LORNAY
ENVIRONMENTAL CONSULTING

SITE SENSITIVITY VERIFICATION REPORT (SSVR)

Proposed Residential Development on Erf 1469, Erf 1470, Erf 1471, Erf 1473, Erf 1479, Vandyksbaai, Caledon RD.

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Compiled by:
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Client:
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INTRODUCTION

This Site Sensitivity Verification Report has been compiled in support of the proposed residential development on Erven 1469, 1470, 1471, 1473, and 1479 in Van Dyksbaai, located within the Overstrand Local Municipality. The development proposal entails the establishment of 123 residential erven within the urban edge of Van Dyksbaai, an area that is predominantly surrounded by residential land uses and existing infrastructure.

In accordance with the requirements set out in the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) Regulations of 2014 (as amended), the Department of Forestry, Fisheries and the Environment's (DFFE) national web-based screening tool was used to determine the environmental sensitivity of the site. The Screening Tool identified various environmental themes as being of Medium to Very High sensitivity, thereby triggering the need for a Site Sensitivity Verification to confirm or refute these initial classifications through site-specific specialist assessments.

The purpose of this report is to:

- Confirm the actual on-site environmental sensitivities as they relate to the development footprint;
- Determine the need for any additional specialist studies or mitigation measures based on ground-truthed data; and
- Guide the integration of environmental considerations into the layout and design of the proposed development to ensure compliance with relevant environmental legislation.

A team of qualified specialists was appointed to assess the themes identified as sensitive by the Screening Tool, including terrestrial biodiversity, aquatic biodiversity, heritage resources, palaeontology, agricultural potential, and the presence of threatened plant and animal species. This verification process has provided an informed and contextual understanding of the environmental constraints and opportunities of the site, thereby facilitating responsible and sustainable land-use planning.

Figure 1. Location of subject properties

The preliminary layout alternative is as follows and was assessed by all specialists.

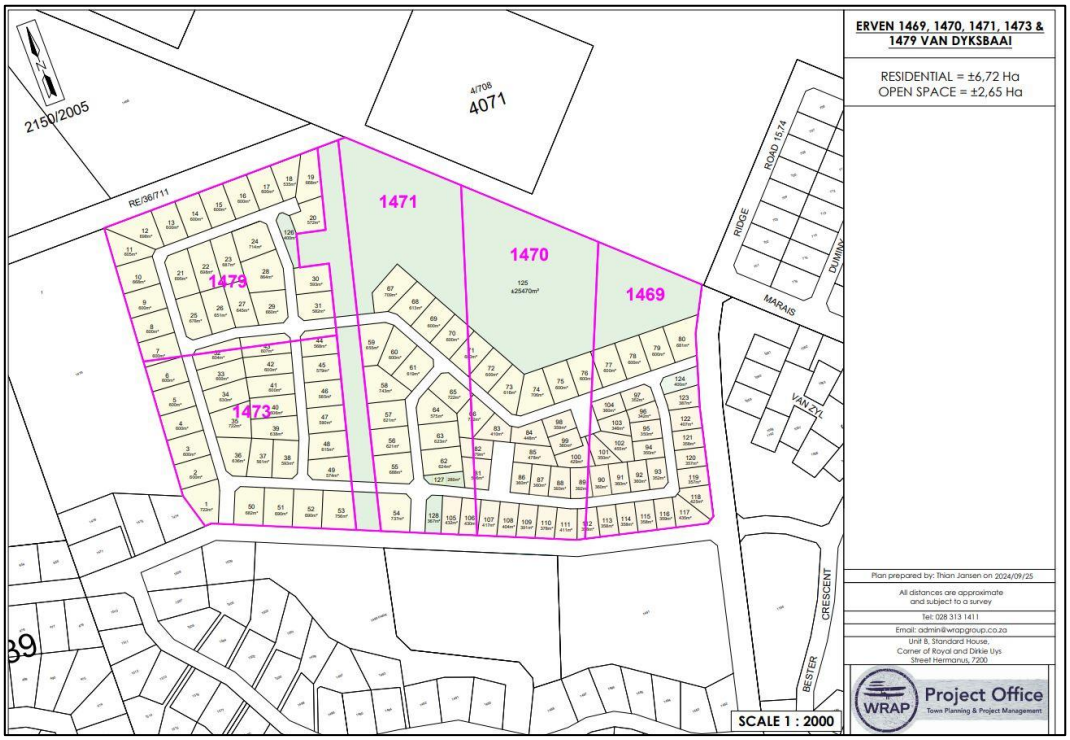

Figure 2. Alternative 3 (PREFERRED) – proposed site plan for the residential development

PURPOSE OF THE REPORT

Lornay Environmental Consulting (Pty) Ltd, was appointed to undertake the required Environmental Authorisation (EA) application process in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) promulgated under the National Environmental Management Act, 1998 (No. 107 of 1998; NEMA), for the proposed project.

Based on the classification selected and the known impacts with the proposed development, the Screening Tool lists the following specialist assessments to be included in the BAR process and / or motivation as to why these specialists are not applicable to the site

- → Landscape / Visual Impact Assessment
- → Archaeological and Cultural Heritage Impact Assessment
- → Palaeontology impact assessment
- → Terrestrial Impact Assessment
- → Aquatic Biodiversity Impact Assessment
- → Socio-Economic Impact Assessment
- → Plant Species Assessment
- → Animal species assessment

Table 1: Environmental Sensitivities on the property

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			

Agricultural Theme - High Sensitivity - The property is located within the demarcated urban edge, and the surrounding land use is designated for residential zoning. An Agricultural Compliance Statement was undertaken by Soil ZA, which disputes the high sensitivity classification assigned by the screening tool. The area is instead rated as medium agricultural sensitivity with a land capability classification of 6, based on its agricultural production potential and current land use. The assessment concludes that the proposed development is acceptable, as it results in a negligible loss of future agricultural production potential.

Animal Species Theme - High Sensitivity - An Animal Species theme was covered in the Terrestrial Biodiversity Impact Assessment. The project area is considered near-intact Overberg Dune Strandveld fragmented by firebreaks with a portion in the northwest infested with alien invasive trees (Acacia cyclops). The property is bordered by roads on three sides and a house and vacant small holding on the other. The northern boundary, Dyer Street, is a busy road that separates the project area from the natural habitat to the north. The near-intact habitat likely hosts various lizard, snake and tortoise species, terrestrial amphibians, small antelope and carnivores (Genets, Mongoose, caracal) and various rodents. During the field survey, the following species were either observed or evidence thereof, the Common Duiker (individual and midden), Cape Molerat (mounds and skull), Mongoose (burrows), Cape Porcupine (burrows and foraging sites), Yellow-throated Plated Lizard, Red-sided Skink, Angulate Tortoise (shells) and 20 species of bird. The DFFE Screening Tool Report identified the project area as having a high sensitivity due to the likely occurrence of four bird SCC and one reptile SC. Based on the findings from the field survey, only the Southern Adder (VU) and Cape Dwarf Chameleon (NT) have a high likelihood of occurrence in the project area.

Aquatic Biodiversity Theme - Very High Sensitivity – According to the Department of Forestry, Fisheries, and the Environment (DFFE) national web-based environmental screening tool report generated for the study area, the Combined Aquatic Biodiversity Theme Sensitivity is classified as “Very High” (DFFE, 2024). The classification trigger is the location of mapped Western Cape Biodiversity Spatial Plan (WCBSP, 2017) aquatic Ecological Support Areas 1 (ESAs) within the area.

Given that the study area may have potential aquatic biodiversity constraints, Delta Ecology was appointed by to undertake an aquatic biodiversity assessment with the aim of (1) verifying the site sensitivity with regards to aquatic biodiversity; and (2) clarify aquatic biodiversity constraints within the study area.

During the assessment, it was determined that there were no mapped rivers, or natural / artificial wetlands within the proposed study area, or within 500 m thereof, according to the National Wetland Map Version 5 (NWM5) (SANBI, 2018), the National Freshwater Ecosystem Priority Area (NFEPA) spatial data (CSIR, 2011), as well as the NGI topographical and watercourse information. According to the WCBSP (2017), the study area overlays an aquatic Ecological Support Area (ESA) 1 and 2 due to a “Coastal Corridor, Watercourse”.

After the field assessment, it was determined that there were no watercourse conditions present within the study area, i.e. no topographical (riverbed/channel or banks), hydric soils, hydrophytic or riparian vegetation. No criteria used to identify a watercourse as per the National Water Act (NWA) (Act 36 of 1998) were present within the study area.

Soil samples taken from various locations within the study area indicated well-drained, light brown to greyish sand. Dominant vegetation consisted of terrestrial species *Searsia lucida* (Blinktaaibos), *Searsia glauca* (Blue Kunirhus), *Satyrium carneum* (Pink Satyre), *Agathosma capensis* (Cape Buchu) and *Helichrysum patulum* (Honey Everlasting) among others. The alien invasive *Acacia cyclops* (Rooikrans Wattle) was also present within the study area.

The study area was deemed to be of "Low" aquatic sensitivity given the lack of watercourses present.

Archaeological and Cultural Heritage Theme - Low Sensitivity **-** A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape, and the correspondence received confirmed that a Heritage Impact Assessment (HIA) that satisfies the provisions of Section 38 (3) of the NHRA be submitted. Following this, a Heritage Impact Assessment covering the archaeological and Heritage Impact Assessment was undertaken by Agency for Cultural Resource Management (ACRM). The assessment highlights that there are fragments of marine shellfish associated with dune mole rat burrowing were encountered in the southwestern portion of the proposed site indicating the possible presence of sub surface archaeological deposits. No cultural remains such as pottery, ostrich eggshell, or any stone tools or flakes were found. Furthermore, no other archaeological occurrences that were encountered across the proposed development site.

Therefore the archaeological resources have been graded as having Low (Grade IIIC) local significance, subject to test excavations to establish the presence/absence of sub-surface deposits.

According to Pether (2024), the proposed development site is on vegetated dunes of the Holocene Strandveld Formation which overlie older calcified dunes of the mid to late Quaternary Waenhuiskrans Formation. Along the South Coast (i.e. the Project Area), the Strandveld Fm. is UNCLASSIFIED, but according to Pether (2024) a MODERATE rating is applicable close to the coast where subfossil bones in archaeological sites occur. The subfossil bones are expected to be of Quaternary/later Holocene age (less than about 7000 years old) and are likely to be mainly members of the extant, modern fauna, but unexpected species which do not belong to the modern/historical fauna may occur, due to fluctuations in the prehistoric palaeo-climate of the region.

As it is likely that only a relatively small volume of Waenhuiskrans Formation deposits will be affected by the proposed development, the anticipated impact is assigned a MODERATE rating.

The only building on the site is a ruined, modern, breeze block borehole structure on Erf 1479. No graves were encountered during the field assessment. Therefore, the indications are that the proposed Van Dyksbaai housing development on Erven 1469, 1470, 1471, 1473, & 1479 does not pose a significant threat to local archaeological and palaeontological heritage resources.

Civil Aviation Theme - High Sensitivity - The proposed development is situated within the urban edge and is in line with the existing residential erven in the vicinity. No additional impacts are expected under this theme, and no further assessment is required**.**

Defence Theme - Low Sensitivity - The proposed development is consistent with the existing developments in the area, and no significant impacts are anticipated. Therefore, no further assessment is necessary**.**

Palaeontology Theme - Very High Sensitivity - The site is situated on vegetated Holocene Strandveld dunes overlying Waenhuiskrans Formation deposits. Although the Screening Tool classifies the sensitivity as "Very High," the Palaeontological Impact Assessment concluded that the expected impact is moderate. Fossil finds, if any, would be of late Quaternary origin and likely consist of extant fauna. Due to limited excavation depth and dune sands overlying fossiliferous layers, the palaeontological risk is low but still warrants monitoring during earthworks.

Plant Species Theme - Medium Sensitivity – The DFFE Screening Tool Report classified the plant species theme of the project area as MEDIUM due to the possible occurrence of forty-eight (48) sensitive plant species. The plant species theme was covered in the Terrestrial Biodiversity Impact Assessment conducted by Biodiversity Africa. It is indicated in the assessment that of the 48 species, four (4) sensitive plant species were confirmed to occur within the project area including three (3) VU species (*Lampranthus fergusoniae, Cynanchum zeyheri, and Athanasia quinquedentata subsp. rigens*), and one (1) NT species (*Asparagus lignosus*). Furthermore, three

(3) SCC have a VERY HIGH likelihood of occurrence and three (3) have a HIGH likelihood of occurrence within the project area as they have been recorded on adjacent properties. As such, the specialist disagrees with the MEDIUM sensitivity rating of the Plant Species Theme as per the DFFE Screening Tool Report and suggests that the plant species theme sensitivity of the Overberg Dune Strandveld and Degraded Areas is reclassified as HIGH due to the confirmed occurrence of SCC, but that the Plant Species Theme Sensitivity of the Acacia Woodland should remain medium.

Terrestrial Biodiversity Theme - Very High Sensitivity - The desktop assessment and field survey confirmed that the project area occurs within Overberg Dune Strandveld. This vegetation type is listed as EN due to its narrow distribution and evidence of ongoing biotic disruption from invasive alien plant species (DFFE, 2022). Despite being listed as EN, 93% (323.2 km2) currently remains intact. The SEI of the Overberg Dune Strandveld was determined to be HIGH. However, it should be noted that portions of Overberg Dune Strandveld within the project area have been modified and degraded due to the establishment of alien invasive plant species and the creation of fire breaks which has resulted in the fragmentation of vegetation.

Table 2: Specialist Assessments Identified as per the Screening Tool

Specialist Assessments	Status/Notes
Landscape/Visual Impact Assessment:	The specialist assessment is not required as per HWC correspondence.
Archaeological and Cultural Heritage Impact Assessment	The Heritage Impact Assessment was undertaken and is attached as **Appendix G3.**
Palaeontological Impact Assessment	This specialist assessment was undertaken and is attached as **Appendix G4.**
Terrestrial Biodiversity Impact Assessment	This specialist assessment was undertaken and is attached as **Appendix G1.**
Aquatic Biodiversity Impact Assessment:	This specialist assessment was undertaken and is attached as **Appendix G2.**
Socio-Economic Impact Assessment:	This assessment was not undertaken as the subject properties lie within the urban edge with residential settlements situated on the east, west and south of the subject properties.
Plant Species Assessment:	This specialist assessment is covered in the Terrestrial Biodiversity Impact Assessment attached as **Appendix G1.**
Animal Species Assessment:	This specialist assessment is covered in the Terrestrial Biodiversity Impact Assessment attached as **Appendix G1.**

PRELIMINARY SITE ASSESSMENT

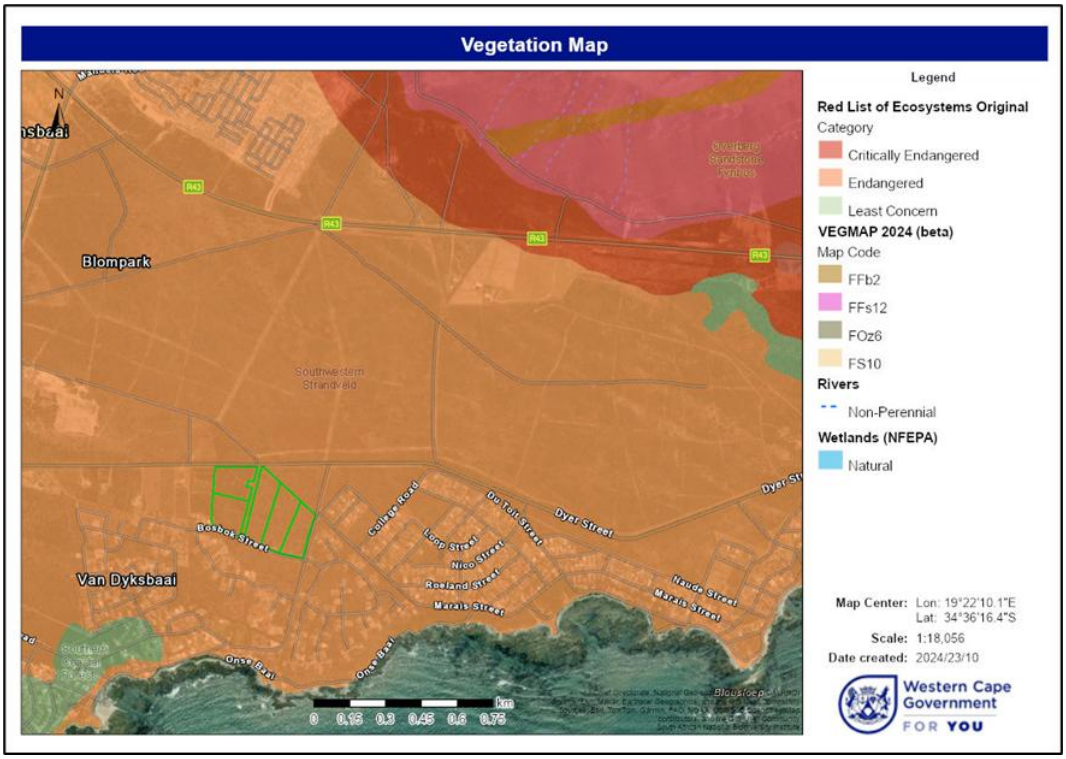

Figure 3: Vegetation type associated with the subject property.

Figure 4: CBA/ ESA Mapping associated with the subject property.

CONCLUSION

Based on the results of the site sensitivity verification process, the initial sensitivity ratings generated by the Department of Forestry, Fisheries, and the Environment (DFFE) Screening Tool have, in several instances, been revised through field assessments and input from qualified specialists. These assessments provided a more accurate understanding of the actual environmental sensitivities present within the study area.

The following specialists were appointed as part of the project team to undertake detailed site assessments and verify the sensitivity themes as required:

- Terrestrial Biodiversity Assessment – Nicole Dealtry; Tarryn Martin; Amber Jackson; Amber Jackson - Biodiversity Africa
- Aquatic Biodiversity Compliance Statement – Kimberley van Zyl & Robyn Morton – Delta Ecology
- Heritage and Archaeological Impact Assessment – Jonathan Kaplan – Agency for Cultural Resource Management (ACRM).
- Palaeontological Impact Assessment – John Pether (ACRM)
- Agricultural Compliance Statement – Johan Lanz – Soil ZA

The findings of the specialist studies confirm that:

Several themes that were initially flagged as high or very high sensitivity were found to have lower actual sensitivity upon field verification.

Certain themes such as Plant and Animal Species, and Terrestrial Biodiversity, retain high sensitivity in specific portions of the site and require careful mitigation and planning.

The site does not contain any watercourses or wetlands, nor does it pose a significant risk to palaeontological or archaeological resources, provided that recommended precautionary measures (such as monitoring) are implemented.

Kind regards,

MICHELLE NAYLOR