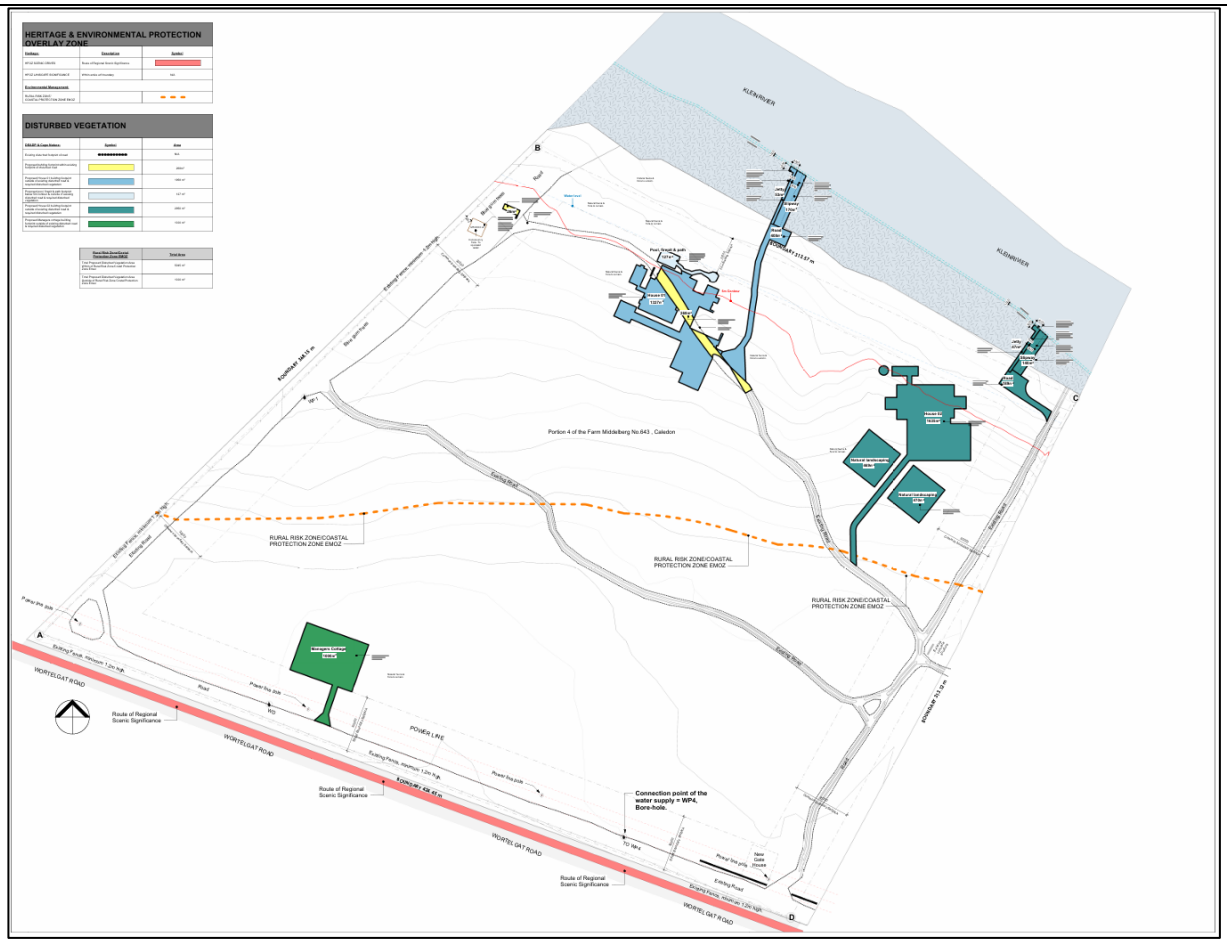

Figure 12- 1: Alternative 1 (non-preferred) site development plan.

Alternative 2 (Non-preferred)

Alternative 2 relocates the proposed residential dwellings above the 5-metre contour, thereby reducing flood risk and improving resilience to climate-related impacts. Under this layout, the major infrastructure is situated outside the riparian zone, representing a notable improvement over Alternative 1 from a risk management perspective.

However, this alternative introduces significant biodiversity-related impacts. House 2 is located within confirmed Mute Winter Katydid habitat, which would result in direct habitat loss for this Species of Conservation Concern. In addition, Alternative 2 retains two slipways and jetties within the riverine area, increasing the footprint of development and contributing to greater vegetation clearance, disturbance to river habitats, and disruption of faunal movement and bird activity.

Despite improvements in flood risk avoidance, the biodiversity impacts associated with this layout remain unacceptable. Consequently, Alternative 2 is also considered non-preferred when assessed against specialist recommendations and the objectives of the Western Cape Biodiversity Spatial Plan.

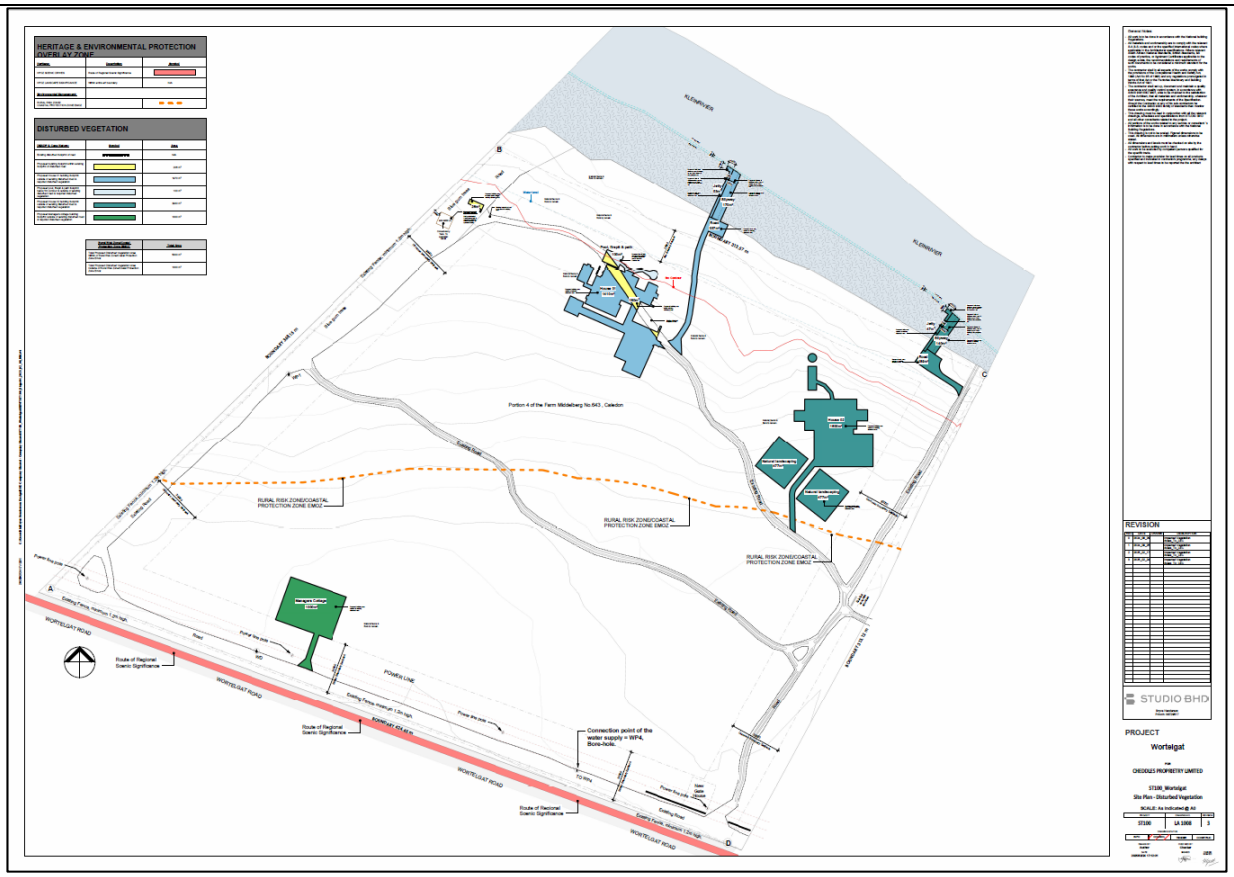

Figure 12-2: Alternative 2 – Non preferred.

Alternative 3

Alternative 3 layout has been carefully designed to avoid negative environmental impacts, mitigate unavoidable impacts, and optimise positive outcomes. The layout focuses on concentrating most of the infrastructure, specifically roads, within previously disturbed or transformed areas of the farm in order to minimise extensive clearance of indigenous vegetation and disturbance of soil elsewhere for road construction.

House 01 is sited along these existing roads making use of the disturbed areas as far as possible, above the 5-metre contour line, and outside sensitive riparian and aquatic zones, further protecting ecological features. House 01 is partially located within an existing disturbed road footprint, while House 02 is positioned to minimize impact on surrounding natural areas, with only a small area of vegetation clearance required. A manager's cottage is included to facilitate on-site management and oversight, ensuring ongoing compliance with environmental management measures.

In accordance with specialist recommendations, House 02 is located outside the recommended 50 m buffer associated with confirmed Mute Winter Katydid habitat. This adjustment avoids direct habitat loss for this Species of Conservation Concern and represents a key improvement over earlier layout alternatives (Alternative 1 and Alternative 2).

Recreational infrastructure, including the slipway and jetty, is located within the High-Water Mark of the Klein Rivier. Alternative 3 incorporates a single slipway and jetty, thereby substantially reducing disturbance within the riverine environment compared to previous alternatives. These structures are designed to be elevated and of limited scale, ensuring minimal interference with natural water flow, sediment transport, and aquatic habitats, and supporting low-intensity recreational use only.

Additional recreational features include a swimming pool and a firepit. A portion of the swimming pool footprint and the firepit are located below the 5-metre contour line. Their placement has been carefully considered during the planning process to limit disturbance to sensitive riparian and aquatic habitats, and their footprint remains small relative to the overall extent of the site.

Summary of evolution of Alternative 3:

- House 2 footprint shifted to be outside of 50m Fauna impact zone and above 5m contour line
- Additional road added to reduce frequency of use for the current road that goes through 50m fauna impact zone
- One slipway and one jetty is retained to reduce impacted vegetation as well as frequency of road use through 50m fauna impact zone

Overall, Alternative 3 represents a biodiversity-sensitive layout that aligns with specialist recommendations and the objectives of the Western Cape Biodiversity Spatial Plan, while retaining the majority of the property in a natural or near-natural state.

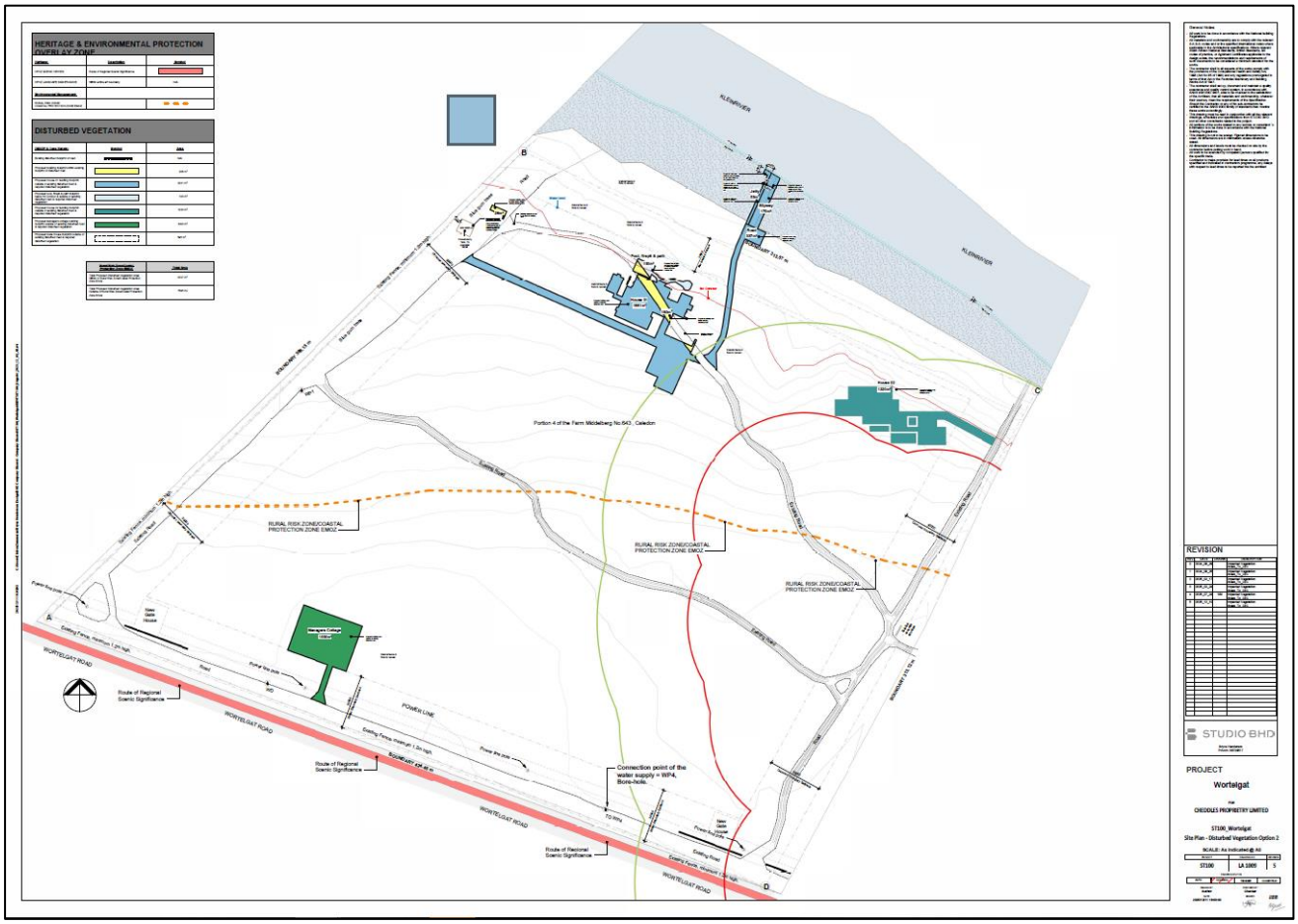

Figure 12-3: Site development plan (Alternative 3).

No – Go

The No-Go Alternative assumes that no development occurs on Portion 4 of Farm 643 and that the property remains in its current, largely undeveloped condition. Under this scenario, no new residential dwellings, recreational infrastructure, or associated services would be constructed, and the environmental features of the site would remain undisturbed.

From an environmental perspective, the No-Go Alternative would result in the least impact, as no vegetation clearing, infrastructure placement, or disturbance of soils, fauna, or hydrological processes would occur. The natural character, ecological functioning, and visual qualities of the property and its surroundings would remain intact.

However, the No-Go Alternative does not meet the applicants' objectives to establish a family-oriented residential development aligned with their long-term vision for the property. It would also mean that the site remains underutilised with no improvements to land management, infrastructure, or recreational function. Therefore, while environmentally favourable, the No-Go Alternative is not aligned with the intended socio-economic and personal objectives of the landowners.

Provide a motivation for the preferred design or layout alternative.

The preferred design and layout alternative (Alternative 4) was selected following an iterative environmental design process informed by specialist assessments, the Western Cape Biodiversity Spatial Plan (WCBSP, 2023), and site-specific ecological constraints. The alternative was specifically motivated by the need to minimise potential impacts on the Klein River Estuary and its associated ecological processes, while ensuring that the proposed residential development remains compatible with the environmental sensitivities of the site and compliant with applicable environmental and coastal management legislation.

Avoidance of Sensitive Aquatic and Estuarine Environments

The Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026) confirmed the absence of wetlands or inland watercourses within the proposed development footprint. The delineated Estuarine Functional Zone (EFZ), associated with the nationally significant Klein River Estuary, is situated approximately 45 m downslope from the majority of the residential infrastructure and upstream of the 5 m contour line. The proposed dwellings are therefore located outside of sensitive freshwater environments and outside of areas regulated as inland watercourses under the National Environmental Management Act (NEMA). Although the national web-based environmental screening tool (DFFE, 2026) initially classified the Combined Aquatic Biodiversity Theme Sensitivity of the site as "Very High" due to the site's proximity to the Klein River Estuary and CBA 1 areas, ground-truthing and specialist verification confirmed that the aquatic biodiversity sensitivity of the development footprint is "Low", providing confidence that Alternative 4 avoids the most sensitive aquatic features on the property.

Location within Previously Disturbed Terrestrial Areas

The proposed dwelling footprints are located within an area that has been historically disturbed by agricultural activities. As confirmed by the aquatic biodiversity specialist, the vegetation within the development area is moderately transformed and comprises a mosaic of dense fynbos thickets interspersed with areas of open shrubland dominated by invasive and disturbance-associated species, including *Stenotaphrum secundatum* (buffalo grass) and *Cynodon dactylon* (couch grass). By concentrating the development footprint within this already-disturbed terrestrial envelope, Alternative 4 avoids the clearing of intact natural vegetation and minimises additional habitat transformation and fragmentation relative to earlier alternatives.

Significant Reduction in Development Footprint and Estuarine Infrastructure

A key motivation for the selection of Alternative 4 is the substantial reduction in both the overall development footprint and the extent of estuarine infrastructure relative to earlier alternatives. The total development footprint has been reduced to 4,950 m², concentrating built infrastructure within a localised and previously disturbed area. Of particular significance, the number of proposed jetties has been reduced from two to one, and the proposed slipway has been removed entirely from the layout. These reductions substantially limit the extent of direct disturbance to the Klein River Estuary, its associated reedbeds, and the aquatic habitats and avifauna dependent on the estuarine system. The Klein

River Estuary, which holds a Present Ecological State (PES) of C (Moderately Modified) and an Estuary Importance Score (EIS) of 93, is classified as "Highly Important" nationally, and the reduction of estuarine infrastructure in Alternative 4 reflects the significance of this resource and the importance of limiting cumulative impacts on its ecological functioning.

Controlled and Defined Estuarine Access

The only development components extending toward the estuarine environment under Alternative 4 are the proposed footpath and the single retained jetty (53 m²). Both components have been deliberately positioned and designed to minimise disturbance to the estuarine reedbeds and estuarine processes. The inclusion of a single, defined footpath to the estuary, rather than the broader and less formalised access arrangements considered in earlier alternatives, consolidates estuarine access to a single low-impact corridor. This approach reduces the risk of incidental and unmanaged disturbance to the EFZ and surrounding natural vegetation. The aquatic biodiversity specialist confirmed that, given the limited footprint and localised nature of the remaining jetty infrastructure, significant long-term impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided construction is undertaken in accordance with the recommended mitigation measures and applicable estuarine management requirements.

Protection of Terrestrial Biodiversity

In addition to the aquatic biodiversity considerations, Alternative 4 incorporates several refinements to protect sensitive terrestrial biodiversity features. House 2 was relocated outside the confirmed habitat area of the Mute Winter Katydid (a Species of Conservation Concern), and a 50 m ecological buffer has been maintained around the confirmed habitat area as well as along the wetland and riparian edge. These measures ensure the continued functioning of sensitive terrestrial habitats and maintain ecological connectivity between the upland fynbos and the estuarine system.

Retention of Natural Vegetation and Ecological Connectivity

Approximately 70% of the property will remain undeveloped and retained as a natural conservation buffer, contributing to the maintenance of ecological corridors between upland and estuarine habitats and supporting the broader CBA 1 and ESA 2 network identified in the WCBSP (2023). Access routes make use of existing disturbed tracks where feasible, thereby reducing additional vegetation clearance. Garden establishment within developed areas is recommended to utilise natural fynbos and locally appropriate indigenous plant species, with no invasive alien plant species permitted for landscaping or rehabilitation, further supporting ecological integrity across the property.

Alternative 4 was further motivated by its compatibility with the full suite of mitigation measures recommended by the aquatic biodiversity specialist. These include the maintenance of a 25 m construction buffer and 15 m operational buffer around the Klein River Estuary, the use of low-impact construction methods and minimal machinery in proximity to the estuarine environment, implementation of stormwater management controls to prevent sediment and pollutant ingress into the estuary, rehabilitation of all disturbed areas following construction, and full adherence to the provisions of the Klein River Estuarine Management Plan and the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality. The layout of Alternative 4 makes the practical implementation of these measures achievable in a manner that earlier, more expansive alternatives would not have permitted.

Provide a detailed motivation if no design or layout alternatives exist.

N/A

List the positive and negative impacts that the design alternatives will have on the environment.

Alternative 1 (Non-Preferred)

Positive Impacts

- → Provides direct residential and recreational use of the riverfront, potentially improving the aesthetic and recreational value of the site for the owners.
- → Minimal additional road or infrastructure construction may be required since existing access points are used.

Negative Impacts

- → Residential dwellings are located within the 5 m contour of the Klein River, placing them in a high-risk flood zone (1:100-year flood line), which may lead to property damage and risk to human safety.
- → Encroachment into the Riparian Zone could disrupt sensitive riparian and aquatic habitats, alter hydrological processes, and negatively affect flora and fauna.
- → Construction within the river may increase erosion and sediment deposition, degrading water quality and habitat conditions.
- → Swimming pools, jetties, and slipways located within the flood zone may suffer damage during flood or storm events.
- → Development within the estuarine buffer may contravene environmental management guidelines, potentially resulting in legal or regulatory challenges.

Alternative 2 (non-preferred)

Positive impacts

- → Residential dwellings are placed above the 5 m contour, reducing vulnerability to flooding, storm surges, and climate-related events.
- → By keeping dwellings outside the riparian zone, the integrity of sensitive habitats and natural hydrological processes is maintained.
- → Minimises long-term maintenance costs and environmental impacts by avoiding high-risk areas.
- → Jetties and slipways are strategically located below the 5 m contour, providing controlled access to the river with minimal ecological disturbance.

Negative impacts

- → Construction of residential dwellings and associated infrastructure may result in the loss of some indigenous vegetation and temporary disturbance to fauna.
- → Noise, dust, and soil disturbance during the building phase may have temporary effects on the local environment.
- → While mitigated by careful placement, jetties and slipways are strategically located below the 5 m contour, providing controlled access to the river with minimal ecological disturbance.

Alternative 3

Positive impacts

- → All residential dwellings are located above the 5 m contour and outside the riparian zone, substantially reducing flood risk and ensuring greater long-term resilience to climate change.

→ Development footprints are concentrated within previously disturbed areas, minimising additional vegetation clearance and habitat transformation.
→ House 2 has been relocated outside the confirmed Mute Winter Katydid habitat, avoiding direct impacts on this Species of Conservation Concern. A 50 m buffer is maintained along these species, protecting their habitats.
→ Jetty infrastructure has been reduced from two structures to a single jetty, limiting disturbance to watercourse processes and bird habitat.
→ Additional access to house 1 included to reduce vehicle traffic in the sensitive katydid area.

Negative impacts

→ Limited and localised vegetation clearance will still occur within areas of low Site Ecological Importance.
→ Low-level disturbance to fauna may occur due to increased human presence, including noise and movement within the developed portions of the site.
→ Residual edge effects, such as low-intensity lighting, landscaping, and potential alien plant invasion, may persist but can be effectively managed through mitigation measures.

Alternative 4 (Preferred)

Positive impacts

→ The reduction of the overall development footprint to 4,950 m² limits the extent of land disturbance in proximity to the Klein River Estuary, reducing the risk of cumulative impacts on this nationally significant water resource.
→ The removal of the proposed slipway and the reduction of jetties from two to one substantially reduces the extent of direct physical disturbance to the estuarine environment, associated reedbeds dominated by *Phragmites australis* (Common Reed), and aquatic habitats relative to earlier alternatives.
→ The concentration of estuarine access to a single defined footpath and one small jetty (53 m²) minimises incidental and unmanaged disturbance to the EFZ, reducing trampling of estuarine vegetation and bank erosion associated with informal access.
→ The maintenance of a 25 m construction buffer and 15 m operational buffer around the Klein River Estuary will protect the estuarine fringe from direct construction-related disturbance, sedimentation, and pollution.
→ The use of a conservancy tank for sewage management, designed and operated in accordance with the National Water Act (Act 36 of 1998), eliminates the risk of untreated effluent entering the Klein River Estuary and contributing to eutrophication, which has been identified as an existing pressure on the estuary.
→ The installation of rainwater harvesting systems will reduce stormwater runoff volumes from impermeable surfaces, limiting the quantity of potentially contaminated runoff directed toward the estuarine environment.
→ The implementation of stormwater management controls, including sediment traps, silt fences, and the direction of runoff through vegetated areas prior to discharge, will reduce sediment mobilisation and water quality impairment in the Klein River Estuary during construction.
→ The positioning of all primary residential infrastructure above the 5 m contour and outside the EFZ maintains the hydrological connectivity and functioning of the estuarine system, avoiding any obstruction of natural water movement between the terrestrial and estuarine environments.
→ The concentration of the development footprint within previously disturbed and moderately transformed terrestrial areas avoids the clearing of intact natural fynbos and shrubland vegetation, reducing additional habitat loss and fragmentation relative to earlier alternatives.
→ The relocation of House 2 outside the confirmed habitat area of the Mute Winter Katydid (a Species of Conservation Concern) and the maintenance of a 50 m ecological buffer around the confirmed habitat area protects this sensitive species and its associated habitat from direct disturbance.
→ The retention of approximately 70% of the property as undeveloped natural land maintains functional ecological corridors between the upland fynbos and the Klein River Estuary, supporting biodiversity movement and connectivity within the broader CBA 1 and ESA 2 network identified in the WCBSP (2023).

- → The use of existing disturbed access tracks where feasible limits additional vegetation clearance and soil disturbance associated with new access route construction.
- → The recommendation to establish gardens using natural fynbos and locally appropriate indigenous plant species, and the prohibition on the use of invasive alien plant species for landscaping or rehabilitation, will contribute positively to the conservation of indigenous flora and the ecological integrity of the site over the long term.
- → The requirement to rehabilitate all disturbed areas following construction will promote the recovery of indigenous vegetation communities within the development footprint.
- → The development will contribute positively to the local economy through employment creation during the construction phase and ongoing economic activity associated with the operation and management of the residential property.
- → The incorporation of a manager's cottage within the layout supports on-site management of the property, including monitoring of the conservancy tank, maintenance of the estuary buffer, and management of invasive alien plants, contributing to the long-term ecological stewardship of the site.
- → The development contributes to the responsible utilisation of privately owned land within the coastal protection zone in a manner that is compatible with the applicable environmental management frameworks, including the Klein River Estuarine Management Plan and the Overstrand Municipality EMOZ requirements.

Negative impacts

- → The proposed jetty (53 m²) and footpath represent direct physical encroachment into the EFZ of the Klein River Estuary, resulting in the localised clearance of *Phragmites australis* reedbeds and the permanent loss of a small area of estuarine fringe habitat. While the footprint is limited, the Klein River Estuary is a nationally significant priority estuary with a "Highly Important" Estuary Importance Score (EIS) of 93, and any direct loss of estuarine habitat must be acknowledged.
- → Construction activities in proximity to the estuary carry a residual risk of sedimentation and pollutant ingress into the estuarine system, particularly during periods of heavy rainfall or if mitigation measures are not consistently implemented. Sedimentation can reduce water clarity, smother benthic habitats, and negatively affect aquatic fauna.
- → The presence of the jetty introduces a permanent structure into the estuarine environment, with the potential for low-level ongoing disturbance to aquatic fauna, including fish and waterbirds, associated with human activity and vessel movement.
- → Increased human activity on and around the estuary associated with the residential development and jetty use may cause localised disturbance to estuarine avifauna, including waterbirds and wading birds that utilise the reedbeds and open water areas of the Klein River Estuary for foraging, roosting, and breeding.
- → External lighting associated with the development, if not appropriately managed, has the potential to disturb nocturnal estuarine fauna and avifauna, alter natural light regimes at the estuarine fringe, and reduce the ecological value of the estuarine buffer as a refuge for light-sensitive species.
- → The conservancy tank, if not adequately maintained or if overflow occurs, presents a risk of sewage contamination of soils and groundwater, with potential downstream impacts on the water quality of the Klein River Estuary. The estuary is already subject to ongoing pressures from pollution and eutrophication as identified in the National Biodiversity Assessment (Van Niekerk et al., 2019).
- → Increased impermeable surface area associated with the residential footprint will alter the natural stormwater hydrology of the site, potentially increasing the volume and velocity of runoff directed toward the estuarine environment during rainfall events.
- → The development will result in the permanent transformation of approximately 4,950 m² of terrestrial land, involving the clearance of moderately transformed fynbos and shrubland vegetation. While this area is within previously disturbed land, the clearance of remaining indigenous vegetation components represents a net loss of terrestrial habitat.

→ Construction activities, including earthworks, vehicle movement, and material storage, carry a risk of soil compaction, erosion, and the spread of invasive alien plant species into adjacent undisturbed vegetation, potentially compromising the ecological integrity of the surrounding natural areas.
→ The introduction of garden plants, domestic animals, and human activity associated with the residential use of the property may increase the pressure of invasive alien species establishment on the site and in adjacent natural vegetation over the long term, if not actively managed.
→ Increased human presence and activity on the property, including associated noise and light pollution, may reduce the ecological value of the retained natural areas as habitat for sensitive fauna, including the Mute Winter Katydid and estuarine avifauna.
→ The development will result in the permanent modification of the visual character and sense of natural openness of the site, which currently presents an undeveloped landscape within the coastal protection zone adjacent to the Klein River Estuary.

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

N/A

Provide a description of any other technology alternatives investigated.

Roof mounted solar power.

Provide a motivation for the preferred technology alternative.

N/A

Provide a detailed motivation if no alternatives exist.

N/A

List the positive and negative impacts that the technology alternatives will have on the environment.

Positive impacts

→ The use of roof-mounted solar panels eliminates dependence on fossil-fuel-based power generation, lowering greenhouse gas emissions.
→ Incorporating energy-efficient technologies (lighting, insulation, and optimised building orientation) reduces overall electricity demand, contributing to sustainable resource use.
→ Adoption of solar technology demonstrates the integration of renewable energy in small-scale residential developments, supporting broader municipal and national sustainability goals.

Negative impacts

→ The production of solar panels, inverters, and batteries has upstream environmental impacts, including energy use, resource extraction, and emissions.
→ Roof-mounted solar panels may alter the visual character of the residential dwellings, although this is generally minimal when sensitively designed.
→ Solar panels and associated batteries require maintenance, and eventual disposal or recycling could generate waste or environmental pollutants if not managed properly.

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

N/A

Provide a description of any other operational alternatives investigated.

N/A

Provide a motivation for the preferred operational alternative.

N/A

Provide a detailed motivation if no alternatives exist.

No operational alternatives have been considered for this development, as the proposed project is limited in scope to the establishment of two single residential dwellings and a manager's cottage on Portion 4 of Farm 643. The nature and scale of the development are inherently constrained by the ownership, size, and zoning of the property.

The primary motivation for this approach is that the property is jointly owned by two brothers, each of whom intends to construct a residence, while the manager's cottage is required to support the oversight of management activities on the property.

List the positive and negative impacts that the operational alternatives will have on the environment.

N/A

1.6.	The option of not implementing the activity (the 'No-Go' Option).

Provide an explanation as to why the 'No-Go' Option is not preferred.

The 'No-Go' option, which would entail not proceeding with the proposed development of two single residential dwellings and a manager's cottage on Portion 4 of Farm 643, is not considered the preferred alternative. Choosing this option would result in the underutilisation of the property, which is zoned for agricultural land use and capable of supporting residential development in accordance with municipal planning provisions.

Furthermore, the No-Go option would prevent the landowners from exercising their legal land-use rights, including the establishment of a primary dwelling and, through consent use, an additional dwelling. This would hinder the ability of the owners to meet their housing needs and would preclude the development from contributing to broader socio-economic objectives, such as local employment during construction and associated economic contribution in the area.

While the No-Go option would avoid potential environmental impacts associated with construction and human activity, the preferred development has been carefully designed to minimise ecological disturbance, ensure compliance with environmental regulations, and situate all dwellings outside sensitive flood-prone and riverine areas. Therefore, the benefits of responsibly developing the property outweigh the option of leaving the site undeveloped.

1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.

No other alternative options that have been considered

1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.

Following a detailed assessment of potential development options for Portion 4 of Farm 643, Alternative 4 has been identified as the preferred layout for the proposed residential development. This alternative has been carefully designed to balance the landowners' development objectives with environmental sensitivities, ensuring minimal negative impacts while optimising positive outcomes.

Alternative 4 (Preferred)

Following a comparative assessment of the identified location alternatives, the site on Portion 4 of Farm Middelburg 643**,** Stanford, within the Overstrand Local Municipality, Western Cape, is confirmed as the preferred location for the proposed development. The site is situated north of Wortelgat Road, adjacent to the southern shore of the Klein River Estuary, and falls within the coastal protection zone as defined under the Integrated Coastal Management Act (ICMA). The farm portion is 13.53 ha in extent and lies northwest of the small town of Stanford, along the Wortelgat Road.

The preferred location was selected on the basis that the proposed development is located on privately owned land that has been subject to historical disturbance and secondary vegetation establishment, thereby reducing the extent of transformation of intact natural habitat required to accommodate the development. The site is appropriately located within the Overstrand Local Municipality's jurisdiction and is subject to the applicable environmental management frameworks, including the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) and the Klein River Estuarine Management Plan, which provide the regulatory context within which the development can be responsibly authorised and managed.

Critically, the Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025) confirmed that the vegetation found on Portion 4 of Middelburg 643 is not Agulhas Limestone Fynbos as mapped in the national Vegetation Map of South Africa (VEGMAP; SANBI, 2024). This finding was confirmed through site inspection and consultation with an expert who has extensively mapped vegetation in the Stanford-Agulhas region. The site is underlain by shale and mudstone of the Ceres Subgroup, Bokkeveld Group, with no coastal limestone deposits present, and the vegetation is more accurately characterised as an undescribed secondary shrubland formation, more akin to Eastern Rûens Shale Renosterveld, that has established following historical disturbance. This distinction has significant implications for the assessment of the site's conservation status and ecological sensitivity, as elaborated below.

The location is further supported by the findings of the Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026), which confirmed through ground-truthing and specialist verification that the development footprint is situated outside of sensitive freshwater environments and areas regulated as inland watercourses under NEMA, with the aquatic biodiversity sensitivity of the development footprint verified as "Low

Alternative 4 is confirmed as the preferred design and layout alternative for the proposed development. This alternative was selected following an iterative environmental design process informed by the findings of multiple specialist assessments, including the Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026), the Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025), and the Faunal Impact Assessment, as well as the spatial requirements of the WCBSP (2023) and the applicable environmental management frameworks.

Alternative 4 represents the most environmentally responsible layout configuration assessed, having been specifically refined to avoid and minimise impacts on the ecological features of the site. The key distinguishing characteristics of Alternative 4, which motivated its selection as the preferred alternative, are summarised as follows:

Terrestrial Biodiversity and Vegetation

The Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025) determined that the vegetation on the site comprises two main sub-types: a low-lying riparian floodplain associated with the Klein River, dominated by *Phragmites*

australis (Common Reed) on the riverbank and *Stenotaphrum secundatum* (buffalo grass) on the floodplain with emergent shrubs and trees; and an upland dense to mid-high shrubland formation dominated by *Passerina corymbosa*, *Gnidia squarrosa*, and *Muraltia spinosa* in the upper stratum, with *Helichrysum* spp. and grasses in the lower stratum. The specialist confirmed that this vegetation is of Low ecological sensitivity, constituting a secondary vegetation type that has colonised previously disturbed agricultural land.

Despite the national web-based environmental screening tool classifying the Relative Terrestrial Biodiversity Theme Sensitivity as "Very High" and the Relative Plant Species Theme Sensitivity as "Medium", the specialist demonstrated that these classifications are erroneous, being based on the incorrect premise that the site supports Agulhas Limestone Fynbos (a Critically Endangered vegetation type). Since no Agulhas Limestone Fynbos occurs on the site, none of the sensitive plant species associated with that vegetation type were encountered during the survey, and the Relative Plant Species Sensitivity is verified as **Low**. Similarly, the classification of the site as Critical Biodiversity Area 1 (CBA1) in the Western Cape Biodiversity Spatial Plan (WCBSP, 2023) is considered erroneous by the specialist; the site should more appropriately be classified as Ecological Support Area 2 (ESA2) or Other Natural Area (ONA) at most.

The Site Ecological Importance (SEI) was calculated by the specialist as Low, based on a Low Conservation Importance, Medium Functional Integrity, and Low Receptor Resilience. For sites with Low SEI, the interpretation guideline indicates that development activities of medium impact are acceptable, followed by appropriate restoration activities. No plant species of conservation concern were recorded on the site. One protected tree species, *Sideroxylon inerme* (white milkwood), was previously recorded on the adjacent portion but would not be affected by the proposed development under Alternative 4. One adult endemic Angulate Tortoise (*Chersina angulata*) was recorded during the site visit, confirming that the ecosystem supports vertebrate wildlife, and signs of porcupine (*Hystrix africaeaustralis*) were noted.

The specialist concluded that the residual botanical and terrestrial biodiversity impacts of the preferred alternative, with development concentrated above the 5 m contour and away from the riparian zone, would be Low Negative in both the construction and operational phases, and that no biodiversity offset would be required. This conclusion was reached on the basis that the vegetation has Low ecological sensitivity, that development is concentrated within previously disturbed areas, and that mitigation measures including avoidance of old established trees, use of existing access tracks, and alien invasive plant clearing would further reduce residual impacts.

Aquatic and Estuarine Environment

All primary residential infrastructure comprising two residential dwellings (House 1: 1,662 m² and House 2: 1,220 m²), a manager's cottage (1,000 m²), and a gatehouse (595 m²), is located above the 5 m contour, outside of the delineated Estuarine Functional Zone (EFZ), and landward of the coastal management line, ensuring adequate separation from the Klein River Estuary and its associated sensitive habitats. The EFZ edge was delineated approximately 45 m downslope from the majority of the residential footprint and upstream of the 5 m contour line.

The total development footprint has been reduced to 4,950 m², concentrating built infrastructure within previously disturbed and lower ecological sensitivity terrestrial areas. The proposed slipway has been removed entirely from the layout, and the number of jetties has been reduced from two to one, substantially limiting the extent of direct physical disturbance to the estuarine environment relative to earlier alternatives. The only development components that encroach into the EFZ are the single defined footpath and the retained jetty (53 m²). The aquatic biodiversity specialist confirmed that, given the limited footprint and localised nature of the remaining jetty infrastructure, significant long-term impacts on the ecological functioning of the Klein River Estuary are not anticipated, provided construction is undertaken in accordance with the recommended mitigation measures.

Protection of Sensitive Species and Habitats

House 2 has been relocated outside the confirmed habitat area of the Mute Winter Katydid (*Baeometra unifolia* habitat zone), a Species of Conservation Concern identified during the faunal assessment, with a 50 m ecological buffer maintained around the confirmed habitat area and along the wetland and riparian edge. These measures ensure the continued functioning of sensitive habitats and maintain ecological connectivity between the upland shrubland and the estuarine system.

Retention of Natural Vegetation and Ecological Connectivity

Approximately 70% of the property will remain undeveloped and retained as a natural conservation buffer, maintaining ecological corridors between the upland shrubland and the Klein River Estuary. While the specialist contested the CBA1 classification of the terrestrial environment, the retention of the majority of the property in its natural state contributes positively to the functioning of the broader landscape and the ecological integrity of the estuarine buffer. Garden establishment within developed areas is recommended to utilise natural fynbos and locally appropriate indigenous plant species, with no invasive alien plant species permitted for landscaping or rehabilitation, and a fire management plan is recommended to allow for the periodic rejuvenation of the moribund upland shrubland vegetation.

Alternative 1 (Non-preferred)

This option situates two dwellings close to the river, below the 5 m contour. While feasible from a construction perspective, it exposes structures to flooding, storm events, and long-term climate-related risks. Proximity to sensitive habitats also increases potential environmental impacts.

Alternative 2 (Non-preferred)

Relocating development above the 5 m contour reduces flood risk but introduces direct biodiversity impacts, including disturbance to confirmed Mute Winter Katydid habitat. Retention of two slipways and jetties further increases ecological disturbance. While improved in terms of risk management, the ecological impacts render this alternative non-preferred.

No-Go Alternative

The No-Go scenario would preserve the property in its current natural state, resulting in the least environmental impact. However, it does not meet the landowners' objectives for residential development, improved land management, or recreational use, and is therefore not considered a viable option.

On balance, Alternative 4 (preferred) represents the most sustainable and responsible option, providing for the landowners' development objectives while avoiding and mitigating significant environmental impacts. The layout ensures the protection of key ecological features, reduces biodiversity loss, and minimises disruption to sensitive riparian areas, making it the preferred alternative for Portion 4 of Farm 643.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).

During the assessment of development alternatives for Portion 4 of Farm Middelburg 643, Stanford, a critical No-Go area was identified in relation to sensitive faunal habitat on the property. The Faunal Impact Assessment identified the presence of the Mute Winter Katydid, a Species of Conservation Concern (SCC), within a defined area of the property. In response to this finding, the Faunal Specialist recommended a strict 50 m no-go buffer surrounding the mapped katydid habitat, within which no development, construction, or associated activities may occur.

The identification of this No-Go area directly informed the refinement of the development layout from earlier alternatives to the preferred Alternative 4. Specifically, House 2 was relocated outside of the confirmed habitat area of the Mute Winter Katydid and outside of the 50 m no-go buffer in response to this constraint. This relocation represents one of the key distinguishing design changes between earlier layout alternatives and the preferred Alternative 4, and demonstrates the iterative, specialist-informed nature of the environmental design process undertaken for this application.

The No-Go area and associated 50 m buffer are illustrated in **Figure 12-3**, which depicts the Very High Sensitivity area associated with the katydid species habitat on the property.

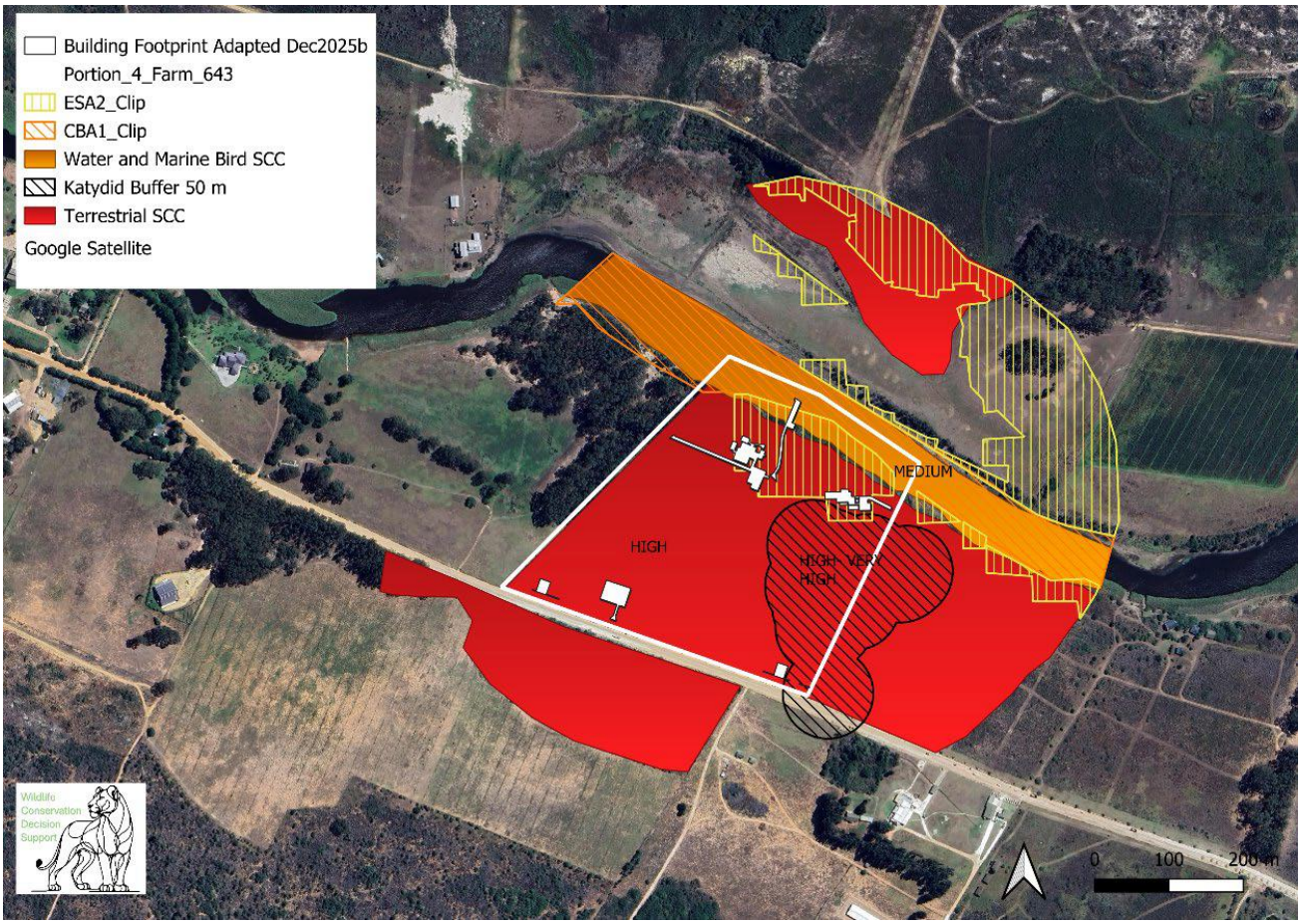

Figure 12-3: Illustrates the Very High Sensitivity area associated with the Katydid species.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.

An impact is any change to a resource or receptor brought about by a project component or through the execution of a project related activity. The evaluation of baseline data provides information for the process of evaluating and describing how the project could affect the biophysical and socio-economic environment.

The Preferred and Alternative site development plans a substantially similar apart from the number of units and the envisaged.

Impact is described according to their nature or type, as follows:

Nature / Type

Nature/ Type of impact	Definition
Positive	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Negative	An impact that is considered to represent an adverse change from the baseline, or introduces a new undesirable factor.
Direct	Impacts that result from a direct interaction between a planned project activity and the receiving environment/receptors (e.g. between occupation of a site and the pre-existing habitats or between an effluent discharge and receiving water quality).
Indirect	Impacts that result from other activities that are encouraged to happen as a consequence of the Project (e.g. in-migration for employment placing a demand on resources).
Cumulative	Impacts that act together with other impacts (including those from concurrent or planned future third-party activities) to affect the same resources and/or receptors as the Project.

Significance

Impacts are described in terms of significance. Significance is a function of the magnitude of the impact and the likelihood of the impact occurring:

Impact Magnitude	
Extent	**On site** – impacts that are limited to the boundaries of the development site.
	Local – impacts that affect an area in a radius of 20 km around the Development site.
	Regional – impacts that affect regionally important environmental resources or are experienced at a regional scale as determined by administrative boundaries, habitat type/ecosystem.
	National – impacts that affect nationally important environmental resources or affect an area that is nationally important/ or have macro-economic consequences

Duration	**Temporary** – impacts are predicted to be of short duration and intermittent/occasional.
	Short-term – impacts that are predicted to last only for the duration of the construction period.
	Long-term – impacts that will continue for the life of the Project but ceases when the project stops operating
	Permanent – impacts that cause a permanent change in the affected receptor or resource (e.g. removal or destruction of ecological habitat) that endures substantially beyond the project lifetime
	BIOPHYSICAL ENVIRONMENT
	Negligible – the impact on the environment is not detectable.
	Low – the impact affects the environment in such a way that natural functions and processes are not affected.
	Medium – where the affected environment is altered but natural functions and processes continue, albeit in a modified way.
Intensity	**High** – where natural functions or processes are altered to the extent that they will temporarily or permanently cease
	SOCIO-ECONOMIC
	Negligible – there is no perceptible change to people's livelihood
	Low - people/communities are able to adapt with relative ease and maintain pre-impact livelihoods
	Medium – people/communities are able to adapt with some difficulty and maintain pre-impact livelihoods but only with a degree of support
	High - affected people/communities will not be able to adapt to changes or continue to maintain pre-impact livelihoods.

Likelihood – the likelihood that an impact will occur

Likelihood	
Unlikely	The impact is unlikely to occur
Likely	The impact is likely to occur under the most conditions.
Definite	The impact will occur

Once an assessment is made of the magnitude and the likelihood, the impact significance is rated through a matrix process:

Significance				
Magnitude		Unlikely	Likely	Definite
	Negligence	Negligible	Negligible	Minor
	Low	Negligible	Minor	Minor
	Medium	Minor	Moderate	Moderate
	High	Moderate	Major	Major

Definition of significance:

Negligible	

	An impact of negligible significance (or an insignificant impact) is where a resource or receptor (including people) will not be affected in any way by a particular activity, or the predicted effect is deemed to be 'negligible'.
Minor	An impact of minor significance is one where an effect will be experienced, but the impact magnitude is small (with and without mitigation) and within accepted standards, and/or the receptor is of low sensitivity/value.
Moderate	An impact of moderate significance is one within accepted limits and standards. The emphasis for moderate impacts is on demonstrating that the impact has been reduced to a level that is as low as reasonably practicable. This does not necessarily mean that 'moderate' impacts have to be reduced to 'minor' impacts, but that moderate impacts are managed effectively and efficiently.
Major	An impact of major significance is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued / sensitive resource / receptors. A goal of the EIA process is to get to a position where the Project does not have any major residual impacts.

Significance of an impact is then qualified through a statement of the degree of confidence. Degree of confidence is expressed as low, medium or high.

Significance colour scale (if applicable):

Negative	Positive
Negligible	Negligible
Minor	Minor
Moderate	Moderate
Major	Major

Impact rating colour scale:

Negative	Positive
Negligible	Negligible
Low	Low
Medium	Medium
High	High

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

ALTERNATIVE 1

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Socioeconomic impacts**
Potential Impact	Job creation during the development / construction phase
Nature of impact:	Positive
Extent and duration of impact:	Local; Short-term
Consequence of impact or risk:	Improved livelihoods for the local community
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	House provisions and job creation during construction phase
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High Positive
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour.
Residual impacts:	Improved livelihoods and skill transfer
Cumulative impact post mitigation:	Job creation and skill transfer to local community
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Visual impacts**
Potential Impact	Visual impacts of construction site and construction activities.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Partial loss of vegetation; as well as visibility of the construction activities.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	Irreversible

Indirect impacts:	None
Cumulative impact prior to mitigation:	Visual impacts associated with construction.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Good design approved by local authority. → Good housekeeping of construction site and working areas. → Screen the visual elements of site construction camp with netting. → Locate the site camp in a transformed area. → Officer to ensure that waste and batching areas are correctly screened and secured to prevent spread by wind, rain or animals.
Residual impacts:	Change of sense of place due to construction activities and construction workers.
Cumulative impact post mitigation:	Typical visual impacts associated with a construction site
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Low Negative**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Dust impacts**
Potential Impact	Dust generated from site clearing and site preparation.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Visual and health impacts Nuisance for residents adjacent to the site.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Potential for reduced visibility in general area.
Cumulative impact prior to mitigation:	Dust may be generated as a result of earthmoving activities required for construction and development.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain ground cover for as long as possible to reduce the total surface area exposed to wind. Do not clear entire areas rather building footprint only → Ensure vehicle speed limits on site are kept to a minimum. → Delivery vehicles to keep loads covered.

	→ Cover fine material stockpiles. → Wet dry and dusty surfaces using non-potable water. → Staff to wear correct PPE if dust is generated for long periods. Road surfaces to be swept and kept clean of sand and fine materials.
Residual impacts:	None
Cumulative impact post mitigation:	Dust generated during construction, mitigation successful.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very-Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Noise impacts**
Potential Impact	Noise generated by vehicles and machinery during construction phase.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Noise disturbance to transient receptors, i.e. motorists, pedestrians, residents.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Will not impact on resources
Degree to which the impact can be reversed:	High
Indirect impacts:	None
Cumulative impact prior to mitigation:	Noise from construction works
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Medium - High
Degree to which the impact can be managed:	Medium - High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Limit noise levels (e.g. install and maintain silencers on machinery) → Provide protective wear for workers → Ensure that construction vehicles and machinery are maintained regularly to reduce noise generation. → Restrict construction to normal work hours.
Residual impacts:	None
Cumulative impact post mitigation:	Typical noise impacts associated with a construction site.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low Negative

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Botanical/ Ecological Impacts**
Potential Impact	Loss of terrestrial vegetation and riparian reedbeds below 5 m contour
Nature of impact:	Negative direct impact
Extent and duration of impact:	Local, Short-term
Consequence of impact or risk:	Loss of vegetation in the riparian zone and significant risk of the development negatively affecting the ability of the local environment to withstand the effects of flooding.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Moderate
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Designing the development to stay above the 5 m contour to reduce ecological impacts. → Using existing roads and paths for access to minimize new disturbances to the environment. → Limiting infrastructure like slipways and jetties, as only one jetty per property is typically permitted and slipways are discouraged. → Clearing of alien invasive plant species.
Residual impacts:	Medium Negative
Cumulative impact post mitigation:	Medium Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Faunal landscape connectivity**
Potential Impact	Corridor narrowing (±30% of 12 ha); fencing/driveways; lighting; alien ingress which is greater sensitivity than the preferred.
Nature of impact:	Negative, direct & indirect. – same mechanisms as Preferred, with slightly higher sensitivity where one dwelling sits closer to the river edge.
Extent and duration of impact:	Site-local; long-term; slightly higher risk at river edge.

Consequence of impact or risk:	Moderate consequence due to potential reduction in functional connectivity across the site and risk to species reliant on movement between terrestrial and wetland habitats.
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium — loss is localised and does not remove the entire corridor function due to retention of ~70% of the property in a natural state.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased lighting and noise disturbance, potential predation by domestic pets, and spread of alien vegetation reducing habitat quality and permeability.
Cumulative impact prior to mitigation:	Adds to ongoing fragmentation pressure along the Klein River corridor and Agulhas Limestone Fynbos ecosystem
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.
Residual impacts:	Edge effects persist but functional corridor retained if measures embedded.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Black Harrier**
Potential Impact	Habitat loss/fragmentation within potential territories; construction disturbance.
Nature of impact:	Negative;
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Reduction of available foraging ground within a landscape that supports a regionally important population; minor contribution to broader cumulative loss of lowland fynbos habitat.
Probability of occurrence:	High

Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Loss of hunting/possible nesting areas in the footprint; construction activity and machinery increase flush/disturbance risk.
Cumulative impact prior to mitigation:	Medium – High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-go buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of watercourse-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Displacement risk reduced but not eliminated; foraging persists in retained strips.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Medium (-)**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential Impact	Dwelling slightly closer to watercourse increases sensitivity during works.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Potential temporary displacement of foraging individuals and reduced local habitat use during construction.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Disturbance to associated watercourse bird species; temporary reduction in foraging efficiency; possible increase in predation pressure or displacement from preferred sites.

Cumulative impact prior to mitigation:	Adds minor short-term disturbance to existing pressures along the Klein River from human activity and nearby land uses
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the watercourse to prevent disorientation or displacement of watercourse dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Local residual disturbance remains
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Denham's bustard**
Potential Impact	Temporary disturbance near river still immaterial for bustard.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	The species is wide-ranging and unlikely to be resident; temporary displacement from foraging areas possible but insignificant to regional population.
Probability of occurrence:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief disturbance to foraging individuals; short-term reduction in local activity; potential short-lived avoidance of construction areas.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High

Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very- Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential Impact	Loss/ disturbance to small, patchy suitable area; construction noise.
Nature of impact:	Negative;
Extent and duration of impact:	Site- Local
Consequence of impact or risk:	Minor local habitat loss and temporary disturbance but given the species' mobility and limited use of the site, long-term effects are minimal.
Probability of occurrence:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	The affected patches are not unique or critical to the regional population and represent marginal habitat.
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Temporary displacement from foraging areas, possible voidance of construction zone, and increased risk of disturbance from noise and human presence.
Cumulative impact prior to mitigation:	Adds slightly to the overall decline in available open habitat across the Overberg region but at a negligible scale.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medum
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Reduced local habitat availability; regional persistence unaffected
Cumulative impact post mitigation:	Low — no significant contribution to regional cumulative impacts on the species.

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Great White Pelican**
Potential Impact	Construction disturbance: proximity change immaterial ecologically; Disturbance of foraging and roosting birds near reed margins and river edges.
Nature of impact:	Negative
Extent and duration of impact:	Site-Local; short-term
Consequence of impact or risk:	The species forages and roosts within the larger Klein River and will not be dependent on, or significantly affected by, site-specific activities.
Probability of occurrence:	Low to Medium — individuals may occasionally overfly or rest nearby but are unlikely to be directly disturbed given their broad use of the river
Degree to which the impact may cause irreplaceable loss of resources:	Very Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief flushing of individuals if present during noisy works; minimal and temporary reduction in local use of the watercourse edge.
Cumulative impact prior to mitigation:	Low – adds negligibly to broader watercourse human activity impacts; no measurable contribution to population-level effects.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the watercourse to prevent disorientation or displacement of dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of watercourse edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very- Low (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Martial Eagle**
Potential Impact	Short-term disturbance to overflying birds due to construction activity, noise, and increased human presence.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-term
Consequence of impact or risk:	Minor disturbance of flight paths and foraging patterns of transient individuals; negligible long-term effect given absence of nesting or core foraging habitat within the site.
Probability of occurrence:	Low – species occurs occasionally as a wide-ranging overflying raptor, with limited site-specific use.
Degree to which the impact may cause irreplaceable loss of resources:	Low – no critical breeding, roosting, or feeding resources are located within the development footprint.
Degree to which the impact can be reversed:	High – species will resume use of airspace once construction activity ceases.
Indirect impacts:	Minor, temporary displacement from immediate airspace; no measurable population-level effects.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Caspian Tern**
Potential Impact	Temporary disturbance during works; no breeding on site.
Nature of impact:	Negative
Extent and duration of impact:	Site; short-term
Consequence of impact or risk:	Minor disturbance to foraging or roosting individuals using the nearby river margins. No loss of breeding habitat or long-term displacement expected
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High

Indirect impacts:	Temporal avoidance of the estuary edge immediately adjacent to the site due to construction-related noise and activity.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	- Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. - Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. - Shield and direct lighting away from the estuary to prevent disorientation or displacement of watercourse-dependent species. - Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). - Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential Impact	Construction disturbance; occasional roadkill risk during clearing/earthworks
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-medium term
Consequence of impact or risk:	Construction activities may disturb individual toads sheltering in vegetation or soil cavities and increase the likelihood of mortality from machinery and vehicle movement. As the species does not breed on site, the impact is limited to temporary displacement or loss of individuals rather than population-level effects.
Probability of occurrence:	Likely - the species may occur sporadically within the site, especially following rainfall or during nocturnal movements.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – once construction activities cease and vegetation recovers, the site can again support occasional movement or foraging by the species.
Indirect impacts:	Potential temporary avoidance of the area by amphibians due to vibration, noise, and compaction of soils; increased risk of mortality from vehicle movement on newly constructed access roads.
Cumulative impact prior to mitigation:	Medium

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site. → Fit escape ramps or "toad savers" in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Low – with mitigation, the impact will be temporary and reversible, and individuals are expected to reoccupy the area post-construction
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Adder**
Potential Impact	Direct loss of refugia during clearing; persecution risk; roadkill during works.
Nature of impact:	Negative
Extent and duration of impact:	Site -local; long-term
Consequence of impact or risk:	Loss of individual snakes; potential local population disturbance; minor contribution to cumulative population decline in the broader area.
Probability of occurrence:	Likely - snakes are likely present in vegetated and undisturbed patches, especially during warmer months.
Degree to which the impact may cause irreplaceable loss of resources:	Low – individual snakes may be lost, but local population is likely resilient if habitat patches are retained.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased predation risk on local fauna due to displacement; potential ecosystem imbalances if snake populations decline in isolated patches.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low -Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia.

	→ Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Localized disturbance; a small number of individuals may still be lost
Cumulative impact post mitigation:	Low Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential Impact	Direct loss of occupied microhabitats; local collapse risk due to low mobility.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	Loss of individuals and microhabitats may lead to local population decline; could disrupt local invertebrate community structure.
Probability of occurrence:	Definite ; species is present in dense vegetation patches and leaf litter.
Degree to which the impact may cause irreplaceable loss of resources:	Medium - while individuals are lost, the species is likely to persist in adjacent undisturbed habitats.
Degree to which the impact can be reversed:	Moderate – habitat may regenerate, allowing recolonization over time, but recovery is slow due to low mobility.
Indirect impacts:	Reduced prey availability for local insectivorous birds and small reptiles; potential minor alteration of local litter decomposition dynamics.
Cumulative impact prior to mitigation:	High – combined with other small-scale habitat disturbances, could lead to local declines in sensitive invertebrate populations.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Relocate the one planned dwelling and associated infrastructure outside a 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers.

	→ Regularly survey katydid populations post-construction to verify persistence and recolonisation.
Residual impacts:	Localized population loss; some microhabitats permanently altered but overall local population expected to persist.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Aquatic Biodiversity**
Potential Impact	Direct physical disturbance, habitat loss, and degradation of the Klein River Estuary estuarine functional zone (EFZ) associated with the construction and operation of two jetties and two slipways.
Nature of impact:	**Negative**
Extent and duration of impact:	Local; short- medium term
Consequence of impact or risk:	The additional footprint of two jetties and two slipways increases the risk of further habitat degradation, erosion, sediment disturbance, and water quality impairment within a system that has limited capacity to absorb additional stress
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Irreplaceable
Degree to which the impact can be reversed:	Low – Medium
Indirect impacts:	Increased human access to the estuarine margin and open water may result in elevated recreational pressure, disturbance to waterbirds and estuarine fauna, increased litter and waste inputs, and a heightened risk of illegal harvesting of estuarine resources (fish, invertebrates). The slipways may facilitate increased motorised boat activity on the estuary, with cumulative noise, wave wash, and fuel contamination implications. Increased impervious surfaces and activity near the EFZ may alter localised stormwater runoff patterns, increasing sediment and nutrient loads entering the estuary.
Cumulative impact prior to mitigation:	High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ **Refer to Page 13 to 15 of the Aquatic Biodiversity Compliance Statement.**
Residual impacts:	Medium
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
POST-CONSTRUCTION PHASE	

Potential impact and risk:	Socio-economic impacts
Potential impact	Access to permanent employment for the community individuals through housekeeping and gardening.
Nature of impact:	Positive
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Improved livelihoods
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	Access to employment for the community during the operational phase; Job creation;
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour
Residual impacts:	Improved livelihoods
Cumulative impact post mitigation:	Improved livelihoods
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Botanical/Ecological Impacts**
Potential impact	Loss of low-lying vegetation close to the river that provides stability to the environment.
Nature of impact:	Flooding due to extreme weather events
Extent and duration of impact:	Medium term
Consequence of impact or risk:	Lowering the buffering of the
Probability of occurrence:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Low
Indirect impacts:	Non identified
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	No operational phase mitigation would be possible
Residual impacts:	Medium Negative
Cumulative impact post mitigation:	Medium Negative

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Faunal landscape connectivity**
Potential impact	River edge lighting/traffic marginally increases nightly barrier effect, potentially disrupting movement of nocturnal fauna such as amphibians, small mammals, and invertebrates.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Reduced movement and dispersal of fauna; potential localized population fragmentation; may limit access to breeding, foraging, or refuge sites for sensitive species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Low
Indirect impacts:	Potential increase in roadkill incidents; minor alterations to local predator-prey interactions; some species may shift activity patterns, affecting ecological processes.
Cumulative impact prior to mitigation:	Medium – combined with habitat fragmentation and other developments, there may be small cumulative effects on local faunal connectivity.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.
Residual impacts:	Low residual illumination pressure at water edge; managed.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Black Harrier**
Potential impact	Slightly higher night lighting effect near water edge without controls.
Nature of impact:	Negative

Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	River facing lighting marginally increases night-time avoidance.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low – effects are behavioural and reversible; populations unlikely to be directly affected.
Degree to which the impact can be reversed:	High – if lighting is managed, the species can resume normal use of the area.
Indirect impacts:	Temporary displacement may slightly increase predation pressure on other prey species elsewhere; minor alteration of local hunting patterns.
Cumulative impact prior to mitigation:	Low to Medium – minor additive effect if combined with other developments along the Klein River
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the watercourse to prevent disorientation or displacement of species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of watercourse edge natural habitat through stewardship or conservation agreements
Residual impacts:	Minor behavioural avoidance of lit areas; no measurable impact on population viability expected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)

POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential impact	Night lighting near river marginally increases disturbance pulses
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Increased illumination near river edges may cause temporary avoidance or startle responses during nocturnal roosting
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance may alter local activity patterns but is unlikely to lead to loss of breeding or feeding habitat.
Degree to which the impact can be reversed:	High – reducing lighting or implementing shielding can rapidly reverse behavioural effects.

Indirect impacts:	Minor shifts in prey distribution; temporary displacement of harriers to darker zones; potential increased competition in adjacent habitats.
Cumulative impact prior to mitigation:	Additive with other lighting sources along the river, leading to gradual reduction in undisturbed foraging zones
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the watercourse to prevent disorientation or displacement of watercourse-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of watercourse natural habitat through stewardship or conservation agreements.
Residual impacts:	Minimal behavioural disturbance: local birds may continue to avoid small lit patches
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Denham's bustard**
Potential impact	Human presence negligible effect due to habitat mismatch.
Nature of impact:	Negative
Extent and duration of impact:	Local site; long-term
Consequence of impact or risk:	The site's altered land cover and residential use reduce habitat suitability for Denham's Bustard, a species that prefers extensive open grasslands and agricultural fields. Occasional overflight or transient individuals may avoid the immediate area due to human activity and structures.
Probability of occurrence:	Probable; the species may occasionally traverse the area but is unlikely to utilize it regularly for foraging or breeding.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Partially reversable
Indirect impacts:	None expected beyond localized avoidance; negligible influence on regional population dynamics or habitat function.

Cumulative impact prior to mitigation:	Low – surrounding landscapes retain more suitable open habitat; the development contributes minimally to regional habitat loss.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible; the species may continue to avoid the developed site, but no population-level impacts are expected.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential impact	Edge disturbance (people/pets) reduces use of marginal habitat
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	The proximity of human activity, domestic pets, and increased noise or movement near natural edges may deter Southern Black Korhaan from using adjacent open habitat for foraging or breeding.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance results mainly in displacement rather than permanent habitat loss; suitable habitat persists beyond the site
Degree to which the impact can be reversed:	Moderate to High – behavioural avoidance may lessen over time if disturbance is minimized and buffer vegetation is maintained.
Indirect impacts:	Potential increase in predation risk if birds are displaced to more exposed or disturbed areas; Disturbance may reduce breeding success in nearby territories; Possible secondary effects on other ground-nesting bird species
Cumulative impact prior to mitigation:	combined with similar developments, disturbance could contribute to gradual contraction of habitat use in peri-urban areas.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High

Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Minor behavioural avoidance near edges may persist, but the broader local population will remain unaffected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Great White Pelican**
Potential impact	Low-level displacement possible but minor.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	The development may result in minor, localized avoidance by Great White Pelicans of nearby areas due to human activity, noise, or lighting, particularly during roosting or flight over the river.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Minimal; temporary shifts in local flight paths or loafing sites may occur but with no broader ecological consequence.
Cumulative impact prior to mitigation:	Low – cumulative effects across the region are minor given the species' adaptability and extensive foraging range.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans).

	→ Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible; the species will continue to utilize the broader estuary system with minimal behavioural adjustments.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Martial Eagle**
Potential impact	Minimal chronic effect with residents.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Occasional overflight or peripheral foraging by Martial Eagles may decline slightly due to increased human presence and movement.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – behavioural avoidance is reversible; the species may resume use if disturbance decreases over time.
Indirect impacts:	Possible minor avoidance of localized areas with high human activity; Slight shift in local hunting patterns toward quieter open habitats
Cumulative impact prior to mitigation:	Localized effects from this and other developments contribute minimally to regional Martial Eagle population pressures, which are primarily driven by large-scale land use changes and powerline electrocution.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible; the species may exhibit mild avoidance of the immediate development footprint, but no significant effect on population dynamics or habitat integrity is anticipated.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Caspian Tern**
Potential impact	Low-level disturbance; maintain buffer to estuary.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long -term
Consequence of impact or risk:	Minor displacement of individuals occasionally foraging or roosting near the estuary mouth could occur due to increased human presence and recreational activity.
Probability of occurrence:	Possible
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporary avoidance of the adjacent estuarine fringe during periods of high recreational use. Potential minor shifts in roosting patterns within the broader river system.
Cumulative impact prior to mitigation:	Development contributes slightly to overall estuarine disturbance pressures but does not affect critical habitat or breeding colonies.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible – disturbance effects will be minimal if the buffer is maintained and access controls are implemented.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential impact	Edge effects (lighting, pets, pesticides) on terrestrial movement.

Nature of impact:	Negative
Extent and duration of impact:	Site – local; long term
Consequence of impact or risk:	Artificial lighting, domestic pets, and pesticide use may interfere with the movement and nocturnal activity of the Western Leopard Toad, particularly during breeding migrations or foraging. This could result in localized mortality or avoidance of the site's margins, although no core breeding habitat occurs within the development footprint.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – reduced lighting and pet control can restore suitable edge conditions over time.
Indirect impacts:	Possible reduction in amphibian abundance in gardens and open spaces due to pesticide use; Increased risk of predation by domestic animals; Minor disruption to nocturnal movement corridors.
Cumulative impact prior to mitigation:	Medium – incremental contribution to regional habitat fragmentation
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium – High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site. → Fit escape ramps or "toad savers" in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Minor, limited to isolated toad movement across developed areas; no population-level effects anticipated.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Adder**
Potential impact	Ongoing persecution and roadkill near dwellings; edge effects on refugia.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long term
Consequence of impact or risk:	Increased human activity and vehicular movement along access routes elevate the risk of direct mortality through roadkill or persecution of snakes perceived as dangerous. Subtle habitat alteration (e.g., reduced refugia, compacted soils, and garden management) may lower local occupancy in suitable edge habitats.

Probability of occurrence:	Likely; occasional encounters expected where remnant natural or open space areas occur adjacent to development.
Degree to which the impact may cause irreplaceable loss of resources:	Low – Medium
Degree to which the impact can be reversed:	Moderate – population recovery and recolonisation possible if human-snake conflict is reduced and habitat edges rehabilitated.
Indirect impacts:	Loss of ecological function (predator role in small mammal control); Displacement of individuals into suboptimal areas due to disturbance; Reduction of local biodiversity resilience along the urban edge.
Cumulative impact prior to mitigation:	Medium – adds incrementally to regional pressures from urban expansion, road networks, and human intolerance of snakes.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Occasional snake mortality may still occur but at low frequency; local populations expected to persist regionally.
Cumulative impact post mitigation:	Low - Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential impact	Trampling and gardening degrade occupied patches; edge stress.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long – term
Consequence of impact or risk:	The loss or degradation of natural vegetation within garden edges and open space areas could reduce the availability of microhabitats for katydid populations. Increased foot traffic, mowing, and landscaping activities may lead to localized population collapse in small remnant patches due to the species' limited mobility and habitat specificity.
Probability of occurrence:	Medium – localized degradation of habitat patches is likely without management controls.

Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium – potential loss of individuals or small local populations, though broader populations remain viable in surrounding natural areas.
Degree to which the impact can be reversed:	Moderate – recolonization possible if vegetation structure and quality are restored in buffer and open space areas.
Indirect impacts:	Reduction in acoustic diversity and ecological balance within natural areas. Diminished invertebrate prey availability for small faunal species. Cumulative degradation of marginal habitats over time.
Cumulative impact prior to mitigation:	Contributes to the regional decline of habitat-dependent invertebrates
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Relocate the one planned dwelling and associated infrastructure outside a 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.
Residual impacts:	Low chronic edge effects remain.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION	
Potential impact and risk:	**Aquatic Biodiversity**
Potential Impact	Direct physical disturbance, habitat loss, and degradation of the Klein River Estuary estuarine functional zone (EFZ) associated with the operation of two jetties and two slipways.
Nature of impact:	**Negative**
Extent and duration of impact:	Local; short- medium term
Consequence of impact or risk:	The additional footprint of two jetties and two slipways increases the risk of further habitat degradation, erosion, sediment disturbance, and water quality impairment within a system that has limited capacity to absorb additional stress
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Irreplaceable
Degree to which the impact can be reversed:	Low – Medium

Indirect impacts:	Increased human access to the estuarine margin and open water may result in elevated recreational pressure, disturbance to waterbirds and estuarine fauna, increased litter and waste inputs, and a heightened risk of illegal harvesting of estuarine resources (fish, invertebrates). The slipways may facilitate increased motorised boat activity on the estuary, with cumulative noise, wave wash, and fuel contamination implications. Increased impervious surfaces and activity near the EFZ may alter localised stormwater runoff patterns, increasing sediment and nutrient loads entering the estuary.
Cumulative impact prior to mitigation:	High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	**Refer to Page 13 to 15 of the Aquatic Biodiversity Compliance Statement.**
Residual impacts:	Medium
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	N/A
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

ALTERNATIVE 2

All new infrastructure and development (except jetties), moved above the 5m contour, no faunal mitigations implemented, proposal includes 2 slipways and 2 jetties

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Socioeconomic impacts**
Potential Impact	Job creation during the development / construction phase
Nature of impact:	Positive
Extent and duration of impact:	Local; Short-term
Consequence of impact or risk:	Improved livelihoods for the local community
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	House provisions and job creation during construction phase
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High Positive
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour.
Residual impacts:	Improved livelihoods and skill transfer
Cumulative impact post mitigation:	Job creation and skill transfer to local community
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Visual impacts**
Potential Impact	Visual impacts of construction site and construction activities.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Partial loss of vegetation being replaced by concrete; as well as visibility of the construction activities.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	None
Cumulative impact prior to mitigation:	Visual impacts associated with construction.

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Good design approved by local authority. → Good housekeeping of construction site and working areas. → Screen the visual elements of site construction camp with netting. → Locate the site camp in a transformed area. Not on proposed Open Space. → Site officer to walk the site on a daily basis to check for general site aesthetics and visual impacts, particularly prior to weekends and holidays. → Officer to ensure that waste and batching areas are correctly screened and secured to prevent spread by wind, rain or animals.
Residual impacts:	Change of sense of place due to construction activities and construction workers.
Cumulative impact post mitigation:	Typical visual impacts associated with a construction site
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Low Negative**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Dust impacts**
Potential Impact	Dust generated from site clearing and site preparation.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Visual and health impacts Nuisance for residents adjacent to the site.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Potential for reduced visibility in general area. Potential for allergic reactions in people allergic to dust.
Cumulative impact prior to mitigation:	Dust may be generated as a result of earthmoving activities required for construction and development.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain ground cover for as long as possible to reduce the total surface area exposed to wind. Do not clear entire plots and rather clear building sites only .

	→ Ensure vehicle speed limits on site are kept to a minimum. → Delivery vehicles to keep loads covered. → Cover fine material stockpiles. → Wet dry and dusty surfaces using non-potable water. → Staff to wear correct PPE if dust is generated for long periods. Road surfaces to be swept and kept clean of sand and fine materials.
Residual impacts:	None
Cumulative impact post mitigation:	Dust generated during construction, mitigation successful.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very-Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Noise impacts**
Potential Impact	Noise generated by vehicles and machinery during construction phase.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Noise disturbance to transient receptors, i.e. motorists, pedestrians, residents.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Will not impact on resources
Degree to which the impact can be reversed:	High
Indirect impacts:	None
Cumulative impact prior to mitigation:	Noise from construction works
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Medium - High
Degree to which the impact can be managed:	Medium - High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Limit noise levels (e.g. install and maintain silencers on machinery) → Provide protective wear for workers i.e. ear plugs. → Ensure that construction vehicles and machinery are maintained regularly to reduce noise generation. → Restrict construction to normal work hours.
Residual impacts:	None
Cumulative impact post mitigation:	Typical noise impacts associated with a construction site.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	

Potential impact and risk:	Botanical/Ecological Impact
Potential Impact	Loss of terrestrial vegetation with low sensitivity above the 5 m contour and loss of riparian vegetation with medium sensitivity at the river i.e. below 5 m contour.
Nature of impact:	Clearing of natural vegetation
Extent and duration of impact:	The vegetation clearing would affect the undescribed shrubland vegetation within the footprint of the proposed residences and riparian zone at the location of the jetties and slipways.
Consequence of impact or risk:	Low impact on terrestrial vegetation and medium impact on riparian vegetation.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Medium Negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Moderate
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Avoidance of the estuarine functional zone to reduce ecological impacts. → Existing roads would be used to avoid unnecessary disturbances to the environment. → Only one jetty and one slipway would be constructed. → Clearing of alien invasive plant species.
Residual impacts:	Low Negative
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Faunal landscape connectivity**
Potential Impact	Corridor narrowing (±30% of 12 ha); fencing/driveways; lighting; alien ingress which is greater sensitivity than the preferred.
Nature of impact:	Negative, direct & indirect. – same mechanisms as Preferred, with slightly higher sensitivity where one dwelling sits closer to the estuary interface.
Extent and duration of impact:	Site-local; long-term; slightly higher risk at estuary edge.
Consequence of impact or risk:	Moderate consequence due to potential reduction in functional connectivity across the site and risk to species reliant on movement between terrestrial and wetland habitats.
Probability of occurrence:	High

Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium — loss is localised and does not remove the entire corridor function due to retention of ~70% of the property in a natural state.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased lighting and noise disturbance, potential predation by domestic pets, and spread of alien vegetation reducing habitat quality and permeability.
Cumulative impact prior to mitigation:	Adds to ongoing fragmentation pressure along the Klein River estuary corridor and Agulhas Limestone Fynbos ecosystem
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River estuary and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.
Residual impacts:	Edge effects persist but functional corridor retained if measures embedded.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Black Harrier**
Potential Impact	Habitat loss/fragmentation within potential territories; construction disturbance.
Nature of impact:	Negative;
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Reduction of available foraging ground within a landscape that supports a regionally important population; minor contribution to broader cumulative loss of lowland fynbos habitat.
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Loss of hunting/possible nesting areas in the footprint; construction activity and machinery increase flush/disturbance

	risk.
Cumulative impact prior to mitigation:	Medium – High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Displacement risk reduced but not eliminated; foraging persists in retained strips.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Medium (-)**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential Impact	Dwelling slightly closer to estuary increases sensitivity during works.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Potential temporary displacement of foraging individuals and reduced local habitat use during construction.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Disturbance to associated estuarine bird species; temporary reduction in foraging efficiency; possible increase in predation pressure or displacement from preferred sites.
Cumulative impact prior to mitigation:	Adds minor short-term disturbance to existing pressures along the Klein River estuary from human activity and nearby land uses
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium

Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Local residual disturbance remains
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Denham's bustard**
Potential Impact	Temporary disturbance near estuary still immaterial for bustard.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	The species is wide-ranging and unlikely to be resident; temporary displacement from foraging areas possible but insignificant to regional population.
Probability of occurrence:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief disturbance to foraging individuals; short-term reduction in local activity; potential short-lived avoidance of construction areas.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment.

	→ Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Neglible
Cumulative impact post mitigation:	Very- Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential Impact	Loss/ disturbance to small, patchy suitable area; construction noise.
Nature of impact:	Negative;
Extent and duration of impact:	Site- Local
Consequence of impact or risk:	Minor local habitat loss and temporary disturbance, but given the species' mobility and limited use of the site, long-term effects are minimal.
Probability of occurrence:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	The affected patches are not unique or critical to the regional population and represent marginal habitat.
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Temporary displacement from foraging areas, possible voidance of construction zone, and increased risk of disturbance from noise and human presence.
Cumulative impact prior to mitigation:	Adds slightly to the overall decline in available open habitat across the Overberg region but at a negligible scale.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medum
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Reduced local habitat availability; regional persistence unaffected
Cumulative impact post mitigation:	Low — no significant contribution to regional cumulative impacts on the species.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Great White Pelican**

Potential Impact	Construction disturbance; proximity change immaterial ecologically; Disturbance of foraging and roosting birds near reed margins and estuary edges.
Nature of impact:	Negative
Extent and duration of impact:	Site-Local; short-term
Consequence of impact or risk:	The species forages and roosts within the larger Klein River estuary and will not be dependent on, or significantly affected by, site-specific activities.
Probability of occurrence:	Low to Medium — individuals may occasionally overfly or rest nearby but are unlikely to be directly disturbed given their broad use of the estuary.
Degree to which the impact may cause irreplaceable loss of resources:	Very Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief flushing of individuals if present during noisy works; minimal and temporary reduction in local use of the estuary edge.
Cumulative impact prior to mitigation:	Low – adds negligibly to broader estuarine human activity impacts; no measurable contribution to population-level effects.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very- Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Martial Eagle**
Potential Impact	Short-term disturbance to overflying birds due to construction activity, noise, and increased human presence.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-term
Consequence of impact or risk:	Minor disturbance of flight paths and foraging patterns of transient individuals; negligible long-term effect given absence of nesting or core foraging habitat within the site.

Probability of occurrence:	Low – species occurs occasionally as a wide-ranging overflying raptor, with limited site-specific use.
Degree to which the impact may cause irreplaceable loss of resources:	Low – no critical breeding, roosting, or feeding resources are located within the development footprint.
Degree to which the impact can be reversed:	High – species will resume use of airspace once construction activity ceases.
Indirect impacts:	Minor, temporary displacement from immediate airspace; no measurable population-level effects.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very-Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Caspian Tern**
Potential Impact	Temporary disturbance during works; no breeding on site.
Nature of impact:	Negative
Extent and duration of impact:	Site; short-term
Consequence of impact or risk:	Minor disturbance to foraging or roosting individuals using the nearby estuarine margins. No loss of breeding habitat or long-term displacement expected
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporal avoidance of the estuary edge immediately adjacent to the site due to construction-related noise and activity.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	- Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses.

	- Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. - Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. - Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). - Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential Impact	Construction disturbance; occasional roadkill risk during clearing/earthworks
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-medium term
Consequence of impact or risk:	Construction activities may disturb individual toads sheltering in vegetation or soil cavities and increase the likelihood of mortality from machinery and vehicle movement. As the species does not breed on site, the impact is limited to temporary displacement or loss of individuals rather than population-level effects.
Probability of occurrence:	Likely - the species may occur sporadically within the site, especially following rainfall or during nocturnal movements.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – once construction activities cease and vegetation recovers, the site can again support occasional movement or foraging by the species.
Indirect impacts:	Potential temporary avoidance of the area by amphibians due to vibration, noise, and compaction of soils; increased risk of mortality from vehicle movement on newly constructed access roads.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site. → Fit escape ramps or “toad savers” in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.

Residual impacts:	Low – with mitigation, the impact will be temporary and reversible, and individuals are expected to reoccupy the area post-construction
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Adder**
Potential Impact	Direct loss of refugia during clearing; persecution risk; roadkill during works.
Nature of impact:	Negative
Extent and duration of impact:	Site -local; long-term
Consequence of impact or risk:	Loss of individual snakes; potential local population disturbance; minor contribution to cumulative population decline in the broader area.
Probability of occurrence:	Likely - snakes are likely present in vegetated and undisturbed patches, especially during warmer months.
Degree to which the impact may cause irreplaceable loss of resources:	Low – individual snakes may be lost, but local population is likely resilient if habitat patches are retained.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased predation risk on local fauna due to displacement; potential ecosystem imbalances if snake populations decline in isolated patches.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low -Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Localized disturbance; a small number of individuals may still be lost
Cumulative impact post mitigation:	Low Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential Impact	Direct loss of occupied microhabitats; local collapse risk due to low mobility.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	Loss of individuals and microhabitats may lead to local population decline; could disrupt local invertebrate community structure.
Probability of occurrence:	Definite ; species is present in dense vegetation patches and leaf litter.
Degree to which the impact may cause irreplaceable loss of resources:	Medium - while individuals are lost, the species is likely to persist in adjacent undisturbed habitats.
Degree to which the impact can be reversed:	Moderate – habitat may regenerate, allowing recolonization over time, but recovery is slow due to low mobility.
Indirect impacts:	Reduced prey availability for local insectivorous birds and small reptiles; potential minor alteration of local litter decomposition dynamics.
Cumulative impact prior to mitigation:	High – combined with other small-scale habitat disturbances, could lead to local declines in sensitive invertebrate populations.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Relocate the one planned dwelling and associated infrastructure outside a 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.
Residual impacts:	Localized population loss; some microhabitats permanently altered but overall local population expected to persist.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Aquatic biodiversity**
Potential Impact	Direct physical disturbance, habitat loss, and degradation of the Klein River Estuary estuarine functional zone (EFZ) associated with the construction and operation of one jetty and one slipway.
Nature of impact:	Negative

Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Medium
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	The slipway may facilitate increased motorised boat activity on the estuary, with associated noise, wave wash, and fuel contamination implications. Increased activity near the EFZ margin may alter localised stormwater runoff patterns, increasing sediment and nutrient loads entering the estuary.
Cumulative impact prior to mitigation:	Medium – High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	**Refer to Page 13 to 15 of the Aquatic Biodiversity Compliance Statement.**
Residual impacts:	Low Medium
Cumulative impact post mitigation:	Low Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium

POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Socio-economic impacts**
Potential impact	Access to permanent employment for the community individuals through housekeeping and gardening.
Nature of impact:	Positive
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Improved livelihoods
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	Access to employment for the community during the operational phase; Job creation;
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour

Residual impacts:	Improved livelihoods
Cumulative impact post mitigation:	Improved livelihoods
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Botanical/Ecological Impacts**
Potential impact	→ Clearing of terrestrial vegetation beyond the limit of the footprints of the residences to limit danger of wildfires. → Slow and imperceptible loss of natural habitat due presence of residents. → Loss of natural vegetation → Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive (*Olea europaea subsp. cuspidata*) → High – The impact within the sensitive riparian zone would be limited.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Loss of natural vegetation
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Low Negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Moderate
Degree to which the impact can be mitigated:	High – The impact within the sensitive riparian zone would be limited.
Proposed mitigation:	Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive *(Olea europaea subsp. cuspidata)*
Residual impacts:	Low Negative
Cumulative impact post mitigation:	Low Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Faunal landscape connectivity**

Potential impact	Estuary-edge lighting/traffic marginally increases nightly barrier effect, potentially disrupting movement of nocturnal fauna such as amphibians, small mammals, and invertebrates.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Reduced movement and dispersal of fauna; potential localized population fragmentation; may limit access to breeding, foraging, or refuge sites for sensitive species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Low
Indirect impacts:	Potential increase in roadkill incidents; minor alterations to local predator-prey interactions; some species may shift activity patterns, affecting ecological processes.
Cumulative impact prior to mitigation:	Medium – combined with habitat fragmentation and other developments, there may be small cumulative effects on local faunal connectivity.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River estuary and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.
Residual impacts:	Low residual illumination pressure at water edge; managed.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Black Harrier**
Potential impact	Slightly higher night lighting effect near water edge without controls.
Nature of impact:	Negative
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Estuary facing lighting marginally increases night-time avoidance.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low – effects are behavioural and reversible; populations unlikely to be directly affected.
Degree to which the impact can be reversed:	High – if lighting is managed, the species can resume normal use of the area.

Indirect impacts:	Temporary displacement may slightly increase predation pressure on other prey species elsewhere; minor alteration of local hunting patterns.
Cumulative impact prior to mitigation:	Low to Medium – minor additive effect if combined with other developments along estuary edges.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements →
Residual impacts:	Minor behavioural avoidance of lit areas; no measurable impact on population viability expected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential impact	Night lighting near estuary marginally increases disturbance pulses
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Increased illumination near estuary edges may cause temporary avoidance or startle responses during nocturnal roosting
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance may alter local activity patterns but is unlikely to lead to loss of breeding or feeding habitat.
Degree to which the impact can be reversed:	High – reducing lighting or implementing shielding can rapidly reverse behavioural effects.
Indirect impacts:	Minor shifts in prey distribution; temporary displacement of harriers to darker zones; potential increased competition in adjacent habitats.
Cumulative impact prior to mitigation:	Additive with other lighting sources along the estuary, leading to gradual reduction in undisturbed foraging zones

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Minimal behavioural disturbance; local birds may continue to avoid small lit patches
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Denham's bustard**
Potential impact	Human presence negligible effect due to habitat mismatch.
Nature of impact:	Negative
Extent and duration of impact:	Local site; long-term
Consequence of impact or risk:	The site's altered land cover and residential use reduce habitat suitability for Denham's Bustard, a species that prefers extensive open grasslands and agricultural fields. Occasional overflight or transient individuals may avoid the immediate area due to human activity and structures.
Probability of occurrence:	Probable; the species may occasionally traverse the area but is unlikely to utilize it regularly for foraging or breeding.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Partially reversable
Indirect impacts:	None expected beyond localized avoidance; negligible influence on regional population dynamics or habitat function.
Cumulative impact prior to mitigation:	Low – surrounding landscapes retain more suitable open habitat; the development contributes minimally to regional habitat loss.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High

Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible; the species may continue to avoid the developed site, but no population-level impacts are expected.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential impact	Edge disturbance (people/pets) reduces use of marginal habitat
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	The proximity of human activity, domestic pets, and increased noise or movement near natural edges may deter Southern Black Korhaan from using adjacent open habitat for foraging or breeding.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance results mainly in displacement rather than permanent habitat loss; suitable habitat persists beyond the site
Degree to which the impact can be reversed:	Moderate to High – behavioural avoidance may lessen over time if disturbance is minimized and buffer vegetation is maintained.
Indirect impacts:	Potential increase in predation risk if birds are displaced to more exposed or disturbed areas; Disturbance may reduce breeding success in nearby territories; Possible secondary effects on other ground-nesting bird species
Cumulative impact prior to mitigation:	Combined with similar developments, disturbance could contribute to gradual contraction of habitat use in peri-urban areas.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones

Residual impacts:	Minor behavioural avoidance near edges may persist, but the broader local population will remain unaffected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Great White Pelican**
Potential impact	Low-level displacement possible but minor.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	The development may result in minor, localized avoidance by Great White Pelicans of nearby areas due to human activity, noise, or lighting, particularly during roosting or flight over the estuary.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Minimal; temporary shifts in local flight paths or loafing sites may occur but with no broader ecological consequence.
Cumulative impact prior to mitigation:	Low – cumulative effects across the region are minor given the species' adaptability and extensive foraging range.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible; the species will continue to utilize the broader estuary system with minimal behavioural adjustments.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)

POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Martial Eagle**
Potential impact	Minimal chronic effect with residents.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Occasional overflight or peripheral foraging by Martial Eagles may decline slightly due to increased human presence and movement.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – behavioural avoidance is reversible; the species may resume use if disturbance decreases over time.
Indirect impacts:	Possible minor avoidance of localized areas with high human activity; Slight shift in local hunting patterns toward quieter open habitats
Cumulative impact prior to mitigation:	Localized effects from this and other developments contribute minimally to regional Martial Eagle population pressures, which are primarily driven by large-scale land use changes and powerline electrocution.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible; the species may exhibit mild avoidance of the immediate development footprint, but no significant effect on population dynamics or habitat integrity is anticipated.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Caspian Tern**
Potential impact	Low-level disturbance; maintain buffer to estuary.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long -term
Consequence of impact or risk:	Minor displacement of individuals occasionally foraging or roosting near the estuary mouth could occur due to increased human presence and recreational activity.

Probability of occurrence:	Possible
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporary avoidance of the adjacent estuarine fringe during periods of high recreational use. Potential minor shifts in roosting patterns within the broader estuary system.
Cumulative impact prior to mitigation:	Development contributes slightly to overall estuarine disturbance pressures but does not affect critical habitat or breeding colonies.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of watercourse-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible – disturbance effects will be minimal if the buffer is maintained and access controls are implemented.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential impact	Edge effects (lighting, pets, pesticides) on terrestrial movement.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long term
Consequence of impact or risk:	Artificial lighting, domestic pets, and pesticide use may interfere with the movement and nocturnal activity of the Western Leopard Toad, particularly during breeding migrations or foraging. This could result in localized mortality or avoidance of the site's margins, although no core breeding habitat occurs within the development footprint.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low

Degree to which the impact can be reversed:	High – reduced lighting and pet control can restore suitable edge conditions over time.
Indirect impacts:	Possible reduction in amphibian abundance in gardens and open spaces due to pesticide use; Increased risk of predation by domestic animals; Minor disruption to nocturnal movement corridors.
Cumulative impact prior to mitigation:	Medium – incremental contribution to regional habitat fragmentation
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium – High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site. → Fit escape ramps or "toad savers" in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Minor, limited to isolated toad movement across developed areas; no population-level effects anticipated.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Adder**
Potential impact	Ongoing persecution and roadkill near dwellings; edge effects on refugia.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long term
Consequence of impact or risk:	Increased human activity and vehicular movement along access routes elevate the risk of direct mortality through roadkill or persecution of snakes perceived as dangerous. Subtle habitat alteration (e.g., reduced refugia, compacted soils, and garden management) may lower local occupancy in suitable edge habitats.
Probability of occurrence:	Likely; occasional encounters expected where remnant natural or open space areas occur adjacent to development.
Degree to which the impact may cause irreplaceable loss of resources:	Low – Medium
Degree to which the impact can be reversed:	Moderate – population recovery and recolonisation possible if human-snake conflict is reduced and habitat edges rehabilitated.
Indirect impacts:	Loss of ecological function (predator role in small mammal control); Displacement of individuals into suboptimal areas due to disturbance; Reduction of local biodiversity resilience along the urban edge.
Cumulative impact prior to mitigation:	Medium – adds incrementally to regional pressures from urban expansion, road networks, and human intolerance of snakes.

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Occasional snake mortality may still occur but at low frequency; local populations expected to persist regionally.
Cumulative impact post mitigation:	Low - Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential impact	Trampling and gardening degrade occupied patches; edge stress.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long – term
Consequence of impact or risk:	The loss or degradation of natural vegetation within garden edges and open space areas could reduce the availability of microhabitats for katydid populations. Increased foot traffic, mowing, and landscaping activities may lead to localized population collapse in small remnant patches due to the species' limited mobility and habitat specificity.
Probability of occurrence:	Medium – localized degradation of habitat patches is likely without management controls.
Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium – potential loss of individuals or small local populations, though broader populations remain viable in surrounding natural areas.
Degree to which the impact can be reversed:	Moderate – recolonization possible if vegetation structure and quality are restored in buffer and open space areas.
Indirect impacts:	Reduction in acoustic diversity and ecological balance within natural areas. Diminished invertebrate prey availability for small faunal species. Cumulative degradation of marginal habitats over time.
Cumulative impact prior to mitigation:	Contributes to the regional decline of habitat-dependent invertebrates

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Relocate the one planned dwelling and associated infrastructure outside a 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.
Residual impacts:	Low chronic edge effects remain.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-COSTRUCTION	
Potential impact and risk:	**Aquatic biodiversity**
Potential Impact	Direct physical disturbance, habitat loss, and degradation of the Klein River Estuary estuarine functional zone (EFZ) associated with the construction and operation of one jetty and one slipway.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Medium
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	The slipway may facilitate increased motorised boat activity on the estuary, with associated noise, wave wash, and fuel contamination implications. Increased activity near the EFZ margin may alter localised stormwater runoff patterns, increasing sediment and nutrient loads entering the estuary.
Cumulative impact prior to mitigation:	Medium – High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	**Refer to Page 13 to 15 of the Aquatic Biodiversity Compliance Statement.**
Residual impacts:	Low Medium
Cumulative impact post mitigation:	Low Medium

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	N/A
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

ALTERNATIVE 3

- Infrastructure and buildings above the 5m contour
- Only 1 jetty and slipway included
- Site plan amended to include the Faunal No-Go area

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Socioeconomic impacts**
Potential Impact	Job creation during the development / construction phase
Nature of impact:	Positive
Extent and duration of impact:	Local; Short-term
Consequence of impact or risk:	Improved livelihoods for the local community
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	House provisions and job creation during construction phase
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High Positive
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour.
Residual impacts:	Improved livelihoods and skill transfer
Cumulative impact post mitigation:	Job creation and skill transfer to local community
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Visual impacts**
Potential Impact	Visual impacts of construction site and construction activities.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Partial loss of vegetation being replaced by concrete; as well as visibility of the construction activities.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	None

Cumulative impact prior to mitigation:	Visual impacts associated with construction.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Good design approved by local authority. → Good housekeeping of construction site and working areas. → Screen the visual elements of site construction camp with netting. → Locate the site camp in a transformed area. Not on proposed Open Space. → Site officer to walk the site on a daily basis to check for general site aesthetics and visual impacts, particularly prior to weekends and holidays. → Officer to ensure that waste and batching areas are correctly screened and secured to prevent spread by wind, rain or animals.
Residual impacts:	Change of sense of place due to construction activities and construction workers.
Cumulative impact post mitigation:	Typical visual impacts associated with a construction site
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Low Negative**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Dust impacts**
Potential Impact	Dust generated from site clearing and site preparation.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Visual and health impacts Nuisance for residents adjacent to the site.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Potential for reduced visibility in general area.
Cumulative impact prior to mitigation:	Dust may be generated as a result of earthmoving activities required for construction and development.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain ground cover for as long as possible to reduce the total surface area exposed to wind. Do not clear entire plots and rather clear building sites only.

	→ Ensure vehicle speed limits on site are kept to a minimum. → Delivery vehicles to keep loads covered. → Cover fine material stockpiles. → Wet dry and dusty surfaces using non-potable water. → Staff to wear correct PPE if dust is generated for long periods. Road surfaces to be swept and kept clean of sand and fine materials.
Residual impacts:	None
Cumulative impact post mitigation:	Dust generated during construction, mitigation successful.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very-Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Noise impacts**
Potential Impact	Noise generated by vehicles and machinery during construction phase.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Noise disturbance to transient receptors, i.e. motorists, pedestrians, residents.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Will not impact on resources
Degree to which the impact can be reversed:	High
Indirect impacts:	None
Cumulative impact prior to mitigation:	Noise from construction works
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Medium - High
Degree to which the impact can be managed:	Medium - High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Limit noise levels (e.g. install and maintain silencers on machinery) → Provide protective wear for workers i.e. ear plugs. → Ensure that construction vehicles and machinery are maintained regularly to reduce noise generation. → Restrict construction to normal work hours.
Residual impacts:	None
Cumulative impact post mitigation:	Typical noise impacts associated with a construction site.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	

Potential impact and risk:	Botanical/Ecological Impact
Potential Impact	Loss of terrestrial vegetation with low sensitivity above the 5 m contour and loss of riparian vegetation with medium sensitivity at the river i.e. below 5 m contour.
Nature of impact:	Clearing of natural vegetation
Extent and duration of impact:	The vegetation clearing would affect the undescribed shrubland vegetation within the footprint of the proposed residences and riparian zone at the location of the jetties and slipways.
Consequence of impact or risk:	Low impact on terrestrial vegetation and medium impact on riparian vegetation.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Medium Negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Moderate
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Avoidance of the riparian zone to reduce ecological impacts. • Existing roads would be used to avoid unnecessary disturbances to the environment. • Only one jetty and one slipway would be constructed. Clearing of alien invasive plant species.
Residual impacts:	Low Negative
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Faunal landscape connectivity**
Potential Impact	Corridor narrowing (±30% of 12 ha); fencing/driveways; lighting; alien ingress which is greater sensitivity than the preferred.
Nature of impact:	Negative, direct & indirect. Negative, direct & indirect. – building pads, driveways, fences and lighting physically narrow or break movement strips; disturbance increases avoidance of humanised edges.
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Moderate consequence due to potential reduction in functional connectivity across the site and risk to species reliant on movement between terrestrial and wetland habitats.

Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium — loss is localised and does not remove the entire corridor function due to retention of ~70% of the property in a natural state.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased lighting and noise disturbance, potential predation by domestic pets, and spread of alien vegetation reducing habitat quality and permeability.
Cumulative impact prior to mitigation:	Adds to ongoing fragmentation pressure along the Klein River corridor and Agulhas Limestone Fynbos ecosystem
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.
Residual impacts:	Edge effects persist but functional corridor retained if measures embedded.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Black Harrier**
Potential Impact	Habitat loss/fragmentation within potential territories; construction disturbance.
Nature of impact:	Negative.
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Reduction of available foraging ground within a landscape that supports a regionally important population; minor contribution to broader cumulative loss of lowland fynbos habitat.
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	High

Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Loss of hunting/possible nesting areas in the footprint; construction activity and machinery increase flush/disturbance risk.
Cumulative impact prior to mitigation:	Medium – High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of river-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Displacement risk reduced but not eliminated; foraging persists in retained strips.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Medium (-)**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential Impact	Dwelling slightly closer to estuary increases sensitivity during works.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Potential temporary displacement of foraging individuals and reduced local habitat use during construction.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Disturbance to associated estuarine bird species; temporary reduction in foraging efficiency; possible increase in predation pressure or displacement from preferred sites.
Cumulative impact prior to mitigation:	Adds minor short-term disturbance to existing pressures along the Klein River from human activity and nearby land uses
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium

Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Reduce proposed jetties from two to a single jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Local residual disturbance remains
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Denham's bustard**
Potential Impact	Temporary disturbance near estuary still immaterial for bustard.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	The species is wide-ranging and unlikely to be resident; temporary displacement from foraging areas possible but insignificant to regional population.
Probability of occurrence:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief disturbance to foraging individuals; short-term reduction in local activity; potential short-lived avoidance of construction areas.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment.

	→ Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very- Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential Impact	Loss/ disturbance to small, patchy suitable area; construction noise.
Nature of impact:	Negative;
Extent and duration of impact:	Site- Local
Consequence of impact or risk:	Minor local habitat loss and temporary disturbance but given the species' mobility and limited use of the site, long-term effects are minimal.
Probability of occurrence:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	The affected patches are not unique or critical to the regional population and represent marginal habitat.
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Temporary displacement from foraging areas, possible avoidance of construction zone, and increased risk of disturbance from noise and human presence.
Cumulative impact prior to mitigation:	Adds slightly to the overall decline in available open habitat across the Overberg region but at a negligible scale.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medum
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Reduced local habitat availability; regional persistence unaffected
Cumulative impact post mitigation:	Low — no significant contribution to regional cumulative impacts on the species.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-) / Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Great White Pelican**

Potential Impact	Construction disturbance: proximity change immaterial ecologically; Disturbance of foraging and roosting birds near reed margins and river edges.
Nature of impact:	Negative
Extent and duration of impact:	Site-Local; short-term
Consequence of impact or risk:	The species forages and roosts within the larger Klein River and will not be dependent on, or significantly affected by, site-specific activities.
Probability of occurrence:	Low to Medium — individuals may occasionally overfly or rest nearby but are unlikely to be directly disturbed given their broad use of the river.
Degree to which the impact may cause irreplaceable loss of resources:	Very Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief flushing of individuals if present during noisy works; minimal and temporary reduction in local use of the estuary edge.
Cumulative impact prior to mitigation:	Low – adds negligibly to broader watercourse human activity impacts; no measurable contribution to population-level effects.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the watercourse to prevent disorientation or displacement of river-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of watercourse edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very- Low (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Martial Eagle**
Potential Impact	Short-term disturbance to overflying birds due to construction activity, noise, and increased human presence.

Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-term
Consequence of impact or risk:	Minor disturbance of flight paths and foraging patterns of transient individuals; negligible long-term effect given absence of nesting or core foraging habitat within the site.
Probability of occurrence:	Low – species occurs occasionally as a wide-ranging overflying raptor, with limited site-specific use.
Degree to which the impact may cause irreplaceable loss of resources:	Low – no critical breeding, roosting, or feeding resources are located within the development footprint.
Degree to which the impact can be reversed:	High – species will resume use of airspace once construction activity ceases.
Indirect impacts:	Minor, temporary displacement from immediate airspace; no measurable population-level effects.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Caspian Tern**
Potential Impact	Temporary disturbance during works; no breeding on site.
Nature of impact:	Negative
Extent and duration of impact:	Site; short-term
Consequence of impact or risk:	Minor disturbance to foraging or roosting individuals using the nearby river margins. No loss of breeding habitat or long-term displacement expected
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporal avoidance of the estuary edge immediately adjacent to the site due to construction-related noise and activity.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High

Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	- Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. - Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. - Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. - Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). - Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential Impact	Construction disturbance; occasional roadkill risk during clearing/earthworks
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-medium term
Consequence of impact or risk:	Construction activities may disturb individual toads sheltering in vegetation or soil cavities and increase the likelihood of mortality from machinery and vehicle movement. As the species does not breed on site, the impact is limited to temporary displacement or loss of individuals rather than population-level effects.
Probability of occurrence:	Likely - the species may occur sporadically within the site, especially following rainfall or during nocturnal movements.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – once construction activities cease and vegetation recovers, the site can again support occasional movement or foraging by the species.
Indirect impacts:	Potential temporary avoidance of the area by amphibians due to vibration, noise, and compaction of soils; increased risk of mortality from vehicle movement on newly constructed access roads.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage.

	→ Prohibit pesticides and herbicides on site. → Fit escape ramps or "toad savers" in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Low – with mitigation, the impact will be temporary and reversible, and individuals are expected to reoccupy the area post-construction
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Adder**
Potential Impact	Direct loss of refugia during clearing; persecution risk; roadkill during works.
Nature of impact:	Negative
Extent and duration of impact:	Site -local; long-term
Consequence of impact or risk:	Loss of individual snakes; potential local population disturbance; minor contribution to cumulative population declines in the broader area.
Probability of occurrence:	Likely - snakes are likely present in vegetated and undisturbed patches, especially during warmer months.
Degree to which the impact may cause irreplaceable loss of resources:	Low – individual snakes may be lost, but local population is likely resilient if habitat patches are retained.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased predation risk on local fauna due to displacement; potential ecosystem imbalances if snake populations decline in isolated patches.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low -Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Localized disturbance: a small number of individuals may still be lost

Cumulative impact post mitigation:	Low Medium	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)	Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE		
Potential impact and risk:	**Mute Winter Katydid**	
Potential Impact	Direct loss of occupied microhabitats; local collapse risk due to low mobility.	
Nature of impact:	Negative	
Extent and duration of impact:	Site – local; long-term	
Consequence of impact or risk:	Loss of individuals and microhabitats may lead to local population decline; could disrupt local invertebrate community structure.	
Probability of occurrence:	Definite; species is present in dense vegetation patches and leaf litter.	
Degree to which the impact may cause irreplaceable loss of resources:	Medium - while individuals are lost, the species is likely to persist in adjacent undisturbed habitats.	
Degree to which the impact can be reversed:	Moderate – habitat may regenerate, allowing recolonization over time, but recovery is slow due to low mobility.	
Indirect impacts:	Reduced prey availability for local insectivorous birds and small reptiles; potential minor alteration of local litter decomposition dynamics.	
Cumulative impact prior to mitigation:	High – combined with other small-scale habitat disturbances, could lead to local declines in sensitive invertebrate populations.	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High	
Degree to which the impact can be avoided:	Low	
Degree to which the impact can be managed:	Low	
Degree to which the impact can be mitigated:	Low – Medium	
Proposed mitigation:	→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.	
Residual impacts:	Localized population loss; some microhabitats permanently altered but overall local population expected to persist.	
Cumulative impact post mitigation:	Medium	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)	Medium (-)
POST-CONSTRUCTION PHASE		
Potential impact and risk:	**Socio-economic impacts**	

Potential impact	Access to permanent employment for the community individuals through housekeeping and gardening.
Nature of impact:	Positive
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Improved livelihoods
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	Access to employment for the community during the operational phase; Job creation;
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour
Residual impacts:	Improved livelihoods
Cumulative impact post mitigation:	Improved livelihoods
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Botanical/Ecological Impacts**
Potential impact	→ Clearing of terrestrial vegetation beyond the limit of the footprints of the residences to limit danger of wildfires. → Slow and imperceptible loss of natural habitat due presence of residents. → Loss of natural vegetation → Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive (*Olea europaea subsp. cuspidata*) → High – The impact within the sensitive riparian zone would be limited.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Loss of natural vegetation
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Low Negative

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Moderate
Degree to which the impact can be mitigated:	High – The impact within the sensitive riparian zone would be limited.
Proposed mitigation:	Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive *(Olea europaea subsp. cuspidata)*
Residual impacts:	Low Negative
Cumulative impact post mitigation:	Low Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Faunal landscape connectivity**
Potential impact	Estuary-edge lighting/traffic marginally increases nightly barrier effect, potentially disrupting movement of nocturnal fauna such as amphibians, small mammals, and invertebrates.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Reduced movement and dispersal of fauna; potential localized population fragmentation; may limit access to breeding, foraging, or refuge sites for sensitive species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Low
Indirect impacts:	Potential increase in roadkill incidents; minor alterations to local predator-prey interactions; some species may shift activity patterns, affecting ecological processes.
Cumulative impact prior to mitigation:	Medium – combined with habitat fragmentation and other developments, there may be small cumulative effects on local faunal connectivity.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna.

	→ Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality. General Site-wide mitigation → Restrict built infrastructure to ~30% of the 12 ha property. → Cap development at three dwellings, as assessed in this application. → Adopt dark-sky compliant lighting (low-spectrum, full cut-off fittings, shield estuary-facing lights) to reduce disturbance to nocturnal fauna and birds. → Enforce pet curfews at night and discourage free-ranging cats and dogs to limit predation and disturbance to birds, reptiles and amphibians. → Implement a formal alien clearing and follow-up programme across retained natural areas to prevent decline in functional integrity. → Stewardship or conservation status: Consider assigning all retained natural habitat (~70% of site) to a formal conservation status, such as a biodiversity stewardship agreement, to ensure long-term ecological management.
Residual impacts:	Low residual illumination pressure at water edge; managed.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Black Harrier**
Potential impact	Slightly higher night lighting effect near water edge without controls.
Nature of impact:	Negative
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Estuary facing lighting marginally increases night-time avoidance.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low – effects are behavioural and reversible; populations unlikely to be directly affected.
Degree to which the impact can be reversed:	High – if lighting is managed, the species can resume normal use of the area.
Indirect impacts:	Temporary displacement may slightly increase predation pressure on other prey species elsewhere; minor alteration of local hunting patterns.
Cumulative impact prior to mitigation:	Low to Medium – minor additive effect if combined with other developments along river edges.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High

Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of river-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements
Residual impacts:	Minor behavioural avoidance of lit areas; no measurable impact on population viability expected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential impact	Night lighting near river marginally increases disturbance pulses
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Increased illumination near estuary edges may cause temporary avoidance or startle responses during nocturnal roosting
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance may alter local activity patterns but is unlikely to lead to loss of breeding or feeding habitat.
Degree to which the impact can be reversed:	High – reducing lighting or implementing shielding can rapidly reverse behavioural effects.
Indirect impacts:	Minor shifts in prey distribution; temporary displacement of harriers to darker zones; potential increased competition in adjacent habitats.
Cumulative impact prior to mitigation:	Additive with other lighting sources along the estuary, leading to gradual reduction in undisturbed foraging zones
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of river-dependent species.

	→ Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Minimal behavioural disturbance: local birds may continue to avoid small lit patches
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Denham's bustard**
Potential impact	Human presence negligible effect due to habitat mismatch.
Nature of impact:	Negative
Extent and duration of impact:	Local site; long-term
Consequence of impact or risk:	The site's altered land cover and residential use reduce habitat suitability for Denham's Bustard, a species that prefers extensive open grasslands and agricultural fields. Occasional overflight or transient individuals may avoid the immediate area due to human activity and structures.
Probability of occurrence:	Probable: the species may occasionally traverse the area but is unlikely to utilize it regularly for foraging or breeding.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Partially reversable
Indirect impacts:	None expected beyond localized avoidance; negligible influence on regional population dynamics or habitat function.
Cumulative impact prior to mitigation:	Low – surrounding landscapes retain more suitable open habitat; the development contributes minimally to regional habitat loss.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible; the species may continue to avoid the developed site, but no population-level impacts are expected.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)

POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential impact	Edge disturbance (people/pets) reduces use of marginal habitat
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	The proximity of human activity, domestic pets, and increased noise or movement near natural edges may deter Southern Black Korhaan from using adjacent open habitat for foraging or breeding.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance results mainly in displacement rather than permanent habitat loss; suitable habitat persists beyond the site
Degree to which the impact can be reversed:	Moderate to High – behavioural avoidance may lessen over time if disturbance is minimized and buffer vegetation is maintained.
Indirect impacts:	Potential increase in predation risk if birds are displaced to more exposed or disturbed areas; Disturbance may reduce breeding success in nearby territories; Possible secondary effects on other ground-nesting bird species
Cumulative impact prior to mitigation:	Combined with similar developments, disturbance could contribute to gradual contraction of habitat use in peri-urban areas.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Minor behavioural avoidance near edges may persist, but the broader local population will remain unaffected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Great White Pelican**
Potential impact	Low-level displacement possible but minor.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	The development may result in minor, localized avoidance by Great White Pelicans of nearby areas due to human activity,

	noise, or lighting, particularly during roosting or flight over the estuary.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Minimal; temporary shifts in local flight paths or loafing sites may occur but with no broader ecological consequence.
Cumulative impact prior to mitigation:	Low – cumulative effects across the region are minor given the species' adaptability and extensive foraging range.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible; the species will continue to utilize the broader estuary system with minimal behavioural adjustments.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Martial Eagle**
Potential impact	Minimal chronic effect with residents.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Occasional overflight or peripheral foraging by Martial Eagles may decline slightly due to increased human presence and movement.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – behavioural avoidance is reversible; the species may resume use if disturbance decreases over time.
Indirect impacts:	Possible minor avoidance of localized areas with high human activity; Slight shift in local hunting patterns toward quieter open habitats

Cumulative impact prior to mitigation:	Localized effects from this and other developments contribute minimally to regional Martial Eagle population pressures, which are primarily driven by large-scale land use changes and powerline electrocution.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible; the species may exhibit mild avoidance of the immediate development footprint, but no significant effect on population dynamics or habitat integrity is anticipated.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very - Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Caspian Tern**
Potential impact	Low-level disturbance; maintain buffer to estuary.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long -term
Consequence of impact or risk:	Minor displacement of individuals occasionally foraging or roosting near the estuary mouth could occur due to increased human presence and recreational activity.
Probability of occurrence:	Possible
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporary avoidance of the adjacent river fringe during periods of high recreational use. Potential minor shifts in roosting patterns within the broader watercourse system.
Cumulative impact prior to mitigation:	Development contributes slightly to overall estuarine disturbance pressures but does not affect critical habitat or breeding colonies.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High

Proposed mitigation:	→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses. → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible – disturbance effects will be minimal if the buffer is maintained and access controls are implemented.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential impact	Edge effects (lighting, pets, pesticides) on terrestrial movement.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long term
Consequence of impact or risk:	Artificial lighting, domestic pets, and pesticide use may interfere with the movement and nocturnal activity of the Western Leopard Toad, particularly during breeding migrations or foraging. This could result in localized mortality or avoidance of the site's margins, although no core breeding habitat occurs within the development footprint.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – reduced lighting and pet control can restore suitable edge conditions over time.
Indirect impacts:	Possible reduction in amphibian abundance in gardens and open spaces due to pesticide use; Increased risk of predation by domestic animals; Minor disruption to nocturnal movement corridors.
Cumulative impact prior to mitigation:	Medium – incremental contribution to regional habitat fragmentation
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium – High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site.

	→ Fit escape ramps or "toad savers" in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Minor, limited to isolated toad movement across developed areas; no population-level effects anticipated.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Adder**
Potential impact	Ongoing persecution and roadkill near dwellings; edge effects on refugia.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long term
Consequence of impact or risk:	Increased human activity and vehicular movement along access routes elevate the risk of direct mortality through roadkill or persecution of snakes perceived as dangerous. Subtle habitat alteration (e.g., reduced refugia, compacted soils, and garden management) may lower local occupancy in suitable edge habitats.
Probability of occurrence:	Likely; occasional encounters expected where remnant natural or open space areas occur adjacent to development.
Degree to which the impact may cause irreplaceable loss of resources:	Low – Medium
Degree to which the impact can be reversed:	Moderate – population recovery and recolonisation possible if human-snake conflict is reduced and habitat edges rehabilitated.
Indirect impacts:	Loss of ecological function (predator role in small mammal control); Displacement of individuals into suboptimal areas due to disturbance; Reduction of local biodiversity resilience along the urban edge.
Cumulative impact prior to mitigation:	Medium – adds incrementally to regional pressures from urban expansion, road networks, and human intolerance of snakes.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk.

	→ Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Occasional snake mortality may still occur but at low frequency; local populations expected to persist regionally.
Cumulative impact post mitigation:	Low - Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential impact	Trampling and gardening degrade occupied patches; edge stress.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long – term
Consequence of impact or risk:	The loss or degradation of natural vegetation within garden edges and open space areas could reduce the availability of microhabitats for katydid populations. Increased foot traffic, mowing, and landscaping activities may lead to localized population collapse in small remnant patches due to the species' limited mobility and habitat specificity.
Probability of occurrence:	Medium – localized degradation of habitat patches is likely without management controls.
Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium – potential loss of individuals or small local populations, though broader populations remain viable in surrounding natural areas.
Degree to which the impact can be reversed:	Moderate – recolonization possible if vegetation structure and quality are restored in buffer and open space areas.
Indirect impacts:	Reduction in acoustic diversity and ecological balance within natural areas. Diminished invertebrate prey availability for small faunal species. Cumulative degradation of marginal habitats over time.
Cumulative impact prior to mitigation:	Contributes to the regional decline of habitat-dependent invertebrates
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.

Residual impacts:	Low chronic edge effects remain.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	N/A
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

ALTERNATIVE 4 (PREFERRED)

→ Informed by the Aquatic Biodiversity Specialist findings
→ Retains one jetty
→ Completely removes slipway by replacing it with the pathway to provide estuarine access.

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Socioeconomic impacts**
Potential Impact	Job creation during the development / construction phase
Nature of impact:	Positive

Extent and duration of impact:	Local; Short-term
Consequence of impact or risk:	Improved livelihoods for the local community
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	House provisions and job creation during construction phase
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High Positive
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour.
Residual impacts:	Improved livelihoods and skill transfer
Cumulative impact post mitigation:	Job creation and skill transfer to local community
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Visual impacts**
Potential Impact	Visual impacts of construction site and construction activities.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Partial loss of vegetation being replaced by concrete; as well as visibility of the construction activities.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	None
Cumulative impact prior to mitigation:	Visual impacts associated with construction.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Good design approved by local authority. → Good housekeeping of construction site and working areas. → Screen the visual elements of site construction camp with netting. → Locate the site camp in a transformed area. Not on proposed Open Space. → Site officer to walk the site on a daily basis to check for general site aesthetics and visual impacts, particularly prior to weekends and holidays.

	→ Officer to ensure that waste and batching areas are correctly screened and secured to prevent spread by wind, rain or animals.
Residual impacts:	Change of sense of place due to construction activities and construction workers.
Cumulative impact post mitigation:	Typical visual impacts associated with a construction site
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Low Negative**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Dust impacts**
Potential Impact	Dust generated from site clearing and site preparation.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Visual and health impacts Nuisance for residents adjacent to the site.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Potential for reduced visibility in general area.
Cumulative impact prior to mitigation:	Dust may be generated as a result of earthmoving activities required for construction and development.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain ground cover for as long as possible to reduce the total surface area exposed to wind. Do not clear entire plots and rather clear building sites only. → Ensure vehicle speed limits on site are kept to a minimum. → Delivery vehicles to keep loads covered. → Cover fine material stockpiles. → Wet dry and dusty surfaces using non-potable water. → Staff to wear correct PPE if dust is generated for long periods. Road surfaces to be swept and kept clean of sand and fine materials.
Residual impacts:	None
Cumulative impact post mitigation:	Dust generated during construction, mitigation successful.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very-Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	

Potential impact and risk:	**Noise impacts**
Potential Impact	Noise generated by vehicles and machinery during construction phase.
Nature of impact:	Negative
Extent and duration of impact:	Local, short term
Consequence of impact or risk:	Noise disturbance to transient receptors, i.e. motorists, pedestrians, residents.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Will not impact on resources
Degree to which the impact can be reversed:	High
Indirect impacts:	None
Cumulative impact prior to mitigation:	Noise from construction works
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Medium - High
Degree to which the impact can be managed:	Medium - High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Limit noise levels (e.g. install and maintain silencers on machinery) → Provide protective wear for workers i.e. ear plugs. → Ensure that construction vehicles and machinery are maintained regularly to reduce noise generation. → Restrict construction to normal work hours.
Residual impacts:	None
Cumulative impact post mitigation:	Typical noise impacts associated with a construction site.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low Negative
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Botanical/Ecological Impact**
Potential Impact	Loss of terrestrial vegetation with low sensitivity above the 5 m contour and loss of riparian vegetation with medium sensitivity at the river i.e. below 5 m contour.
Nature of impact:	Clearing of natural vegetation
Extent and duration of impact:	The vegetation clearing would affect the undescribed shrubland vegetation within the footprint of the proposed residences and riparian zone at the location of the jetty and pathway.
Consequence of impact or risk:	Low impact on terrestrial vegetation and medium impact on riparian vegetation.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Medium Negative

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Moderate
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Avoidance of the riparian zone to reduce ecological impacts. → Existing roads would be used to avoid unnecessary disturbances to the environment. → Only one jetty would be constructed. → Clearing of alien invasive plant species.
Residual impacts:	Low Negative
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Faunal landscape connectivity**
Potential Impact	Corridor narrowing (±30% of 12 ha); fencing/driveways; lighting; alien ingress which is greater sensitivity than the preferred.
Nature of impact:	Negative, direct & indirect. Negative, direct & indirect. – building pads, driveways, fences and lighting physically narrow or break movement strips; disturbance increases avoidance of humanised edges.
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Moderate consequence due to potential reduction in functional connectivity across the site and risk to species reliant on movement between terrestrial and wetland habitats.
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium — loss is localised and does not remove the entire corridor function due to retention of ~70% of the property in a natural state.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased lighting and noise disturbance, potential predation by domestic pets, and spread of alien vegetation reducing habitat quality and permeability.
Cumulative impact prior to mitigation:	Adds to ongoing fragmentation pressure along the Klein River corridor and Agulhas Limestone Fynbos ecosystem
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	

	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.
Residual impacts:	Edge effects persist but functional corridor retained if measures embedded.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Black Harrier**
Potential Impact	Habitat loss/fragmentation within potential territories; construction disturbance.
Nature of impact:	Negative.
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Reduction of available foraging ground within a landscape that supports a regionally important population; minor contribution to broader cumulative loss of lowland fynbos habitat.
Probability of occurrence:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Loss of hunting/possible nesting areas in the footprint; construction activity and machinery increase flush/disturbance risk.
Cumulative impact prior to mitigation:	Medium – High
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of river-dependent species.

	→ Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Displacement risk reduced but not eliminated; foraging persists in retained strips.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**Low - Medium (-)**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Marsh Harrier**
Potential Impact	Dwelling slightly closer to estuary increases sensitivity during works.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Potential temporary displacement of foraging individuals and reduced local habitat use during construction.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Disturbance to associated estuarine bird species; temporary reduction in foraging efficiency; possible increase in predation pressure or displacement from preferred sites.
Cumulative impact prior to mitigation:	Adds minor short-term disturbance to existing pressures along the Klein River from human activity and nearby land uses
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Local residual disturbance remains
Cumulative impact post mitigation:	Low – Medium

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Denham's bustard**
Potential Impact	Temporary disturbance near estuary still immaterial for bustard.
Nature of impact:	Negative
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	The species is wide-ranging and unlikely to be resident; temporary displacement from foraging areas possible but insignificant to regional population.
Probability of occurrence:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief disturbance to foraging individuals; short-term reduction in local activity; potential short-lived avoidance of construction areas.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very- Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very – Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential Impact	Loss/ disturbance to small, patchy suitable area; construction noise.
Nature of impact:	Negative;
Extent and duration of impact:	Site- Local
Consequence of impact or risk:	Minor local habitat loss and temporary disturbance but given the species' mobility and limited use of the site, long-term effects are minimal.
Probability of occurrence:	Medium

Degree to which the impact may cause irreplaceable loss of resources:	The affected patches are not unique or critical to the regional population and represent marginal habitat.
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Temporary displacement from foraging areas, possible avoidance of construction zone, and increased risk of disturbance from noise and human presence.
Cumulative impact prior to mitigation:	Adds slightly to the overall decline in available open habitat across the Overberg region but at a negligible scale.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medum
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Reduced local habitat availability; regional persistence unaffected
Cumulative impact post mitigation:	Low — no significant contribution to regional cumulative impacts on the species.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Great White Pelican**
Potential Impact	Construction disturbance: proximity change immaterial ecologically; Disturbance of foraging and roosting birds near reed margins and river edges.
Nature of impact:	Negative
Extent and duration of impact:	Site-Local; short-term
Consequence of impact or risk:	The species forages and roosts within the larger Klein River and will not be dependent on, or significantly affected by, site-specific activities.
Probability of occurrence:	Low to Medium — individuals may occasionally overfly or rest nearby but are unlikely to be directly disturbed given their broad use of the river.
Degree to which the impact may cause irreplaceable loss of resources:	Very Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Brief flushing of individuals if present during noisy works; minimal and temporary reduction in local use of the estuary edge.
Cumulative impact prior to mitigation:	Low – adds negligibly to broader watercourse human activity impacts; no measurable contribution to population-level effects.

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the watercourse to prevent disorientation or displacement of river-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of watercourse edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very- Low (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Martial Eagle**
Potential Impact	Short-term disturbance to overflying birds due to construction activity, noise, and increased human presence.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-term
Consequence of impact or risk:	Minor disturbance of flight paths and foraging patterns of transient individuals; negligible long-term effect given absence of nesting or core foraging habitat within the site.
Probability of occurrence:	Low – species occurs occasionally as a wide-ranging overflying raptor, with limited site-specific use.
Degree to which the impact may cause irreplaceable loss of resources:	Low – no critical breeding, roosting, or feeding resources are located within the development footprint.
Degree to which the impact can be reversed:	High – species will resume use of airspace once construction activity ceases.
Indirect impacts:	Minor, temporary displacement from immediate airspace; no measurable population-level effects.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High

Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Caspian Tern**
Potential Impact	Temporary disturbance during works; no breeding on site.
Nature of impact:	Negative
Extent and duration of impact:	Site; short-term
Consequence of impact or risk:	Minor disturbance to foraging or roosting individuals using the nearby river margins. No loss of breeding habitat or long-term displacement expected
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporal avoidance of the estuary edge immediately adjacent to the site due to construction-related noise and activity.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	- .Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. - Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. - Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). - Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible
Cumulative impact post mitigation:	Very Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential Impact	Construction disturbance; occasional roadkill risk during clearing/earthworks
Nature of impact:	Negative
Extent and duration of impact:	Site-local; short-medium term
Consequence of impact or risk:	Construction activities may disturb individual toads sheltering in vegetation or soil cavities and increase the likelihood of mortality from machinery and vehicle movement. As the species does not breed on site, the impact is limited to temporary displacement or loss of individuals rather than population-level effects.
Probability of occurrence:	Likely - the species may occur sporadically within the site, especially following rainfall or during nocturnal movements.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – once construction activities cease and vegetation recovers, the site can again support occasional movement or foraging by the species.
Indirect impacts:	Potential temporary avoidance of the area by amphibians due to vibration, noise, and compaction of soils; increased risk of mortality from vehicle movement on newly constructed access roads.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site. → Fit escape ramps or “toad savers” in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Low – with mitigation, the impact will be temporary and reversible, and individuals are expected to reoccupy the area post-construction
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Southern Adder**
Potential Impact	Direct loss of refugia during clearing; persecution risk; roadkill during works.
Nature of impact:	Negative
Extent and duration of impact:	Site -local; long-term

Consequence of impact or risk:	Loss of individual snakes; potential local population disturbance; minor contribution to cumulative population declines in the broader area.
Probability of occurrence:	Likely - snakes are likely present in vegetated and undisturbed patches, especially during warmer months.
Degree to which the impact may cause irreplaceable loss of resources:	Low – individual snakes may be lost, but local population is likely resilient if habitat patches are retained.
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Increased predation risk on local fauna due to displacement; potential ecosystem imbalances if snake populations decline in isolated patches.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low -Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Localized disturbance: a small number of individuals may still be lost
Cumulative impact post mitigation:	Low Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential Impact	Direct loss of occupied microhabitats; local collapse risk due to low mobility.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	Loss of individuals and microhabitats may lead to local population decline; could disrupt local invertebrate community structure.
Probability of occurrence:	Definite; species is present in dense vegetation patches and leaf litter.
Degree to which the impact may cause irreplaceable loss of resources:	Medium - while individuals are lost, the species is likely to persist in adjacent undisturbed habitats.
Degree to which the impact can be reversed:	Moderate – habitat may regenerate, allowing recolonization over time, but recovery is slow due to low mobility.

Indirect impacts:	Reduced prey availability for local insectivorous birds and small reptiles; potential minor alteration of local litter decomposition dynamics.
Cumulative impact prior to mitigation:	High – combined with other small-scale habitat disturbances, could lead to local declines in sensitive invertebrate populations.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low
Degree to which the impact can be mitigated:	Low – Medium
Proposed mitigation:	→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.
Residual impacts:	Localized population loss; some microhabitats permanently altered but overall local population expected to persist.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Aquatic Biodiversity**
Potential Impact	Localised clearance of *Phragmites australis* (Common Reed) reedbeds within the EFZ at the jetty (53 m²) and footpath location. Risk of sedimentation, stormwater runoff, and incidental pollutant ingress into the Klein River Estuary during construction. All primary residential infrastructure is located above the 5 m contour, outside the EFZ, and more than 32 m from the nearest freshwater feature. No wetland or watercourse indicators were identified within the development footprint. The aquatic biodiversity sensitivity of the development footprint has been verified as **Low**.
Nature of impact:	Negative; direct (jetty and footpath within EFZ) and indirect (construction-phase runoff risk); limited and localised in extent
Extent and duration of impact:	Site-specific and highly localised; short-term construction phase disturbance; permanent but small loss of estuarine fringe habitat at jetty and footpath location
Consequence of impact or risk:	Permanent but highly localised loss of estuarine fringe reedbed vegetation at the jetty and footpath location. The Klein River Estuary is a nationally significant priority estuary (EIS: 93; PES: C — Moderately Modified) and any direct encroachment into the EFZ must be acknowledged. However, the aquatic biodiversity specialist confirmed that significant long-term ecological impacts on the functioning of the Klein River Estuary are not anticipated given the limited footprint of the encroachment, provided construction mitigation measures are consistently implemented.

	Construction-phase sedimentation and pollutant ingress risks are manageable through standard mitigation.
Probability of occurrence:	Medium — Construction-phase runoff and sedimentation risks are weather-dependent and contingent on adherence to mitigation measures. The physical impacts of the jetty and footpath within the EFZ are definite but limited in extent.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	Temporary displacement of estuarine avifauna from the immediate construction zone; temporary increase in turbidity or sedimentation risk in the immediate vicinity of the jetty construction area if mitigation is not effectively implemented; temporary noise and disturbance to estuarine fauna during construction activities; potential for incidental introduction of invasive alien plant propagules into the estuarine fringe during construction.
Cumulative impact prior to mitigation:	Low – Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	**Refer to Page 13 to 15 of the Aquatic Biodiversity Compliance Statement.**
Residual impacts:	Low
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Socio-economic impacts**
Potential impact	Access to permanent employment for the community individuals through housekeeping and gardening.
Nature of impact:	Positive
Extent and duration of impact:	Local; short-term
Consequence of impact or risk:	Improved livelihoods
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	Access to employment for the community during the operational phase; Job creation;
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	N/A

Proposed mitigation:	1. Ensure labour force is sourced locally as far as possible. 2. Consider gender balance during when sourcing labour
Residual impacts:	Improved livelihoods
Cumulative impact post mitigation:	Improved livelihoods
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**High Positive**
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Botanical/Ecological Impacts**
Potential impact	→ Clearing of terrestrial vegetation beyond the limit of the footprints of the residences to limit danger of wildfires. → Slow and imperceptible loss of natural habitat due presence of residents. → Loss of natural vegetation → Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive (*Olea europaea subsp. cuspidata*) → High – The impact within the sensitive riparian zone would be limited.
Nature of impact:	Negative
Extent and duration of impact:	Local; Long-term
Consequence of impact or risk:	Loss of natural vegetation
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Low
Indirect impacts:	None identified
Cumulative impact prior to mitigation:	Low Negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Moderate
Degree to which the impact can be mitigated:	High – The impact within the sensitive riparian zone would be limited.
Proposed mitigation:	Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive *(Olea europaea subsp. cuspidata)*
Residual impacts:	Low Negative
Cumulative impact post mitigation:	Low Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Faunal landscape connectivity**

Potential impact	Estuary-edge lighting/traffic marginally increases nightly barrier effect, potentially disrupting movement of nocturnal fauna such as amphibians, small mammals, and invertebrates.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Reduced movement and dispersal of fauna; potential localized population fragmentation; may limit access to breeding, foraging, or refuge sites for sensitive species
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Low
Indirect impacts:	Potential increase in roadkill incidents; minor alterations to local predator-prey interactions; some species may shift activity patterns, affecting ecological processes.
Cumulative impact prior to mitigation:	Medium – combined with habitat fragmentation and other developments, there may be small cumulative effects on local faunal connectivity.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Low – Medium
Degree to which the impact can be managed:	Low – Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats. → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm). → Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna. → Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality. General Site-wide mitigation → Restrict built infrastructure to ~30% of the 12 ha property. → Cap development at three dwellings, as assessed in this application. → Adopt dark-sky compliant lighting (low-spectrum, full cut-off fittings, shield estuary-facing lights) to reduce disturbance to nocturnal fauna and birds. → Enforce pet curfews at night and discourage free-ranging cats and dogs to limit predation and disturbance to birds, reptiles and amphibians. → Implement a formal alien clearing and follow-up programme across retained natural areas to prevent decline in functional integrity. → Stewardship or conservation status: Consider assigning all retained natural habitat (~70% of site) to a formal

	conservation status, such as a biodiversity stewardship agreement, to ensure long-term ecological management.
Residual impacts:	Low residual illumination pressure at water edge; managed.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Black Harrier**
Potential impact	Slightly higher night lighting effect near water edge without controls.
Nature of impact:	Negative
Extent and duration of impact:	Local; long-term
Consequence of impact or risk:	Estuary facing lighting marginally increases night-time avoidance.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Low – effects are behavioural and reversible; populations unlikely to be directly affected.
Degree to which the impact can be reversed:	High – if lighting is managed, the species can resume normal use of the area.
Indirect impacts:	Temporary displacement may slightly increase predation pressure on other prey species elsewhere; minor alteration of local hunting patterns.
Cumulative impact prior to mitigation:	Low to Medium – minor additive effect if combined with other developments along river edges.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of river-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements
Residual impacts:	Minor behavioural avoidance of lit areas; no measurable impact on population viability expected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Marsh Harrier**

Potential impact	Night lighting near river marginally increases disturbance pulses
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Increased illumination near estuary edges may cause temporary avoidance or startle responses during nocturnal roosting
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance may alter local activity patterns but is unlikely to lead to loss of breeding or feeding habitat.
Degree to which the impact can be reversed:	High – reducing lighting or implementing shielding can rapidly reverse behavioural effects.
Indirect impacts:	Minor shifts in prey distribution; temporary displacement of harriers to darker zones; potential increased competition in adjacent habitats.
Cumulative impact prior to mitigation:	Additive with other lighting sources along the estuary, leading to gradual reduction in undisturbed foraging zones
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of river-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Minimal behavioural disturbance: local birds may continue to avoid small lit patches
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Denham's bustard**
Potential impact	Human presence negligible effect due to habitat mismatch.
Nature of impact:	Negative
Extent and duration of impact:	Local site; long-term
Consequence of impact or risk:	The site's altered land cover and residential use reduce habitat suitability for Denham's Bustard, a species that prefers extensive open grasslands and agricultural fields. Occasional overflight or transient individuals may avoid the immediate area due to human activity and structures.
Probability of occurrence:	Probable: the species may occasionally traverse the area but is unlikely to utilize it regularly for foraging or breeding.
Degree to which the impact may cause irreplaceable loss of resources:	Low

Degree to which the impact can be reversed:	Partially reversable
Indirect impacts:	None expected beyond localized avoidance; negligible influence on regional population dynamics or habitat function.
Cumulative impact prior to mitigation:	Low – surrounding landscapes retain more suitable open habitat; the development contributes minimally to regional habitat loss.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
Residual impacts:	Negligible; the species may continue to avoid the developed site, but no population-level impacts are expected.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Black Korhaan**
Potential impact	Edge disturbance (people/pets) reduces use of marginal habitat
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	The proximity of human activity, domestic pets, and increased noise or movement near natural edges may deter Southern Black Korhaan from using adjacent open habitat for foraging or breeding.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low – disturbance results mainly in displacement rather than permanent habitat loss; suitable habitat persists beyond the site
Degree to which the impact can be reversed:	Moderate to High – behavioural avoidance may lessen over time if disturbance is minimized and buffer vegetation is maintained.
Indirect impacts:	Potential increase in predation risk if birds are displaced to more exposed or disturbed areas; Disturbance may reduce breeding success in nearby territories; Possible secondary effects on other ground-nesting bird species
Cumulative impact prior to mitigation:	Combined with similar developments, disturbance could contribute to gradual contraction of habitat use in peri-urban areas.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High

Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Minor behavioural avoidance near edges may persist, but the broader local population will remain unaffected.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Great White Pelican**
Potential impact	Low-level displacement possible but minor.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long-term
Consequence of impact or risk:	The development may result in minor, localized avoidance by Great White Pelicans of nearby areas due to human activity, noise, or lighting, particularly during roosting or flight over the estuary.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Minimal; temporary shifts in local flight paths or loafing sites may occur but with no broader ecological consequence.
Cumulative impact prior to mitigation:	Low – cumulative effects across the region are minor given the species' adaptability and extensive foraging range.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.

Residual impacts:	Negligible; the species will continue to utilize the broader estuary system with minimal behavioural adjustments.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Martial Eagle**
Potential impact	Minimal chronic effect with residents.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long-term
Consequence of impact or risk:	Occasional overflight or peripheral foraging by Martial Eagles may decline slightly due to increased human presence and movement.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – behavioural avoidance is reversible; the species may resume use if disturbance decreases over time.
Indirect impacts:	Possible minor avoidance of localized areas with high human activity; Slight shift in local hunting patterns toward quieter open habitats
Cumulative impact prior to mitigation:	Localized effects from this and other developments contribute minimally to regional Martial Eagle population pressures, which are primarily driven by large-scale land use changes and powerline electrocution.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones
Residual impacts:	Negligible; the species may exhibit mild avoidance of the immediate development footprint, but no significant effect on population dynamics or habitat integrity is anticipated.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very - Low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Caspian Tern**

Potential impact	Low-level disturbance; maintain buffer to estuary.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long -term
Consequence of impact or risk:	Minor displacement of individuals occasionally foraging or roosting near the estuary mouth could occur due to increased human presence and recreational activity.
Probability of occurrence:	Possible
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High
Indirect impacts:	Temporary avoidance of the adjacent river fringe during periods of high recreational use. Potential minor shifts in roosting patterns within the broader watercourse system.
Cumulative impact prior to mitigation:	Development contributes slightly to overall estuarine disturbance pressures but does not affect critical habitat or breeding colonies.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns. → Shield and direct lighting away from the river to prevent disorientation or displacement of estuary-dependent species. → Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans). → Secure long-term management of river-edge natural habitat through stewardship or conservation agreements.
Residual impacts:	Negligible – disturbance effects will be minimal if the buffer is maintained and access controls are implemented.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Western Leopard Toad**
Potential impact	Edge effects (lighting, pets, pesticides) on terrestrial movement.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long term
Consequence of impact or risk:	Artificial lighting, domestic pets, and pesticide use may interfere with the movement and nocturnal activity of the Western Leopard Toad, particularly during breeding migrations or foraging. This could result in localized mortality or avoidance of

	the site's margins, although no core breeding habitat occurs within the development footprint.
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	High – reduced lighting and pet control can restore suitable edge conditions over time.
Indirect impacts:	Possible reduction in amphibian abundance in gardens and open spaces due to pesticide use; Increased risk of predation by domestic animals; Minor disruption to nocturnal movement corridors.
Cumulative impact prior to mitigation:	Medium – incremental contribution to regional habitat fragmentation
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium – High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage. → Prohibit pesticides and herbicides on site. → Fit escape ramps or "toad savers" in swimming pools. → Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal. → Provide residents with awareness material on toad movement periods and safe behaviours.
Residual impacts:	Minor, limited to isolated toad movement across developed areas; no population-level effects anticipated.
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very low (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Southern Adder**
Potential impact	Ongoing persecution and roadkill near dwellings; edge effects on refugia.
Nature of impact:	Negative
Extent and duration of impact:	Site-local; long term
Consequence of impact or risk:	Increased human activity and vehicular movement along access routes elevate the risk of direct mortality through roadkill or persecution of snakes perceived as dangerous. Subtle habitat alteration (e.g., reduced refugia, compacted soils, and garden management) may lower local occupancy in suitable edge habitats.
Probability of occurrence:	Likely; occasional encounters expected where remnant natural or open space areas occur adjacent to development.
Degree to which the impact may cause irreplaceable loss of resources:	Low – Medium
Degree to which the impact can be reversed:	Moderate – population recovery and recolonisation possible if human-snake conflict is reduced and habitat edges rehabilitated.

Indirect impacts:	Loss of ecological function (predator role in small mammal control); Displacement of individuals into suboptimal areas due to disturbance; Reduction of local biodiversity resilience along the urban edge.
Cumulative impact prior to mitigation:	Medium – adds incrementally to regional pressures from urban expansion, road networks, and human intolerance of snakes.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Conduct supervised vegetation clearance with relocation of snakes and refugia where possible. → Retain or recreate rock piles, woody debris, and shrub thickets as refugia. → Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling. → Impose strict speed limits on internal tracks to reduce roadkill risk. → Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.
Residual impacts:	Occasional snake mortality may still occur but at low frequency; local populations expected to persist regionally.
Cumulative impact post mitigation:	Low - Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Mute Winter Katydid**
Potential impact	Trampling and gardening degrade occupied patches; edge stress.
Nature of impact:	Negative
Extent and duration of impact:	Site – local; long – term
Consequence of impact or risk:	The loss or degradation of natural vegetation within garden edges and open space areas could reduce the availability of microhabitats for katydid populations. Increased foot traffic, mowing, and landscaping activities may lead to localized population collapse in small remnant patches due to the species' limited mobility and habitat specificity.
Probability of occurrence:	Medium – localized degradation of habitat patches is likely without management controls.
Degree to which the impact may cause irreplaceable loss of resources:	Low to Medium – potential loss of individuals or small local populations, though broader populations remain viable in surrounding natural areas.
Degree to which the impact can be reversed:	Moderate – recolonization possible if vegetation structure and quality are restored in buffer and open space areas.
Indirect impacts:	Reduction in acoustic diversity and ecological balance within natural areas.

	Diminished invertebrate prey availability for small faunal species. Cumulative degradation of marginal habitats over time.
Cumulative impact prior to mitigation:	Contributes to the regional decline of habitat-dependent invertebrates
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – High
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Low – medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat. → Avoid hard road surface construction → Mark and protect occupied patches as no-go areas during and after construction. → Prohibit mowing, gardening or herbicide or pesticide use within buffers. → Regularly survey katydid populations post-construction to verify persistence and recolonisation.
Residual impacts:	Low chronic edge effects remain.
Cumulative impact post mitigation:	Low – Medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Medium (-)
POST-CONSTRUCTION PHASE	
Potential impact and risk:	**Aquatic Biodiversity**
Potential impact	Ongoing low-level disturbance to the Klein River Estuary and associated estuarine habitats from residential occupation and use of the single jetty. Potential risk of sewage contamination if the conservancy tank is not adequately monitored and maintained. Increased stormwater runoff from impermeable surfaces during rainfall events directed toward the estuarine environment. External lighting potentially disturbing nocturnal estuarine fauna and avifauna. Risk of invasive alien plant establishment within the estuarine buffer from garden species.
Nature of impact:	Negative
Extent and duration of impact:	Local; Short-term
Consequence of impact or risk:	Low-level ongoing disturbance to estuarine fauna and habitats from human activity associated with residential occupation and jetty use. The maintenance of a 15 m operational buffer around the Klein River Estuary will limit the extent of direct disturbance from residential activity during the operational phase. The conservancy tank proposed for sewage management carries a residual risk of leakage or overflow if not adequately monitored, with potential for sewage contamination contributing to eutrophication of the estuary, which is already identified as an existing pressure on the system (Van Niekerk et al., 2019). Rainwater harvesting systems will reduce stormwater runoff volumes from impermeable surfaces. External lighting must be

	minimised and directed away from the estuarine environment to reduce disturbance to estuarine fauna and avifauna.
Probability of occurrence:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Medium
Indirect impacts:	Chronic low-level light pollution affecting nocturnal estuarine fauna and avifauna; disturbance to estuarine waterbirds and wading birds from human and domestic animal activity near the estuarine fringe; risk of invasive alien plant establishment in the estuarine buffer from garden plants; potential for incremental increase in nutrient loading of estuarine waters from stormwater runoff from developed surfaces.
Cumulative impact prior to mitigation:	Low-Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Medium
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	→ Refer to Page 13 to 15 of the Aquatic Biodiversity Compliance Statement.
Residual impacts:	Low
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	N/A
Nature of impact:	-
Extent and duration of impact:	-
Consequence of impact or risk:	-
Probability of occurrence:	-
Degree to which the impact may cause irreplaceable loss of resources:	-
Degree to which the impact can be reversed:	-
Indirect impacts:	-
Cumulative impact prior to mitigation:	-
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-
Degree to which the impact can be avoided:	-
Degree to which the impact can be managed:	-
Degree to which the impact can be mitigated:	-
Proposed mitigation:	-
Residual impacts:	-
Cumulative impact post mitigation:	-

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	-

NO – GO

→ Status quo is retained – property is not developed
→ Allows for risk for unauthorised / unregulated development
→ No scope of available job creation, skills transfer.
→ Management of the site limited in the absence of development.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment Report

→ The assessment included a desktop study and site investigations, incorporating iNaturalist and GBIF records, reports, field guides, and scientific literature, as well as three site visits on 16, 25, and 26 August 2025.
→ Surveys combined meandering search effort on foot and 10-minute point surveys to record species and signs of presence (sounds, tracks, scats), with a focus on Species of Conservation Concern (SCC).
→ Five distinct faunal habitat types were identified: open fynbos scrubland, dense fynbos scrubland, Phragmites reedbeds, Eucalyptus stands, and Kikuyu grass patches, each supporting varying assemblages of fauna.
→ The site supports a disproportionately high concentration of SCC, including confirmed records of the Mute Winter Katydid (Vulnerable), Western Leopard Toad (Endangered), and African Marsh Harrier, with additional SCC likely in the broader area of potential impact.
→ The Mute Winter Katydid population was concentrated in dense fynbos areas; 43 individuals were recorded, with a density of ~1.17 individuals per hectare; infrastructure was relocated to maintain a 50-metre buffer, and at least 70% of the property is recommended to remain undeveloped.
→ The Western Leopard Toad was confirmed near the main access road, with suitable wetland and estuarine fringe habitat nearby, requiring careful management of development interfaces.
→ The property functions as an ecological corridor, maintaining connectivity between the Kleinrivier estuary and surrounding fynbos habitats.
→ Even low-intensity residential development introduces irreversible disturbance and long-term edge effects; without mitigation, potential impacts are Medium to High.
→ With implementation of mitigation measures—including limiting development to three dwellings, applying the full mitigation hierarchy, relocating infrastructure away from SCC habitats, reducing jetty infrastructure, alien vegetation management, and long-term conservation management—impacts can be reduced to Low - Medium but cannot be fully eliminated. This is fully achieved by the current layout alternative.
→ Alternative 4, the preferred development option, is considered ecologically acceptable, resulting in Low-Medium impacts on terrestrial animal species and habitats.

Terrestrial Biodiversity Impact Assessment

- → A range of systematic conservation planning tools and biodiversity informants were consulted, including VEGMAP (SANBI 2024), the National Web-based Environmental Screening Tool, the Western Cape Biodiversity Spatial Plan (CapeNature, 2023), and the National Red List of Ecosystems, alongside site-specific field surveys and expert consultation.
- → VEGMAP indicated that the site comprises Agulhas Limestone Fynbos, classified as Critically Endangered, forming the basis for the WCBSP classification of the site as Critical Biodiversity Area 1 (CBA1) and the National Red List of Ecosystems' Critically Endangered designation.
- → The National Screening Tool rated the site as medium sensitivity for plant species and Very High for terrestrial biodiversity based on the assumed presence of Agulhas Limestone Fynbos.
- → Field verification conducted on 5 October 2025 confirmed that no limestone substrate is present and that the vegetation does not correspond to Agulhas Limestone Fynbos in substrate, structure, or species composition.
- → The site's vegetation is more similar to Eastern Rûens Shale Renosterveld, although not fully aligned with its typical description, and exhibits low botanical and terrestrial biodiversity sensitivity.
- → No plant species of conservation concern were recorded during field surveys, meaning the sensitivity ratings from desktop tools do not reflect the actual ecological conditions onsite.
- → The vegetation comprises two main sub-types: low-lying riparian floodplain dominated by dense Common Reed (*Phragmites australis),* buffalo grass (*Stenotaphrum secundatum*), scattered and multi-stemmed thickets including *Gymnosporia buxifolia, Plecostachys serpyllifolia, Senecio halimifolius, Searsia glauca, Searsia rehmanniana,* and occasional taller trees such as *Olea europaea subsp. cuspidata* and *Melianthus* major; and upland shrubland dominated by dense to mid-dense mid-high to tall shrubs including *Passerina corymbosa*, *Gnidia squarrosa, Muraltia spinosa*, with low shrubs, grasses, occasional thickets, and scattered wild olive trees.
- → Portions of the upland shrubland are moribund, with senescent and dying shrubs due to the absence of natural fire cycles.
- → Few bird and animal species were observed on-site, including Bokmakierie, Cape Robin-Chat, Karoo Prinia, and an adult Angulate Tortoise (*Chersina angulata*), with signs of Cape Porcupine (*Hystrix africaeaustralis*) activity recorded.
- → The National Screening Tool's Medium sensitivity rating for plant species and Very High rating for terrestrial biodiversity were found to be incorrect, as no Agulhas Limestone Fynbos occurs on site and the vegetation present is of low ecological sensitivity.
- → The Western Cape Biodiversity Spatial Plan classification of the property as CBA1 is disputed by the specialist, highlighting that the site's appropriate classification should be not higher than Ecological Support Area 2 (ESA2) or Other Natural Area (ONA).
- → Site Ecological Importance (SEI) was recalculated based on field observations, using low Conservation Importance, medium Functional Integrity, and low Receptor Resilience, resulting in a SEI rating of LOW, indicating the site can accommodate medium-impact development with mitigation.
- → The No-Go Alternative would result in no direct impacts, with vegetation and ecological processes remaining undisturbed.
- → Alternative 1, involving development below the 5 m contour, would result in low negative impacts during the development phase, with medium significance pre-mitigation; residual impacts remain medium negative during operation due to loss of low-sensitivity terrestrial and riparian vegetation.
- → Alternative 4, the preferred option above the 5 m contour using existing roads and paths, limits vegetation clearing, avoids the 5m contour area, reduces jetty infrastructure, and removes slipway, alien invasive plants, and therefore the residual impact is reduced to low negative during development and low significance during operation.
- → Overall, Alternative 4 is considered the ecologically preferred development option with acceptable impacts of low negative impacts, provided that the mitigations measures recommended by the faunal specialist have been implemented and reflected in the new preferred layout.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment Report

Mitigation measures

General Site-Wide Mitigation

→ Restrict built infrastructure to ~30% of the 12-ha property.

→ Cap development at three dwellings, as assessed in this application.

→ Adopt dark-sky compliant lighting (low-spectrum, full cut-off fittings, shield estuary-facing lights) to reduce disturbance to nocturnal fauna and birds.

→ Enforce pet curfews at night and discourage free-ranging cats and dogs to limit predation and disturbance to birds, reptiles and amphibians.

→ Implement a formal alien clearing and follow-up programme across retained natural areas to prevent decline in functional integrity.

→ Consider assigning all retained natural habitat (~70% of site) to a formal conservation status, such as a biodiversity stewardship agreement, to ensure long-term ecological management.

Faunal Landscape Connectivity

→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats.

→ Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm).

→ Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna.

→ Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.

Estuarine and Water-Associated Birds (African Marsh Harrier, Caspian Tern, Great White Pelican)

→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses.

→ Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns.

→ Lighting controls: Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species.

→ Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans).

→ Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.

Terrestrial SCC Birds (Southern Black Korhaan, Denham's Bustard)

→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity.

→ Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment.

→ Disturbance reduction: Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.

Amphibians (Western Leopard Toad)

→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage.

→ Prohibit pesticides and herbicides on site.

→ Fit escape ramps or "toad savers" in swimming pools.

→ Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal.

→ Provide residents with awareness material on toad movement periods and safe behaviours.

Reptiles (Southern Adder)

→ Pre-construction search and rescue: Conduct supervised vegetation clearance with relocation of snakes and refugia where possible.

→ Retain or recreate rock piles, woody debris, and shrub thickets as refugia.

→ Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling.

→ Impose strict speed limits on internal tracks to reduce roadkill risk.

→ Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.

Invertebrates (Mute Winter Katydid, Other SCCs)

Mute Winter Katydid

→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat – As implemented in **Alternative 3 (Preferred)**

→ Avoid hard road surface construction

→ Mark and protect occupied patches as no-go areas during and after construction.

→ Prohibit mowing, gardening or herbicide or pesticide use within buffers.

→ Regularly survey katydid populations post-construction to verify persistence and recolonisation.

Yellow-winged Agile Grasshopper

→ No targeted mitigation required as the species' specific habitat is absent; site-wide alien control and natural vegetation retention suffice.

Other SCC Invertebrates

→ Map and avoid patches supporting confirmed SCCs where possible.

→ Establish indicator taxa monitoring to detect changes in population presence or habitat quality.

→ Actively restore and reseed disturbed patches post decommissioning to return invertebrate habitat function.

Terrestrial Biodiversity Impact Assessment

→ Designing the development to stay above the 5 m contour to reduce ecological impacts.
→ Using existing roads and paths for access to minimize new disturbances to the environment.
→ Limiting infrastructure like slipways and jetties, as only one jetty per property is typically permitted and slipways are discouraged.
→ Clearing of alien invasive plant species.
→ Avoidance of the area below the 5m contour to reduce ecological impacts.
→ Existing roads would be used to avoid unnecessary disturbances to the environment.
→ Only one jetty and one slipway would be constructed.
→ Clearing of alien invasive plant species.
→ Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive (*Olea europaea subsp. cuspidata*).

Aquatic Compliance Statement

The following mitigation measures are recommended for the water resource Klein River Estuary:

→ All activities must comply with the requirements of the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality. Of particular note, the jetty must be designed and constructed in accordance with the specifications and requirements stipulated within the applicable EMOZ provisions and designed in line with Cape nature's specifications.
→ The provisions and management objectives of the Klein River Estuarine Management Plan must be adhered to at all times for activities within and adjacent to the Klein River Estuary.
→ Construction of the jetty and pathways must be undertaken using low-impact methods and minimal machinery where feasible.
→ Prior to the commencement of construction, the estuary and its associated buffer (25 m) must be clearly demarcated on site using temporary fencing and/or danger tape, and workers must be instructed that no access, disturbance, or storage of materials may occur within this area, apart from the development of the footpath and the jetty.
→ Construction vehicles must remain within clearly defined access routes and may not enter the estuary buffer or surrounding natural vegetation.

- → Where feasible, the proposed works should be undertaken during the dry season to reduce the potential for stormwater runoff and sediment mobilisation towards the nearby estuary.
- → Should construction activities occur outside of the dry season, additional mitigation measures must be implemented to minimise the risk of sediment transport and water quality impairment. These measures include the installation of temporary erosion and sediment control structures (e.g. silt fences, sandbags, or geotextile sediment barriers) downslope of disturbed areas, stabilisation of exposed soils, and the placement of stockpiled materials outside of drainage pathways.
- → Access track and construction-related works must ensure that stormwater runoff from disturbed surfaces is directed through vegetated areas or temporary sediment traps prior to discharge.
- → No temporary crossings, drainage diversions, or discharge of stormwater may occur directly into the estuary.
- → Construction camps, laydown areas, stockpiling of materials, and waste storage must be located outside of the estuary buffer and away from any drainage pathways that could transport pollutants into the estuary.
- → Concrete mixing and cement handling must take place in designated areas located well outside of the estuary buffer, and wash water from concrete works must not be discharged onto the ground where it could enter drainage pathways.
- → The storage of fuels, oils, and other hazardous substances must occur within bunded areas, and vehicle refuelling or servicing must not occur near drainage pathways or within the estuary buffer.
- → A spill response kit must be kept on site at all times, and any accidental spills of fuels, oils, or chemicals must be immediately contained and cleaned up to prevent contamination of soils and stormwater runoff.
- → All waste generated during construction must be stored in sealed containers and regularly removed from site to prevent litter and debris from entering the estuary or surrounding natural vegetation.
- → Construction activities must be temporarily suspended during periods of heavy rainfall where runoff may mobilise sediments.
- → All disturbed areas must be rehabilitated and stabilised as soon as practicable following completion of the works.
- → Vegetation clearance should be restricted to the relevant development components and indigenous vegetation cover should be maintained as far as practically possible. Furthermore, it is recommended that natural fynbos vegetation be used predominantly for garden establishment, including appropriate local indigenous lawn grass, to contribute towards conservation of the wildlife of the region.
- → No invasive alien plant species may be used for landscaping or rehabilitation purposes.
- → A conservancy tank is proposed. Therefore, it is recommended that monitoring of sewerage collection tanks should occur to ensure no leakage and ensure that no leakages occur when sewerage collection tanks are emptied. The disposal of sewage must at all times comply with the requirements of Sections 22 and 40 of the National Water Act of 1998, (Act 36 of 1998).
- → When a conservancy tank is used for the disposal of sewerage, the Breede-Olifants Catchment Management Agency (BOCMA) must be furnished with a signed copy of the contract between the contractor and/or the municipality which is appointed to pump the conservancy tank.
- → The tank must be provided with a fresh air inlet and an intercepting grease trap.
- → The tank must have an airtight manhole cover to allow access to the tank for the removal and safe disposal of the tank contents.
- → No industrial waste or refuse may be discharged into the conservancy tank except by written agreements with the relevant authorities.
- → The size of the conservancy tank must be determined by both the frequency of removal of its contents to the local Wastewater Treatment Works and by the quantity of sewage anticipated from the above-mentioned project.
- → The contents of the tank must be removed by a vacuum tanker and conveyed to a local WWTW that is capable of processing the volume and contents of the conservancy tank.

→ The contingency plan including a system backup, consideration to any blockage in pipes, and prevention of storm water or groundwater (if applicable) ingress must be drawn up to protect against overflow of the conservancy tank.

→ As per above, ingress of storm water or groundwater (if applicable) into the conservancy tank must be prevented. Consider installing a grey water system, as washing/dishwashing machines require the capacity of the conservancy tank to be increased.

→ Rainwater harvesting systems should be installed to reduce runoff volumes.

→ External lighting associated with the development should be minimised and directed away from the estuarine environment to reduce disturbance to estuarine fauna and avifauna.

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

N/A

4.	Explain how the proposed development will impact the surrounding communities.

Positive impacts

→ The proposed development will contribute to job creation during the construction phase for local labourers, including skilled and unskilled workers.

→ Once completed, the residential units and associated infrastructure may enhance local property values and encourage investment in the area.

→ The construction and maintenance of the slipways and jetties could support recreational activities.

Negative impacts

→ Short-term disturbances such as noise, dust, and increased traffic during the construction phase may affect neighbouring properties and community members.

→ Visual impacts along the watercourse edge due to the jetties, slipways, and residential structures could alter the natural landscape character of the area.

→ Human presence near the river may disturb local wildlife, which could reduce the quality of natural areas used by the community for recreation or aesthetic enjoyment.

→ If not managed carefully, there may be long-term environmental impacts that could indirectly affect community livelihoods linked to ecosystem services, such as water quality or watercourse health.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

Climate change poses a range of potential risks to the proposed residential development on Portion 4 of Farm Middelburg 643, Stanford, given the site's location within the coastal protection zone adjacent to the Klein River Estuary. The potential impacts of climate change have been considered and addressed through the iterative environmental design process that informed the preferred Alternative 4 layout, and through the specialist assessments undertaken in support of this Basic Assessment. The following discussion outlines the key climate change risks relevant to the proposed development and explains how these have been incorporated into the design and mitigation framework.

Climate Context

Stanford experiences a warm-summer Mediterranean climate (Köppen Csb), with a mean annual rainfall of approximately 527 mm per year, occurring predominantly during the winter months (June to August) with a secondary lower peak in early summer (November). Average daily maximum temperatures reach approximately 25–26°C in summer (January/February), with winter daily mean temperatures of approximately 11.6–12.3°C (McDonald, 2025). Wind patterns are influenced by coastal interactions, high-pressure systems over the South Atlantic, and mid-latitude frontal systems in winter, with dominant easterly winds and periodic strong south-easterly winds in summer.

Under projected climate change scenarios for the Western Cape, the region is anticipated to experience:

- Increased mean annual temperatures and more frequent and intense heat events;
- Changes in rainfall seasonality and intensity, with projected increases in the frequency of extreme rainfall events interspersed with prolonged dry periods;
- Rising sea levels and associated increases in coastal flood risk and storm surge frequency and intensity;
- Increased frequency and severity of wildfires associated with hotter, drier conditions and increased wind speeds;
- Changes in the hydrology of the Klein River catchment, including altered freshwater inflow patterns to the Klein River Estuary, which is already identified as being under pressure from reduced freshwater inflow (Van Niekerk et al., 2019).

Flood Risk and Sea Level Rise

The most significant climate change risk to the proposed development relates to flooding and sea level rise, given the site's location adjacent to the Klein River Estuary and within the coastal protection zone. The Klein River Estuary is a large temporary open/closed estuarine-lake system covering approximately 1,153 ha, and water levels within the estuary are subject to seasonal fluctuation as well as episodic opening and closing of the estuary mouth. Under climate change scenarios, increased storm surge frequency and intensity, rising sea levels, and more extreme rainfall events are projected to increase the frequency and extent of estuarine flooding in the lower-lying portions of the site.

How this has been addressed in Alternative 4:

This risk was explicitly identified and addressed during the development of the preferred Alternative 4 layout. All proposed residential dwellings and associated primary infrastructure have been positioned above the 5 m contour, thereby reducing flood risk and improving the long-term resilience of the development to climate change, sea level rise, and storm surge events. The Botanical and Terrestrial Biodiversity Assessment (McDonald, 2025) specifically identified that Alternative 1, which proposed development below the 5 m contour, would expose residential infrastructure to significant and increasing flood risk under climate change conditions, noting that the 5 m contour serves as an important buffer zone accommodating seasonal changes in water levels and storm events. This risk was a key motivating factor in the rejection of Alternative 1 and the adoption of the above-5m-contour layout of Alternative 4.

The Aquatic Biodiversity Compliance Statement (Morton & van Zyl, 2026) further confirmed that the EFZ edge was delineated approximately 45 m downslope from the majority of the residential footprint and upstream of the 5 m contour line, providing a meaningful topographic and physical separation between the built environment and the estuarine system that will buffer the development against projected increases in estuarine flood frequency and extent.

Increased Stormwater Runoff and Sedimentation Risk

Projected increases in the frequency and intensity of extreme rainfall events under climate change scenarios will increase the volume and velocity of stormwater runoff from the developed surfaces of the property toward the Klein River Estuary. Increased stormwater runoff carries the risk of elevated sediment mobilisation, nutrient loading, and pollutant transport into the estuarine system, potentially exacerbating the existing eutrophication and habitat quality decline pressures already documented for the Klein River Estuary (Van Niekerk et al., 2019).

How this has been addressed in Alternative 4:

The preferred Alternative 4 layout incorporates a range of stormwater management measures recommended by the aquatic biodiversity specialist to reduce the volume and impact of stormwater runoff toward the estuary, including the installation of rainwater harvesting systems to reduce runoff volumes from impermeable surfaces, the direction of stormwater runoff through vegetated areas and temporary sediment traps prior to discharge, and the prohibition of direct stormwater discharge into the estuary. The positioning of all primary infrastructure above the 5 m contour and the maintenance of approximately 70% of the property as undeveloped natural land further supports the infiltration of stormwater through natural vegetation, reducing peak runoff volumes during extreme rainfall events.

The aquatic biodiversity specialist further recommended that construction activities should preferably be undertaken during the dry season to minimise the risk of sediment mobilisation during the construction phase, and that additional erosion and sediment control measures should be implemented if construction occurs outside of the dry season. These recommendations directly address the projected increase in extreme rainfall frequency under climate change scenarios**.**

Altered Estuarine Hydrology and Freshwater Inflow

Climate change is projected to alter the hydrology of the Klein River catchment, with potential reductions in mean annual runoff and changes in the seasonality and intensity of freshwater inflow to the Klein River Estuary. The Klein River has already been recognised as a potential water source for the water-stressed Onrus River Catchment, and the estuary is already under pressure from a reduction in freshwater inflow, which is documented as one of the primary drivers of ongoing habitat quality decline (Van Niekerk et al., 2019). Changes in freshwater inflow under climate change scenarios may alter the salinity regime, water levels, and ecological functioning of the estuary, with potential consequences for estuarine fauna and flora.

How this has been addressed in Alternative 4:

The preferred Alternative 4 layout avoids any obstruction of natural water movement between the terrestrial and estuarine environments, and no infrastructure that would alter the natural hydrological connectivity of the site with the Klein River Estuary is proposed. The positioning of all primary infrastructure above the 5 m contour ensures that the natural drainage pathways from the upslope terrestrial environment to the estuary are not obstructed, maintaining the natural hydrological functioning of the site within the Klein River catchment. The installation of rainwater harvesting systems further supports responsible water management on the property, reducing the demand on the regional water supply and contributing to the maintenance of natural flow regimes in the broader catchment.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

N/A

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.

The findings and recommendations of the specialist studies were systematically integrated into the project planning and design process to inform the most appropriate mitigation measures and to ensure that potential environmental impacts

associated with the proposed development are effectively managed. Specialist inputs, including the faunal and terrestrial biodiversity assessments, were used to identify sensitive environmental features, assess potential impacts associated with the layout alternatives assessed, and guide the refinement of the preferred development layout.

The faunal specialist assessment identified the presence of the Mute Winter Katydid within a specific portion of the site and highlighted the sensitivity of its habitat to direct disturbance and habitat loss. In response to these findings, the initial layout alternatives (Alternatives 1 and 2) were reassessed, as both involved the placement of a residential unit within the identified Katydid habitat. The specialist recommended the establishment of a 50 m buffer zone around the species' location and the relocation of infrastructure outside this buffer to avoid direct impacts. These recommendations directly informed the development of Alternative 3 and the new preferred layout (Alternative 4) which relocates the affected residential unit outside the Katydid habitat and associated buffer zone, thereby avoiding habitat loss and significantly reducing faunal impacts.

In addition, the faunal specialist recommended a reduction in the extent of watercourse infrastructure to limit disturbance to the riverine environment. While Alternatives 1 and 2 proposed the construction of two jetties and two slipways, Alternative 3 includes only a single jetty and one slipway. The updated preferred layout (Alternative 4) further improves on this approach by retaining only one jetty and removing the slipway entirely, while incorporating a consolidated access pathway to provide access to the proposed jetty. This reduction in infrastructure represents a substantial improvement over the earlier alternatives and results in decreased disturbance to the riverine habitat, a reduced development footprint below the 5 m contour, and lower potential impacts on riverine ecological processes and estuarine functioning.

Moreover, the updated layout (Alternative 4) incorporates the recommended mitigation measures identified by the freshwater specialist, including application of a buffer of 25 m during Construction and 15 m during the operation of the proposed dwellings determined for the Klein River Estuary.

Through the integration of specialist findings and recommendations, Alternative 4 was developed as a refined layout that prioritises avoidance of sensitive habitats, minimises the development footprint, and reduces infrastructure-related impacts. This integrated approach ensured that the proposed mitigation measures are site-specific, scientifically informed, and effective in reducing residual impacts to acceptable levels, thereby representing the most appropriate and practicable environmental option for the proposed development.

8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

The mitigation hierarchy was systematically applied during the assessment of the layout alternatives to identify the best practicable environmental option for the proposed development. This process was informed by site-specific environmental sensitivities and constraints identified through specialist studies and baseline environmental assessments.

The application of the mitigation hierarchy followed the primary steps of avoidance, minimisation, rehabilitation, and consideration of offsets, with the objective of protecting sensitive environmental features on site while accommodating the proposed development. Through the implementation of specialist recommendations and mitigation measures, the residual impacts associated with the proposed activities were reduced to low to low-medium significance levels. Consequently, biodiversity offsets, which represent the final step of the mitigation hierarchy, were assessed as unnecessary for the proposed development.

Specifically, the mitigation hierarchy was applied as follows:

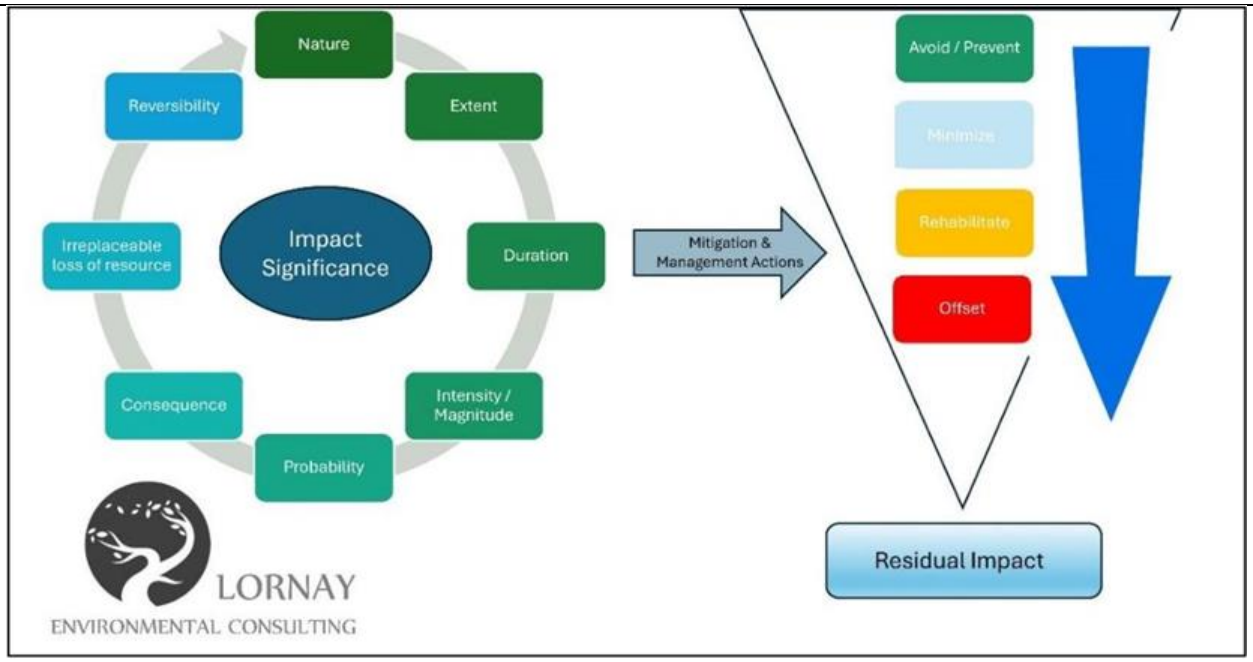

Figure 13: Mitigation hierarchy.

Avoidance

Avoidance was prioritised from the outset of the layout assessment process through the comparative assessment of four layout alternatives, namely Alternatives 1 and 2 (non-preferred), Alternative 3, and the final preferred layout, Alternative 4.

During the early planning stages, the applicant initially favoured Alternative 2. However, specialist investigations identified several environmental sensitivities associated with Alternatives 1 and 2. Most notably, both alternatives positioned one of the proposed residential units within identified habitat associated with the Mute Winter Katydid, which would have resulted in direct habitat loss and disturbance to the species.

The faunal specialist subsequently recommended the establishment of a 50 m buffer around the identified Mute Winter Katydid habitat and the relocation of the affected dwelling outside of this buffer area. As a result, Alternatives 1 and 2 were reconsidered and ultimately rejected in favour of layouts that more effectively avoided sensitive ecological features.

Alternative 3 was thereafter developed to accommodate the required ecological buffer and avoid direct impacts on the identified species habitat, thereby reducing the significance of impacts relative to the earlier alternatives. Building on this approach, Alternative 4 was further refined and selected as the preferred alternative due to its improved environmental performance and reduced development footprint within sensitive areas.

In addition, the aquatic assessment confirmed that the proposed development footprint is located outside of freshwater wetlands and inland watercourses, with the residential infrastructure situated more than 32 m from the nearest freshwater feature. The preferred layout therefore avoids direct impacts on sensitive freshwater environments and limits encroachment into the estuarine interface.

Minimisation

Alternative 4, as the preferred layout, incorporates a reduced development footprint that minimises vegetation disturbance by utilising previously disturbed areas and existing access routes as far as practicable. This approach ensures that the majority of indigenous vegetation and surrounding natural habitat remains undisturbed.

Furthermore, the faunal specialist recommended reducing the extent of infrastructure associated with the riverine environment. While Alternatives 1 and 2 proposed two jetties and two slipways, Alternative 3 reduced this to one jetty and one slipway. The preferred Alternative 4 further improves on this approach by retaining only a single jetty and removing the slipway entirely, while incorporating a consolidated access pathway to the jetty. This significantly reduces the footprint below the 5 m contour and decreases disturbance to the riverine and estuarine environment.

The preferred layout also allows for the implementation of additional mitigation measures recommended by the aquatic specialist, including the demarcation of estuary buffers, use of low-impact construction methods, stormwater management controls, erosion prevention measures, and rehabilitation of disturbed areas. Construction activities will be confined to clearly demarcated work areas to prevent unnecessary disturbance beyond the approved footprint. All these recommended mitigation measures are crucial to safeguard the estuarine environment.

Rehabilitation

Rehabilitation measures will be implemented to address temporary disturbances associated with construction activities. All disturbed areas outside of the permanent development footprint will be rehabilitated as soon as practicable following construction through re-vegetation with appropriate indigenous species characteristic of the local vegetation type. Disturbed soils will be stabilised to prevent erosion and the establishment or spread of invasive alien vegetation.

In accordance with specialist recommendations, disturbed areas associated with the pathway and jetty construction will also be rehabilitated and stabilised to minimise long-term impacts on the surrounding estuarine environment.

Offset

The implementation of biodiversity offsets was considered unnecessary for the proposed development. Following the application of the mitigation hierarchy specifically avoidance, minimisation, and rehabilitation no significant residual impacts were identified that would warrant offsetting.

The specialist studies concluded that the preferred Alternative 4 avoids the most sensitive ecological features on site and that the remaining impacts can be effectively managed through the recommended mitigation measures. Residual impacts associated with the proposed development were assessed as being of low to low-medium significance following mitigation. As such, biodiversity offsets, as the final step of the mitigation hierarchy, are not required for this project.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

Summary of the Key Findings of the EIA

→ The property abuts the Klein River to the north and is therefore associated with a sensitive riverine and coastal environment.

- → Terrestrial Biodiversity impact assessments confirmed that the site does not contain Agulhas Limestone Fynbos, despite its CBA1 designation in the Western Cape Biodiversity Spatial Plan (WCBSP). Field verification established that the vegetation present is of low ecological sensitivity, and no plant Species of Conservation Concern (SCC) were recorded on site.
- → The property was categorised into five faunal habitat types, namely:
  - Open fynbos scrubland;
  - Dense fynbos scrubland;
  - Phragmites reedbeds;
  - Eucalyptus habitat; and
  - Kikuyu grass habitat.
- → The Faunal Assessment confirmed the presence of several Species of Conservation Concern (SCC), including the Mute Winter Katydid (*Anepisceptus monterosatoi*) (Vulnerable), Western Leopard Toad (*Sclerophrys pantherina*) (Endangered), and African Marsh Harrier. These findings necessitated the repositioning of proposed infrastructure to avoid sensitive habitat areas.
- → The majority of the property falls within the Coastal Protection Zone.
- → The preferred layout alternative incorporates specialist recommendations by locating all permanent structures above the 5 m contour and more than 100 m from the High-Water Mark. This approach avoids encroachment into riparian areas and reduces flood risk under future climate change scenarios.
- → The property plays an important functional role in maintaining ecological connectivity between the Klein River and the surrounding fynbos landscape.
- → The overall Site Ecological Importance (SEI) for fauna was assessed as High.
- → Although the proposed development has a relatively small physical footprint, it would result in irreversible habitat disturbance and long-term edge effects within a sensitive ecological landscape.
- → The faunal specialist recommended that the proposed development, particularly the planned dwelling (House 2) and associated infrastructure, be located outside a 50 m no-go buffer surrounding mapped katydid habitat. This requirement has been achieved through the preferred layout alternative (Alternative 4).
- → In addition, the faunal specialist recommended a reduction in the extent of watercourse infrastructure to limit disturbance to the riverine environment. While Alternatives 1 and 2 proposed two jetties and two slipways, Alternative 3 reduced this to a single jetty and one slipway. The preferred layout (Alternative 4) further reduces impacts by retaining only one jetty, removing the slipway entirely, and consolidating access into a single pathway to the jetty. This represents a substantial improvement over the earlier alternatives and results in reduced disturbance to riverine habitat, a smaller footprint below the 5 m contour, and lower potential impacts on riverine ecological processes.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)

Refer to **Appendix D.**

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.

Positive impacts

- → Short-term job creation during the construction phase and indirect stimulation of the local economy through the procurement of services and materials.
- → Enables the landowners to exercise their land-use rights in accordance with the Municipal Planning By-Law, thereby preventing underutilisation of the property.
- → Incorporation of solar energy systems to supplement Eskom supply, supporting sustainable energy use and reducing long-term reliance on non-renewable resources.

→ The preferred alternative ensures that residential dwellings are located above the 5m contour line, thereby avoiding areas most vulnerable to flooding.
→ The activity permits the construction of the residential units by avoiding the known location of the Mute Winter Katydid. This is achieved through the implementation of a buffer zone around the species' habitat.

Negative Impacts

→ Construction activities may result in vegetation clearance, soil disturbance, and temporary disruption of local fauna.
→ Introduction of built structures into a rural and largely natural setting may alter the visual character of the landscape.
→ Improper stormwater management during construction could result in erosion, sedimentation, or contamination of downstream watercourses.
→ Placement of dwellings within the 5m contour of the Klein River would expose residents and infrastructure to long-term risks of flooding, climate change-related events, and riverine dynamics.

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

Recommendations by the EAP:

→ Construction should take place during daylight hours only, with additional care near the watercourse margin and sensitive faunal habitats.
→ Construction activities will be confined to clearly demarcated building areas to prevent unnecessary disturbance beyond the approved footprint.
→ Fencing, if used, must allow free movement of small and medium-sized fauna (no solid or impermeable barriers).
→ At least 70% of the property must remain under natural vegetation, free from infrastructure and permanent barriers, to ensure movement of faunal species.
→ Outdoor lighting must be downward-shielded, low-intensity, and activated only when required for safety.
→ A long-term alien vegetation management plan must be implemented across the property, prioritising removal of invasive species such as *Acacia saligna* and *A. cyclops* and promoting indigenous fynbos regeneration.
→ The No go area indicated by the Faunal specialist and as reflected in Alternative 3, must be implemented and maintained in perpetuity.

Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment Report

Mitigation measures

General Site-Wide Mitigation

→ Restrict built infrastructure to ~30% of the 12-ha property.
→ Cap development at three dwellings, as assessed in this application.
→ Adopt dark-sky compliant lighting (low-spectrum, full cut-off fittings, shield estuary-facing lights) to reduce disturbance to nocturnal fauna and birds.
→ Enforce pet curfews at night and discourage free-ranging cats and dogs to limit predation and disturbance to birds, reptiles and amphibians.
→ Implement a formal alien clearing and follow-up programme across retained natural areas to prevent decline in functional integrity.

→ Consider assigning all retained natural habitat (~70% of site) to a formal conservation status, such as a biodiversity stewardship agreement, to ensure long-term ecological management.

Faunal Landscape Connectivity

→ Maintain a continuous natural corridor across at least 70% of the property to allow free movement between the Klein River and adjacent upland habitats.
→ Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm).
→ Consolidate infrastructure and driveways to reduce fragmentation and maintain open strips for fauna.
→ Actively rehabilitate degraded strips post-construction and manage alien regrowth to preserve corridor functionality.

Estuarine and Water-Associated Birds (African Marsh Harrier, Caspian Tern, Great White Pelican)

→ Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses.
→ Maintain a no-work buffer at reed margins and estuary edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns.
→ Lighting controls: Shield and direct lighting away from the estuary to prevent disorientation or displacement of estuary-dependent species.
→ Schedule noisy construction away from peak breeding/foraging seasons (Aug–Nov for marsh harrier; peak roost periods for terns/pelicans).
→ Secure long-term management of estuary-edge natural habitat through stewardship or conservation agreements.

Terrestrial SCC Birds (Southern Black Korhaan, Denham's Bustard)

→ Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity.
→ Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment.
→ Disturbance reduction: Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.

Amphibians (Western Leopard Toad)

→ Shape access tracks with shallow U/V profiles; include amphibian-safe drainage.
→ Prohibit pesticides and herbicides on site.
→ Fit escape ramps or "toad savers" in swimming pools.
→ Retain indigenous groundcover and vegetated strips between dwellings to support terrestrial dispersal.
→ Provide residents with awareness material on toad movement periods and safe behaviours.

Reptiles (Southern Adder)

→ Pre-construction search and rescue: Conduct supervised vegetation clearance with relocation of snakes and refugia where possible.
→ Retain or recreate rock piles, woody debris, and shrub thickets as refugia.
→ Educate contractors and residents about the conservation importance of Southern Adder and provide protocols for safe handling.
→ Impose strict speed limits on internal tracks to reduce roadkill risk.

→ Maintain functional fynbos structure with alien clearing and fire in line with ecological cycles.

Invertebrates (Mute Winter Katydid, Other SCCs)

Mute Winter Katydid

→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat.
→ Avoid hard road surface construction
→ Mark and protect occupied patches as no-go areas during and after construction.
→ Prohibit mowing, gardening or herbicide or pesticide use within buffers.
→ Regularly survey katydid populations post-construction to verify persistence and recolonisation.

Yellow-winged Agile Grasshopper

→ No targeted mitigation required as the species' specific habitat is absent; site-wide alien control and natural vegetation retention suffice.

Other SCC Invertebrates

→ Map and avoid patches supporting confirmed SCCs where possible.
→ Establish indicator taxa monitoring to detect changes in population presence or habitat quality.
→ Actively restore and reseed disturbed patches post decommissioning to return invertebrate habitat function.

Terrestrial Biodiversity Impact Assessment

→ Designing the development to stay above the 5 m contour to reduce ecological impacts.

→ Using existing roads and paths for access to minimize new disturbances to the environment.

→ Limiting infrastructure like slipways and jetties, as only one jetty per property is typically permitted and slipways are discouraged.

→ Clearing of alien invasive plant species.

→ Avoidance of the area below the 5m contour to reduce ecological impacts.

→ Existing roads would be used to avoid unnecessary disturbances to the environment.

→ Only one jetty and one slipway would be constructed.

→ Clearing of alien invasive plant species.

→ Development of residences should be above the 5 m contours and should wherever possible avoid well-established old trees, particularly of wild olive (*Olea europaea subsp. cuspidata*).

Aquatic Biodiversity Compliance Statement

→ All activities must comply with the requirements of the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality. Of particular note, the jetty must be designed and constructed in accordance with the specifications and requirements stipulated within the applicable EMOZ provisions and designed in line with Cape nature's specifications.

- → The provisions and management objectives of the Klein River Estuarine Management Plan must be adhered to at all times for activities within and adjacent to the Klein River Estuary.
- → Construction of the jetty and pathways must be undertaken using low-impact methods and minimal machinery where feasible.
- → Prior to the commencement of construction, the estuary and its associated buffer (25 m) must be clearly demarcated on site using temporary fencing and/or danger tape, and workers must be instructed that no access, disturbance, or storage of materials may occur within this area, apart from the development of the footpath and the jetty.
- → Construction vehicles must remain within clearly defined access routes and may not enter the estuary buffer or surrounding natural vegetation.
- → Where feasible, the proposed works should be undertaken during the dry season to reduce the potential for stormwater runoff and sediment mobilisation towards the nearby estuary.
- → Should construction activities occur outside of the dry season, additional mitigation measures must be implemented to minimise the risk of sediment transport and water quality impairment. These measures include the installation of temporary erosion and sediment control structures (e.g. silt fences, sandbags, or geotextile sediment barriers) downslope of disturbed areas, stabilisation of exposed soils, and the placement of stockpiled materials outside of drainage pathways.
- → Access track and construction-related works must ensure that stormwater runoff from disturbed surfaces is directed through vegetated areas or temporary sediment traps prior to discharge.
- → No temporary crossings, drainage diversions, or discharge of stormwater may occur directly into the estuary.
- → Construction camps, laydown areas, stockpiling of materials, and waste storage must be located outside of the estuary buffer and away from any drainage pathways that could transport pollutants into the estuary.
- → Concrete mixing and cement handling must take place in designated areas located well outside of the estuary buffer, and wash water from concrete works must not be discharged onto the ground where it could enter drainage pathways.
- → The storage of fuels, oils, and other hazardous substances must occur within bunded areas, and vehicle refuelling or servicing must not occur near drainage pathways or within the estuary buffer.
- → A spill response kit must be kept on site at all times, and any accidental spills of fuels, oils, or chemicals must be immediately contained and cleaned up to prevent contamination of soils and stormwater runoff.
- → All waste generated during construction must be stored in sealed containers and regularly removed from site to prevent litter and debris from entering the estuary or surrounding natural vegetation.
- → Construction activities must be temporarily suspended during periods of heavy rainfall where runoff may mobilise sediments.
- → All disturbed areas must be rehabilitated and stabilised as soon as practicable following completion of the works.
- → Vegetation clearance should be restricted to the relevant development components and indigenous vegetation cover should be maintained as far as practically possible. Furthermore, it is recommended that natural fynbos vegetation be used predominantly for garden establishment, including appropriate local indigenous lawn grass, to contribute towards conservation of the wildlife of the region.
- → No invasive alien plant species may be used for landscaping or rehabilitation purposes.
- → A conservancy tank is proposed. Therefore, it is recommended that monitoring of sewerage collection tanks should occur to ensure no leakage and ensure that no leakages occur when sewerage collection tanks are emptied. The disposal of sewage must at all times comply with the requirements of Sections 22 and 40 of the National Water Act of 1998, (Act 36 of 1998).
- → When a conservancy tank is used for the disposal of sewerage, the Breede-Olifants Catchment Management Agency (BOCMA) must be furnished with a signed copy of the contract between the contractor and/or the municipality which is appointed to pump the conservancy tank.
- → The tank must be provided with a fresh air inlet and an intercepting grease trap.

- → The tank must have an airtight manhole cover to allow access to the tank for the removal and safe disposal of the tank contents.
- → No industrial waste or refuse may be discharged into the conservancy tank except by written agreements with the relevant authorities.
- → The size of the conservancy tank must be determined by both the frequency of removal of its contents to the local Wastewater Treatment Works and by the quantity of sewage anticipated from the above-mentioned project.
- → The contents of the tank must be removed by a vacuum tanker and conveyed to a local WWTW that is capable of processing the volume and contents of the conservancy tank.
- → The contingency plan including a system backup, consideration to any blockage in pipes, and prevention of storm water or groundwater (if applicable) ingress must be drawn up to protect against overflow of the conservancy tank.
- → As per above, ingress of storm water or groundwater (if applicable) into the conservancy tank must be prevented. Consider installing a grey water system, as washing/dishwashing machines require the capacity of the conservancy tank to be increased.
- → Rainwater harvesting systems should be installed to reduce runoff volumes.
- → External lighting associated with the development should be minimised and directed away from the estuarine environment to reduce disturbance to estuarine fauna and avifauna.

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

- → Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat.
- → Mark and protect occupied patches as no-go areas during and after construction.
- → Align dwellings and infrastructure away from the few lower, more open fynbos patches that may be marginally suitable for korhaan or bustard activity.
- → Secure long-term management of river edge natural habitat through stewardship or conservation agreements.
- → Regularly survey katydid populations post-construction to verify persistence and recolonisation.
- → Establish indicator taxa monitoring to detect changes in population presence or habitat quality.
- → Actively restore and reseed disturbed patches post decommissioning to return invertebrate habitat function.
- → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment.
- → Limit human and pet activity in marginal open patches and restrict additional disturbance near sensitive zones.
- → Consider assigning all retained natural habitat (~70% of site) to a formal conservation status, such as a biodiversity stewardship agreement, to ensure long-term ecological management.
- → Enforce pet curfews at night and discourage free-ranging cats and dogs to limit predation and disturbance to birds, reptiles and amphibians.
- → Adopt dark-sky compliant lighting (low-spectrum, full cut-off fittings, shield river-facing lights) to reduce disturbance to nocturnal fauna and birds.
- → Prohibit impermeable fencing; if fences are required, ensure wildlife-permeable design (≥30 cm ground clearance, no mesh smaller than 100×100 mm).
- → Reduce proposed jetties from two to a single low-intensity jetty to limit repeated disturbance pulses.
- → Maintain a no-work buffer at reed margins and river edges during construction; enforce quiet hours at dusk and dawn to protect hunting harriers and roosting terns.
- → Construction activities near sensitive faunal habitat must avoid dusk and dawn periods to reduce disturbance to hunting harriers, roosting terns, and other sensitive bird species.
- → Erosion and sediment control measures must be implemented throughout construction to prevent sedimentation and pollution of adjacent aquatic systems.

→ Stormwater management measures must ensure that runoff from developed areas does not directly discharge into aquatic habitats without appropriate attenuation and treatment.
→ Sensitive aquatic areas and ecological buffer zones must be demarcated prior to construction and monitored throughout the construction period.
→ Construction footprints must be strictly limited to approved development areas to avoid unnecessary disturbance of natural vegetation and riparian habitat.
→ Rehabilitation of temporarily disturbed areas must commence immediately following construction to reduce long-term ecological impacts and prevent erosion or invasive species establishment.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

It is the Environmental Assessment Practitioner's finding that the proposed development on Portion 4 of Farm 643 should be authorised, subject to the full implementation of the recommended impact management and mitigation measures provided by the appointed specialists.

The property is privately owned by Cheddles (Pty) Ltd, representing two brothers who seek to establish two single residential dwellings House 1 and House 2 on their rural property situated west of Stanford, outside the urban edge and along the upper reaches of the Klein Rivier. The proposed development footprint has been deliberately designed to avoid environmentally sensitive areas and to limit disturbance.

All essential service infrastructure will be off grid, with water sourced from groundwater under a Schedule 1 domestic use, and sewage managed through a closed conservancy tank serviced by the Overstrand Municipality. Importantly, the residential dwellings, conservancy tanks, and all associated infrastructure will be positioned above the 5 m contour, more than 100 m from the High-Water Mark of the watercourse, and more than 32 m from the Klein Rivier, thereby avoiding flood-prone and ecologically sensitive riparian zones. Whereas the pathway to the estuary and the jetty, as is inherent to their function, must be located within close proximity to the water's edge.

Additional specialist studies including the Aquatic Biodiversity Compliance Statement was undertaken and included additional mitigation measures which are crucial for the protection of the estuarine environment. The botanical specialist confirmed that the vegetation on site is of low ecological sensitivity, with no presence of Agulhas Limestone Fynbos or any plant Species of Conservation Concern. The Western Cape Biodiversity Spatial Plan's (2023) CBA1 mapping was found to be inaccurate for this property, with the appropriate classification more aligned with ESA2 or ONA. Similarly, the faunal specialist determined the Site Ecological Importance to be low, with impacts manageable through appropriate mitigation.

Based on these assessments and considering that the preferred layout (Alternative 4) successfully avoids ecologically sensitive areas and integrates all specialist recommendations, the development can be undertaken in an environmentally responsible manner.

If authorised, the following conditions should apply to ensure the development proceeds in a sustainable and environmentally compliant manner:

→ Keep development outside the 50 m no-go buffer surrounding mapped katydid habitat.
→ Maintain all permanent structures and service infrastructure above the 5 m contour and more than 100 m from the High-Water Mark of the Klein Rivier.
→ Limit vegetation clearing strictly to the development footprint and retain at least 70% of the property under natural vegetation cover to maintain ecological connectivity.
→ Implement an alien vegetation control programme throughout the property, including long-term monitoring and clearing of invasive species.
→ Avoid disturbance to mature wild olive trees and other structurally significant indigenous vegetation.

→ Design and construct the jetty in a manner that minimises watercourse disturbance, and ensure no infilling, excavation, or pollution occurs within the river. → Implement all faunal protection measures, including pre-construction walk-throughs, no-go areas, and strict management of construction activities to avoid harm to Species of Conservation Concern. → Use alien clearing and appropriate fire management to preserve a patchy vegetation structure, favouring species sensitive to tall, dense shrub encroachment. → The provisions and management objectives of the Klein River Estuarine Management Plan must be adhered to at all times for activities within and adjacent to the Klein River Estuary. → Construction of the jetty and pathways must be undertaken using low-impact methods and minimal machinery where feasible. → Prior to the commencement of construction, the estuary and its associated buffer (25 m) must be clearly demarcated on site using temporary fencing and/or danger tape, and workers must be instructed that no access, disturbance, or storage of materials may occur within this area, apart from the development of the footpath and the jetty.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.
N/A	

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.
The holder must commence the listed activities on site within a period of five (5) years from the date of issue of this Environmental Authorization. The development must be concluded within ten (10) years from the date of commencement of the first listed activity. Conduct Environmental Audits yearly during the duration of construction with one final construction audit at conclusion of construction.	

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.
During the construction phase, non-potable water sources such as greywater or harvested rainwater will be prioritised for dust suppression, concrete mixing, and vegetation irrigation where feasible. Contractors will be required to use water-saving construction practices and to avoid any unnecessary water use.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.
On site separation, reduction and reuse should be encouraged in the construction and operational phases with the aim to reduce waste to landfill.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

Alternative energy options are explored to encourage off the grid sources.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

Note: Duplicate this section where there is more than one Applicant.

I…Hedley Gerhardt (Cheddles Pty Ltd)., ID number …… 2023/506072/07 …in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;

- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;

- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;

- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;

- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;

- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

02/06/2026

Signature of the Applicant: Date:

Cheddles (Pty) Ltd

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I **MICHELLE NAYLOR** EAP Registration number **2019/698** as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

16-01-2026

Signature of the EAP: Date:

Lornay Environmental Consulting

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

I ……, EAP Registration number …….. as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

Lornay Environmental Consulting

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Jan A Venter, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

27/05/2026

Signature of the EAP: Date:

Wildlife Conservation Decision Support

Name of company (if applicable):

Lornay Environmental Consulting

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Kimberley van Zy, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

KvanZyl — 3 June 2026

Signature of the EAP: Date:

Delta Ecology

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I ..... David McDonald....., as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

03 June 2026

Signature of the ~~EAP:~~ Date:

Bergwind Botanical Surveys & Tours CC

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST

I ……., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):