



LORNAY
ENVIRONMENTAL CONSULTING

SITE SENSITIVITY VERIFICATION REPORT (SSVR)

Proposed Residential dwellings and Associated infrastructure,
Portion 4 of the Farm 643, Wortelgat Road, Stanford

June 2026

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

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1. INTRODUCTION

Chaddles (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 (EA) application process in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) 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 Estuary, 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 the Coastal Protection Zone Environmental Management Overlay Zone (EMOZ) of the Overstrand Local Municipality.

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, characteristic 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.



Figure 1. Locality of subject property

1.1 Proposed Development

The development will occupy an area of approximately 4 950 m² within the broader 13.53-hectare property and consists of the following infrastructure components:

- **House 1 (primary residential dwelling):** approximately 1 662 m², partially within the footprint of an existing disturbed access road, positioned above the 5 m contour line.
- **House 2 (primary residential dwelling):** approximately 1 220 m², positioned above the 5 m contour line and outside the 50 m no-go buffer for confirmed Mute Winter Katydid habitat.
- **Manager's Cottage:** approximately 1 000 m², within a previously disturbed area.
- **Gatehouse:** approximately 595 m², at the main site access point.
- **Swimming pool, fire pit, and pedestrian pathways:** approximately 420 m² combined, below the 5 m contour within previously disturbed areas.
- **Jetty:** 53 m², providing controlled low-impact access to the Klein River Estuary, designed in accordance with CapeNature guidelines and the requirements of the Coastal Protection Zone EMOZ.
- **Internal access roads:** less than 1 000 m in total length, maximum 4 m width, utilising existing disturbed pathways.
- **Water supply:** sourced from an existing borehole for domestic use (Schedule 1, National Water Act).
- **Electricity:** off-grid roof-mounted solar photovoltaic systems for all dwellings.
- **Sewage:** sealed conservancy tank (minimum 6 000 litre capacity), emptied by a licensed contractor to a registered municipal wastewater treatment facility.

All bulk and permanent residential infrastructure has been positioned above the 5 m contour line and more than 32 m landward of the nearest aquatic feature. Only the pedestrian footpath and the jetty encroach into the Estuarine Functional Zone (EFZ) of the Klein River Estuary.

| Theme | Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|--|-----------------------|------------------|--------------------|-----------------|
| Agriculture Theme | | X | | |
| Animal Species Theme | | X | | |
| Aquatic Biodiversity Theme | X | | | |
| Archaeological and Cultural Heritage Theme | | | | X |
| Civil Aviation Theme | | | | X |
| Defence Theme | | | | X |
| Paleontology Theme | X | | | |
| Plant Species Theme | | | X | |
| Terrestrial Biodiversity Theme | X | | | |

Table 2: Environmental Theme Sensitivities – Screening Tool Classification and Verified Site Sensitivity.

| Environmental Theme | Screening Tool Classification | Verified Site Sensitivity | Assessment Outcome |
|-----------------------------|-------------------------------|---------------------------|--|
| Agricultural | High | Low | The property and adjacent agricultural lands have not been actively farmed for many years and are not suitable for intensive agriculture. No rezoning is proposed; the property retains its Agricultural Zoning. No further assessment is required. |
| Animal Species | High | Low-Medium | A Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment was undertaken by Venter (2025). Eleven (11) animal species of conservation concern (SCC) were identified as potentially occurring on the property. Field verification confirmed three (3) SCC on-site: the Mute Winter Katydid, Western Leopard Toad, and African Marsh Harrier. A minimum 50 m no-go buffer has been established around all confirmed Mute Winter Katydid habitat. The preferred development layout (Alternative 4) positions House 2 and all bulk infrastructure outside this buffer. Residual faunal impacts have been reduced from Medium–High (Alternative 2) to Low–Medium (Alternative 4) following design refinements. |
| Aquatic Biodiversity | Very High | Low | 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 |

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| | | | <p>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).</p> <p>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 <i>Phragmites australis</i> 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.</p> <p>The only development components encroaching into the EFZ are the proposed jetty (53 m²) 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.</p> |
| Archaeological & Cultural Heritage | Low | Low | No Heritage Impact Assessment is required. The proposal does not trigger the submission |

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|---------------------------------|------------------|---------------|---|
| | | | of a Notice of Intent to Develop to Heritage Western Cape. The standard chance-find procedure will be implemented during construction. |
| Civil Aviation | Low | Low | The proposed activity is in line with the existing agricultural land use zoning. No additional impacts to this theme are expected. No further assessment is required. |
| Defence | Low | Low | The proposed activity is in line with the existing agricultural land use zoning. No additional impacts to this theme are expected. No further assessment is required. |
| Palaeontology | Very High | Medium | Portion 4 of Farm 643 is located within an area of very high palaeontological sensitivity. However, given the small scale and low-impact nature of the proposed residential development, no significant excavation or earthworks beyond typical construction foundations are planned, and much of the site has been previously disturbed. A full Palaeontological Impact Assessment (PIA) is therefore not required. The standard chance-find procedure will be strictly implemented during all ground-disturbing activities. |
| Plant Species | Medium | Low | The botanical specialist confirmed that no plant species of conservation concern (SCC) were encountered within the study area. The principal reason is that the vegetation type on the property is not Agulhas Limestone Fynbos (notwithstanding the screening tool mapping), and the sensitive species identified by the screening tool do not occur on the property. The plant species assessment is integrated into the Terrestrial Biodiversity Impact Assessment. |
| Terrestrial Biodiversity | Very High | Low | The site is mapped as Agulhas Limestone Fynbos (Critically Endangered) and as CBA 1 under the WCBSP (2023), triggering a Very High screening classification. However, specialist ground-truthing confirmed that Agulhas Limestone Fynbos is absent from the property and that the vegetation is not CBA 1. The vegetation is moderately transformed following historical agricultural disturbance. The botanical specialist |

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| | | | assessed the overall impact as low negative, subject to mitigation measures including restriction of clearance to the minimum necessary, rehabilitation with locally indigenous fynbos species, and prohibition on alien invasive plant species. |
| Socio-Economic | Low | Low | The proposed activity is small-scale and consistent with surrounding land uses. No significant socio-economic impacts are anticipated. No further Socio-Economic Impact Assessment is required. |

4. BUFFER ZONES DETERMINED BY SPECIALIST ASSESSMENTS

The following buffer zones have been determined by specialist assessments and incorporated into the preferred development layout (Alternative 4) and the Maintenance Management Plan (MMP):

Table 3: Specialist-Determined Buffer Zones

| Environmental Feature / Species | Buffer Distance | Phase | Source / Authority |
|---|--|----------------------------|---|
| Klein River Estuary – Estuarine Functional Zone (EFZ) | 25 m | Construction | Buffer Zone Tool (Macfarlane & Bredin, 2017); ABCS (Morton & van Zyl, 2026) |
| Klein River Estuary – Estuarine Functional Zone (EFZ) | 15 m | Operational / Long-term | Buffer Zone Tool (Macfarlane & Bredin, 2017); ABCS (Morton & van Zyl, 2026) |
| Mute Winter Katydid (Libanasidus vittatus) – confirmed habitat | 50 m (no-go buffer) | Construction & Operational | Faunal Specialist Assessment (Venter, 2025); incorporated into Alternative 4 layout |
| Nearest freshwater feature (general) | >32 m (confirmed separation distance – all primary infrastructure) | All phases | ABCS ground-truthing (Morton & van Zyl, 2026) |
| 5 m contour line – Klein River Estuary | All bulk/permanent infrastructure above 5 m contour | All phases | Site layout design requirement; confirmed in preferred Alternative 4 |
| High-Water Mark (HWM) | >100 m (bulk/permanent infrastructure); only jetty (53 m ²) and footpath below HWM | All phases | Site layout design requirement; Coastal Management Line compliance |

5. SPECIALIST ASSESSMENTS

Based on the classification of environmental sensitivities by the national web-based environmental screening tool (DFFE, 2026) and the findings of the SSVR process, the following specialist assessments were identified as required and have been undertaken. Detailed findings are presented in Sections 5.1–5.3 below.

Table 4: Specialist Assessments

| Specialist Assessment | Status | Key Findings / Notes |
|--|------------------|--|
| Terrestrial Biodiversity & Plant Species Impact Assessment (McDonald, 2025 – Bergwind Botanical Surveys & Tours CC) | Completed | Agulhas Limestone Fynbos confirmed absent. No plant SCC identified. Vegetation is a moderately transformed, undescribed shrubland formation. Overall impact: Low Negative. No biodiversity offset required. Site Ecological Importance: Low. |
| Terrestrial Biodiversity Impact Assessment Addendum (McDonald, 2026 – Bergwind Botanical Surveys & Tours CC) | Completed | Confirmed that revised Alternative 3/4 layout introduces no change in botanical impact level (Low Negative) from the primary assessment. Alternative 4 layout is acceptable from a botanical and terrestrial biodiversity perspective. |
| Faunal Impact Assessment (Venter, 2025 – Wildlife Conservation Decision Support) | Completed | High sensitivity confirmed. 11 screening-tool SCC assessed; 3 confirmed on-site: Mute Winter Katydid (VU, 43 individuals at ~1.17/ha), Western Leopard Toad (EN), African Marsh Harrier (VU). SEI: Medium. 50 m no-go buffer for Brinckiella aptera habitat. Residual impact reduced from Medium–High (Alt. 2) to Low–Medium (Alt. 4). |
| Faunal Impact Assessment Addendum (Venter, 2026 – Wildlife Conservation Decision Support) | Completed | Alternative 4 (removal of slipway, retention of single jetty) supported from a faunal perspective. 25 m construction / 15 m operational buffers for Klein River Estuary also endorsed from faunal perspective. All Venter (2025) mitigation measures remain applicable. |
| Aquatic Biodiversity Compliance Statement (ABCS) (Morton & van Zyl, 2026 – Delta Ecology) | Completed | Site sensitivity verified as Low. EFZ delineated ~45 m from residential footprints. Buffer zones: 25 m (construction) and 15 m (operational). Submitted in formal response to BOCMA letter dated 23 February 2026. MMP prepared incorporating all mitigation measures. |
| Landscape / Visual Impact Assessment | Not required | Low-profile, single-storey dwellings integrated into the rural landscape. No formal VIA required. |
| Archaeological & Cultural Heritage Impact Assessment | Not required | Low sensitivity. Standard chance-find procedure applies during construction. |
| Palaeontological Impact Assessment | Not required | Very High screening classification but small-scale low-impact development with extensive prior disturbance. Formal PIA not required. Chance-find procedure applies. |
| Socio-Economic Impact Assessment | Not required | Small-scale development consistent with surrounding land uses. No significant impacts anticipated. |

5.1 Terrestrial Biodiversity Impact Assessment

Dr David J. McDonald of Bergwind Botanical Surveys & Tours CC was appointed to conduct the Terrestrial Biodiversity Impact Assessment. A field survey was conducted on 5 October 2025, supplemented by iNaturalist database records and consultation with regional vegetation expert Mr Sean Privett. An Addendum was issued on 15 January 2026 in response to the revised development layout.

Vegetation Type and VEGMAP Classification

The national VEGMAP (SANBI, 2024) classifies the entire property as Agulhas Limestone Fynbos (Critically Endangered). This classification is disputed and confirmed as incorrect by the botanical specialist. The underlying geology of the site is the Ceres Subgroup, Bokkeveld Group (shale and mudstone); no coastal limestone deposits occur on the site. Mr Sean Privett, who has extensively mapped vegetation in the Stanford–Agulhas region, confirmed that the vegetation is NOT Agulhas Limestone Fynbos. The vegetation is more akin to Eastern Rùens Shale Renosterveld but does not fit easily into any described vegetation type and is best described as an undescribed shrubland formation arising from historical agricultural disturbance. The specialist concluded that the vegetation is not Critically Endangered and that the site should not be classified as CBA1 in the WCBS.

Vegetation Description

Two main vegetation sub-types were identified on the property. The low-lying riparian floodplain of the Klein River (below approximately 5 m AMSL) is dominated by *Phragmites australis* (Common Reed) reedbeds along the riverbank, with the floodplain strongly dominated by *Stenotaphrum secundatum* (buffalo grass) with emergent shrubs including *Gymnosporia buxifolia*, *Searsia glauca*, *Searsia rehmanniana*, *Olea europaea subsp. cuspidata*, and *Melanthus major*. Further upslope, the vegetation comprises dense mid-high to tall shrubland dominated by *Passerina corymbosa*, *Gnidia squarrosa*, and *Muraltia spinosa*, with a dense understorey including several *Helichrysum* spp. and both indigenous and exotic grasses. The matrix shrubland is punctuated by dense thickets of *Searsia crenata* and *Searsia glauca*, with scattered *Olea europaea subsp. cuspidata* trees. Parts of the upland shrubland are old and moribund, typical of vegetation in need of fire for rejuvenation. Key species recorded on the property include: *Aspalathus hispida*, *Berkheya rigida*, *Carpanthea pomeridiana*, *Chrysocoma ciliata*, *Disphyma crassifolia*, *Helichrysum cymosum*, *Metalasia densa*, *Moraea miniata*, *Pelargonium capitatum*, *Salvia africana*, *Salvia lanceolata*, *Searsia glauca*, *Sparaxis bulbifera*, and *Zantedeschia aethiopica*, among others. One protected Milkwood tree (*Sideroxylon inerme*) was recorded but would not be affected by the proposed development.

Conservation Status and Site Ecological Importance

No plant species of conservation concern (SCC) were identified within the study area. The plant species listed by the screening tool as sensitive all pertain to Agulhas Limestone Fynbos and none were found on the property. The ecosystem is mapped as Critically Endangered by the RLE (SANBI, 2022); however, this classification is erroneous as it is based on the incorrect VEGMAP classification. The ecosystem should be mapped as Least Concern. The WCBS classification of CBA1 is similarly erroneous; the property should be classified as at most Ecological Support Area 2 (ESA2) or Other Natural Area (ONA). The Site Ecological Importance (SEI) was calculated as LOW (Biodiversity Importance: Low; Receptor Resilience: Medium).

Impact Assessment Outcome

The direct impact of the proposed development on terrestrial vegetation (Alternative 4 / Preferred) is assessed as Low Negative for all phases, subject to mitigation. This applies to both the construction and operational phases. No biodiversity offset is required. Key mitigation measures recommended by the botanical specialist include: avoiding old and well-established trees (particularly wild olive *Olea europaea subsp. cuspidata*); restricting vegetation clearance to the minimum necessary; rehabilitating disturbed areas with locally indigenous species; and clearing alien invasive plants. The

Addendum (McDonald, 15 January 2026) confirmed that the revised Alternative 4 layout introduces no change in the level of botanical impact (Low Negative) from that determined in the primary assessment.

5.2 Faunal Impact Assessment

Prof Jan A. Venter (SACNASP Reg. No. 400111/14) of Wildlife Conservation Decision Support was appointed to conduct the Terrestrial Animal Site Sensitivity Verification and Species Specialist Assessment. Field surveys were conducted on 16, 25, and 26 August 2025 using meandering diurnal and nocturnal surveys, point counts, and species-specific detection protocols. The Project Area of Influence (PAOI) included a 300 m buffer for birds and larger mammals, and a 100 m buffer for smaller taxa. A desktop review was supported by SABAP, iNaturalist, GBIF, and SANBI datasets. A Faunal Addendum was issued on 27 May 2026 in response to the revised Alternative 4 layout.

Screening Tool Assessment and Animal SCC

The DFFE screening tool (2024) identified the site as High sensitivity under the Animal Species Theme. Eleven (11) animal species of conservation concern were identified as potentially occurring on the property (see Table 5 below). Field verification confirmed or strongly supported the presence of the following:

Table 5: Animal Species of Conservation Concern – Screening Tool List and Field Verification Outcome

| Species | Conservation Status | Screening Tool Sensitivity | Field Verification Outcome |
|---|---------------------|----------------------------|--|
| Mute Winter Katydid (<i>Brinckiella aptera</i>) | Vulnerable (VU) | Medium | CONFIRMED – 43 individuals recorded; density ~1.17/ha in central habitat. Habitat mapped. 50 m no-go buffer established. |
| Western Leopard Toad (<i>Sclerophrys pantherina</i>) | Endangered (EN) | Medium | SUPPORTED – research-grade iNaturalist roadkill record adjacent to property; suitable breeding and foraging habitat confirmed. |
| African Marsh Harrier (<i>Circus ranivorus</i>) | Vulnerable (VU) | High | CONFIRMED – observed hunting over estuarine reedbeds during field surveys. |
| Black Harrier (<i>Circus maurus</i>) | Endangered (EN) | High | LIKELY – suitable habitat within PAOI; regional records. Not confirmed on-site during surveys. |
| Denham’s Bustard (<i>Neotis denhami</i>) | Vulnerable (VU) | High | POSSIBLE – suitable open habitat present; considered possible within the wider PAOI. |
| Southern Black Korhaan (<i>Afrotis afra</i>) | Vulnerable (VU) | Medium | POSSIBLE – suitable habitat present; considered possible within the PAOI. |
| Southern Adder (<i>Bitis armata</i>) | Vulnerable (VU) | Medium | POSSIBLE – suitable fynbos habitat present; considered possible within the PAOI. |
| Great White Pelican (<i>Pelecanus onocrotalus</i>) | Least Concern | High | POSSIBLE – Klein River Estuary provides suitable foraging habitat. |

| | | | |
|---|-----------------|--------|---|
| Caspian Tern (<i>Hydroprogne caspia</i>) | Least Concern | Medium | POSSIBLE – Klein River Estuary provides suitable foraging and roosting habitat. |
| Martial Eagle (<i>Polemaetus bellicosus</i>) | Endangered (EN) | High | POSSIBLE – broad-ranging species; occasional occurrence within wider PAOI possible. |
| Yellow-winged Agile Grasshopper (<i>Aneuryphymus montanus</i>) | Data Deficient | Medium | UNCONFIRMED – suitable habitat present; considered possible within the PAOI. |

Site Ecological Importance (Faunal)

The Site Ecological Importance (SEI) was assessed in accordance with SANBI (2020) guidelines as MEDIUM, based on High Conservation Importance (due to confirmed SCC and habitat for Critically Endangered vegetation), Medium Functional Integrity (approximately 70% intact natural cover), and Low–Medium Receptor Resilience for key SCC such as the Mute Winter Katydid and Western Leopard Toad. The property also plays a functional role in maintaining faunal connectivity between the Klein River Estuary and the surrounding Agulhas Limestone Fynbos landscape, further supported by observations of Cape Clawless Otter and high avifaunal richness.

Design Revisions and Impact Reduction

In direct response to the findings of the original faunal assessment (Venter, 2025), two critical avoidance-based design refinements were implemented in the preferred Alternative 4 layout: (1) reduction of jetty infrastructure from two to one, substantially decreasing disturbance pressure on estuary-associated fauna; and (2) relocation of all residential building infrastructure outside the recommended 50 m no-go buffer around confirmed *Brinckiella aptera* (Mute Winter Katydid) habitat, thereby eliminating direct habitat loss for this SCC. These refinements constitute avoidance, the highest tier of the SANBI (2020) mitigation hierarchy, and substantially reduce predicted impacts relative to the original layout. With these revisions and full implementation of mitigation, residual faunal impacts are reduced from Medium–High (original layout) to Low–Medium (Alternative 4).

The Faunal Addendum (Venter, 27 May 2026) confirmed that Alternative 4 is supported from a faunal specialist perspective. The removal of the slipway is specifically endorsed, as a slipway would have introduced additional physical disturbance along the estuary edge and increased operational disturbance associated with launching, movement, trampling, and noise. The informal pathway to the jetty is acceptable provided it remains narrow, informal, permeable, and aligned along the least-sensitive route. It must not be widened, surfaced, hardened, lit, or formalised without further faunal specialist review. The 25 m construction buffer and 15 m operational buffer for the Klein River Estuary are also explicitly endorsed from a faunal perspective.

Key Faunal Mitigation Measures

The following mitigation measures are required by the faunal specialist and form part of the Environmental Management Programme (EMPr) for this development:

- 50 m no-go buffer: No construction, infrastructure, hard road surfaces, or landscaping activities within the demarcated 50 m buffer around confirmed Mute Winter Katydid (*Brinckiella aptera*) habitat. The buffer must be clearly demarcated prior to construction.
- Jetty and estuary edge: Only one jetty (53 m²) is permitted. The pathway to the jetty must remain narrow, informal, and permeable. No slipway or additional estuary-edge structures are permitted without further faunal specialist review.
- Buffer zones: 25 m construction buffer and 15 m operational buffer for the Klein River Estuary must be implemented as minimum requirements, clearly demarcated during construction.
- Western Leopard Toad: Low-level, directional external lighting only; road-crossing awareness signage; escape ramps or features on any walled structures; no use of pesticides near breeding wetlands or drainage pathways.

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- Lighting management: All external lighting must be minimised, directed downward, and shielded from the estuarine environment to reduce disturbance to estuarine birds, foraging bats, amphibians, and other nocturnal fauna.
- Alien plant control: A comprehensive alien invasive plant control programme must be implemented and maintained across the property, targeting species that could compromise SCC habitats.
- Pet management: Domestic pets (particularly cats and dogs) must be strictly managed and may not roam freely across the property or into natural habitat, estuarine areas, or adjacent properties.
- No intensification: The development must be strictly limited to the three proposed dwellings (Houses 1 and 2 and the manager's cottage). Any future densification, additional access routes, or material change to the assessed layout must be referred back to the faunal specialist.
- Biodiversity stewardship: The undeveloped natural area ($\pm 70\%$ of the property) should be considered for formal biodiversity stewardship registration to ensure long-term conservation management.
- Landscape connectivity: Natural faunal movement corridors must be maintained by avoiding barrier fencing across the property where possible, and by installing wildlife-friendly fence designs.
- No development may occur within or expand into the demarcated no-go areas without further specialist review and, where applicable, competent authority approval.

5.3. Aquatic Biodiversity Compliance Statement

An Aquatic Biodiversity Compliance Statement (ABCS) was prepared by Delta Ecology (Morton, R. & van Zyl, K., 2026) in accordance with the Protocol for the Specialist Assessment and Minimum Report Requirements for Environmental Impacts on Aquatic Biodiversity (GN No. 320 of 20 March 2020). A site visit was conducted on 28 April 2026. The ABCS was submitted in formal response to the Breede-Olifants Catchment Management Agency (BOCMA) letter dated 23 February 2026. A Maintenance Management Plan (MMP) was also prepared to address long-term management of infrastructure within and adjacent to the Klein River Estuary EFZ.

The Klein River Estuary covers approximately 1 153 ha, holds a Present Ecological State (PES) of C (Moderately Modified), a High Wetland Ecological Status (WES), and an Estuary Importance Score (EIS) of 93 (Highly Important), ranking it 5th nationally for botanical value, fish biodiversity, and bird biodiversity (Clark et al., 2015). It is classified as Aquatic CBA 1 under the WCBSP (2023) and as a national priority estuary. The EFZ was delineated approximately 45 m downslope from the majority of the residential dwellings' footprint, upstream of the 5 m contour line. The site sensitivity was verified as Low. Key aquatic mitigation measures and the 25 m construction / 15 m operational buffer zones are incorporated into the MMP and the EMPr.

6. PRELIMINARY SITE ASSESSMENT

A preliminary site assessment was undertaken by Lornay Environmental Consulting (Pty) Ltd in conjunction with specialist site visits by Bergwind Botanical Surveys & Tours CC (botanical, 5 October 2025), Wildlife Conservation Decision Support and Delta Ecology. The following key observations were made:

6.1. Topography and General Site Conditions

The site is situated to the north of Wortelgat Road and exhibits a gentle northward slope, descending from approximately 12 m AMSL in the south to approximately 2 m AMSL towards the Klein River Estuary. The site is predominantly north- to northwest-facing. Currently no formal infrastructure is present, although a network of informal dirt tracks intersects the property and provides internal access. These tracks constitute the primary areas of existing disturbance and have been incorporated into the design of the preferred development layout (Alternative 4).

6.2. Geology, Soils, and Climate

The underlying geology is the Ceres Subgroup, Bokkeveld Group (shale and mudstone). No coastal limestone deposits occur on the site. Soils are predominantly of the CA type (strong texture contrast), with soils of limited pedological development (ED type) in the southwest corner. Stanford experiences a warm-summer Mediterranean climate (Köppen Csb) with a mean annual rainfall of approximately 527 mm, mainly in winter (June–August). Mean summer daily maximum temperatures reach 25–26 °C; winter minimum temperatures can drop to approximately 7.8 °C.

6.3. Vegetation and Terrestrial Environment

The proposed development areas are located within a terrestrial environment historically disturbed by agricultural activities. The vegetation is an undescribed shrubland formation (not Agulhas Limestone Fynbos), moderately transformed, comprising dense mid-high to tall shrubland dominated by *Passerina corymbosa*, *Gnidia squarrosa*, *Muraltia spinosa*, and *Searsia spp.*, with a dense understorey. The low-lying riparian floodplain (below 5 m AMSL) is dominated by *Stenotaphrum secundatum* and *Phragmites australis* reedbeds. No plant species of conservation concern were identified within the proposed development footprint. One protected Milkwood tree (*Sideroxylon inerme*) was recorded but will not be affected by the preferred development layout.

6.4. Faunal Habitat and Species of Conservation Concern

Field surveys (August 2025) confirmed high faunal sensitivity, with the property supporting a disproportionately high concentration of SCC relative to its small size. Confirmed SCC include the Mute Winter Katydid (43 individuals at ~1.17/ha in the central portion of the property), the Western Leopard Toad, and the African Marsh Harrier. Several additional SCC are considered highly likely within the PAOI, including Black Harrier and Southern Adder. Strong ecological connectivity between the property and the Klein River Estuary is supported by additional observations including Cape Clawless Otter. The preferred Alternative 4 layout positions all bulk infrastructure outside the 50 m no-go buffer for confirmed Mute Winter Katydid habitat.

6.5. Aquatic Environment and Estuarine Functional Zone

The northern portion of the site is directly associated with the Klein River Estuary. The EFZ is characterised by dense *Phragmites australis* reedbeds fringed by *Stenotaphrum secundatum* and shrubs, marking a clear transition from the terrestrial development site to the estuarine environment. The EFZ was delineated on 28 April 2026 at approximately 45 m downslope from the residential footprints. No watercourse or wetland indicators regulated under NEMA were identified within the primary development footprint. The proposed residential infrastructure is more than 32 m from the nearest freshwater feature. Only the pedestrian footpath and the 53 m² jetty encroach into the EFZ.

6.6. Existing Disturbance

Historical agricultural disturbance across the majority of the property has substantially reduced the ecological significance of the terrestrial development footprint. House 1 is partially positioned within an existing disturbed road footprint. The utilisation of existing informal tracks for access roads minimises the extent of new vegetation clearance required. Approximately 70% of the property will be retained in a natural or near-natural state under the preferred Alternative 4 layout.



Photo 1. Overview of the subject property, showing existing internal access roads.



Photo 2: View of the existing access road covered in secondary grass.



Photo 3: Overview of the northern portion of the property highlighting areas of historical disturbance.



Photo 4: View of the property in the southern boundary adjacent to the Kleinrivier.



Photo 5: View of the subject property illustrating existing road infrastructure traversing the site, indicative of previously disturbed areas.



Figure 3: Vegetation type associated with the subject property – Agulhas Limestone Fynbos. Critically Endangered. Existing internal roads included in the design to reduce the extent of vegetation clearance required.



Figure 4: The map shows that the site is within CBA

7. CONCLUSION

This Site Sensitivity Verification Report confirms the following findings for Portion 4 of Farm Middelburg 643, Stanford, in support of the Basic Assessment process:

- **VEGMAP CLASSIFICATION:** The national VEGMAP classifies the property as Agulhas Limestone Fynbos (Critically Endangered). This classification is confirmed as incorrect by the botanical specialist (McDonald, 2025). The underlying geology is shale and mudstone (Ceres Subgroup, Bokkeveld Group); no limestone is present. The vegetation is an undescribed shrubland formation more akin to Eastern Rùens Shale Renosterveld. The RLE Critically Endangered classification and the WCBSP CBA1 terrestrial classification are consequently also erroneous. The correct classification should be Least Concern / at most ESA2.
- **BOTANICAL IMPACT:** No plant species of conservation concern were identified. The botanical specialist assessed the overall terrestrial biodiversity impact as Low Negative for all phases, subject to mitigation. No biodiversity offset is required. The Site Ecological Importance is Low. The botanical Addendum (McDonald, 15 January 2026) confirmed that the revised Alternative 4 layout does not increase the level of botanical impact.
- **FAUNAL SENSITIVITY:** The site supports a disproportionately high concentration of animal SCC relative to its small size. Three SCC were confirmed on-site: Mute Winter Katydid (*Brinckiella aptera* – VU, 43 individuals), Western Leopard Toad (*Sclerophrys pantherina* – EN), and African Marsh Harrier (*Circus ranivorus* – VU). Additional SCC including Black Harrier and Southern Adder are considered highly likely within the PAOI. The Faunal SEI is Medium.

- **FAUNAL NO-GO BUFFER:** A 50 m no-go buffer has been established around all confirmed Mute Winter Katydid habitat. All bulk and permanent residential infrastructure under Alternative 4 is positioned outside this buffer.
- **FAUNAL IMPACT (ALTERNATIVE 4):** Following the two key avoidance-based design refinements (reduction from two to one jetty; relocation of House 2 outside katydid buffer), residual faunal impacts are reduced from Medium–High (original layout) to Low–Medium (Alternative 4). The Faunal Addendum (Venter, 27 May 2026) confirmed that Alternative 4 is supported from a faunal perspective, subject to strict conditions.
- **AQUATIC BIODIVERSITY:** The Combined Aquatic Biodiversity Theme Sensitivity is classified as Very High by the screening tool (Klein River Estuary; Aquatic CBA 1, WCBSP 2023). Following field-based verification, the aquatic biodiversity sensitivity of the development footprint is confirmed as Low. All primary infrastructure is more than 32 m from the nearest freshwater feature, outside the EFZ, and outside NEMA-regulated freshwater watercourses.
- **ESTUARINE BUFFER ZONES:** A construction buffer of 25 m and an operational buffer of 15 m have been established for the Klein River Estuary (Buffer Zone Tool, Macfarlane & Bredin, 2017). These buffers are also explicitly endorsed from a faunal perspective (Venter, 2026). Only the pedestrian footpath and jetty (53 m²) encroach into the EFZ.
- **INFRASTRUCTURE ABOVE 5 m CONTOUR:** All bulk and permanent residential infrastructure is positioned above the 5 m contour line and more than 100 m landward of the High-Water Mark. The jetty (53 m²) is the only permanent structure below the HWM.
- **KLEIN RIVER ESTUARY IMPORTANCE:** The Klein River Estuary holds a PES of C (Moderately Modified), a High WES, and an EIS of 93, ranking it 5th nationally. No significant long-term impacts on the estuary are anticipated, provided construction and maintenance are undertaken in accordance with the Coastal Protection Zone EMOZ, the Klein River Estuarine Management Plan, the ABCS, and the MMP.
- **NO BIODIVERSITY OFFSET REQUIRED:** Given the corrected vegetation classification (undescribed shrubland, not Critically Endangered), the Low SEI, and the design refinements incorporated into Alternative 4, no biodiversity offset is required under this application.

The following specialist team has been appointed as part of the project:

| Specialist / Role | Organisation | Scope |
|--|-----------------|---|
| Kimberley van Zyl & Robyn Morton SACNASP Reg. No. 117097 | Delta Ecology | Aquatic Biodiversity Compliance Statement |
| Faunal Specialist (Venter, 2025) | To be confirmed | Faunal Impact Assessment (Animal Species) |
| Botanical Specialist | To be confirmed | Terrestrial Biodiversity Impact Assessment |

Yours sincerely,

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