SITE SENSITIVITY VERIFICATION & TERRESTRIAL BIODIVERSITY SPECIALIST ASSESSMENT

THE REMAINDER OF ERF 1627, THE ISLAND, SEDGEFIELD

KNYSNA MUNICIPAL AREA

View of the property

Benjamin Walton for Cape Vegetation Surveys

o.b.o. the proponent Rodney Nel Management Services (Pty) Ltd

September 2023 with revision March 2025

STATEMENT OF INDEPENDENCE

I, Benjamin Alan Walton, trading as *Cape Vegetation Surveys*, in terms of section 33 of the NEMA, 1998 (Act No. 107 of 1998), as amended, hereby declare that I provide services as an independent botanical specialist and receive remuneration for services rendered for expressing a factual account of the baseline environment. I have no financial or other vested interest in the project. Botanical information contained in the report may not be copied without the author's consent.

An abridged Curriculum Vitae:

Benjamin Alan Walton

Registered Scientist: Botanical Science (Pr. Sci. Nat.)

SACNASP registration #138424

Experience:

Cape Vegetation Surveys: Consulting Botanist 2017-2024

Western Cape Nature Conservation Board (CapeNature) Scientist: Land Use Advisor for half the Western Cape Province: Central Karoo & Garden Route Districts 2010-2017

Department of Environmental Affairs and Development Planning, Principal Environmental Officer (George) Central Karoo & Garden Route (formerly Eden) Districts 2008-2010

Cape Vegetation Surveys: Consulting Botanist (Cape Town) 2006-2008

Qualification:

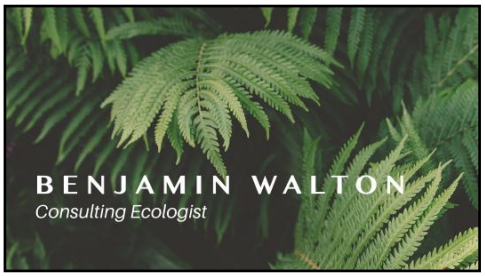
M.Sc. Forestry (Conservation Ecology), Stellenbosch University, 2001- 2006

B.Sc. Botany & Zoology, University of Cape Town, 1986-1989

BENJAMIN WALTON

Consulting Ecologist for Eden & Central Karoo Districts
B.Sc. (Bot.), M.Sc. Forestry (Cons. Ecol.)

phytofundi@gmail.com
081 499 1678
Wilderness



Contents

1 Executive Summary

The author was commissioned to compile a Terrestrial Biodiversity Specialist Assessment of the receiving environment for a Basic Assessment application for environmental authorisation of the proposed mixed-use development and associated infrastructure at the Remainder of Erf 1627 in Sedgefield.

Site inspections were conducted to evaluate the vegetation unit and habitat condition at the receiving environment. The habitat is partly transformed, degraded, and otherwise disturbed with remnant Southern Cape Dune Fynbos (FFd 11) (see Fig. 1); and a Non-terrestrial (Estuarine Functional Zone) wetland area called the Perdespruit. Based on aerial imagery ca. 1956 (see Fig. 2) the property was cleared of vegetation and with passive secondary succession the current vegetation state is composed of common Fynbos elements, with a notable lack of certain floral components. The property is low-lying and generally flat. After a thorough evaluation of the receiving environment the Biodiversity Report hereunder was completed, containing a Site Sensitivity Verification and Terrestrial Biodiversity Specialist Assessment.

Figure 1: Showing a remnant patch of disturbed Southern Cape Dune Fynbos at the property.

2 Terms of Reference

The terms of reference are to conduct a vegetation survey to confirm the vegetation unit and conservation status at the property for a Basic Assessment environmental authorization process for a mixed use development and associated infrastructure in Sedgefield; and describe the vegetation and sensitivity, with reference to Fynbos Forum ecosystem guidelines and NEMA specialist guidelines[1]. This is to inform the environmental impact (botanical and terrestrial sensitivity) of the proposed development activities within Southern Cape Dune Fynbos habitat; and identify risks, suggest mitigation, and make recommendations for the development. The sensitivity of the study area, for the proposed mixed-use development, at the Remainder of Erf 1627 in Sedgefield is described in context of the remaining natural habitat, land use, level of infestation and degradation by Invasive Alien Species and suitability of development.

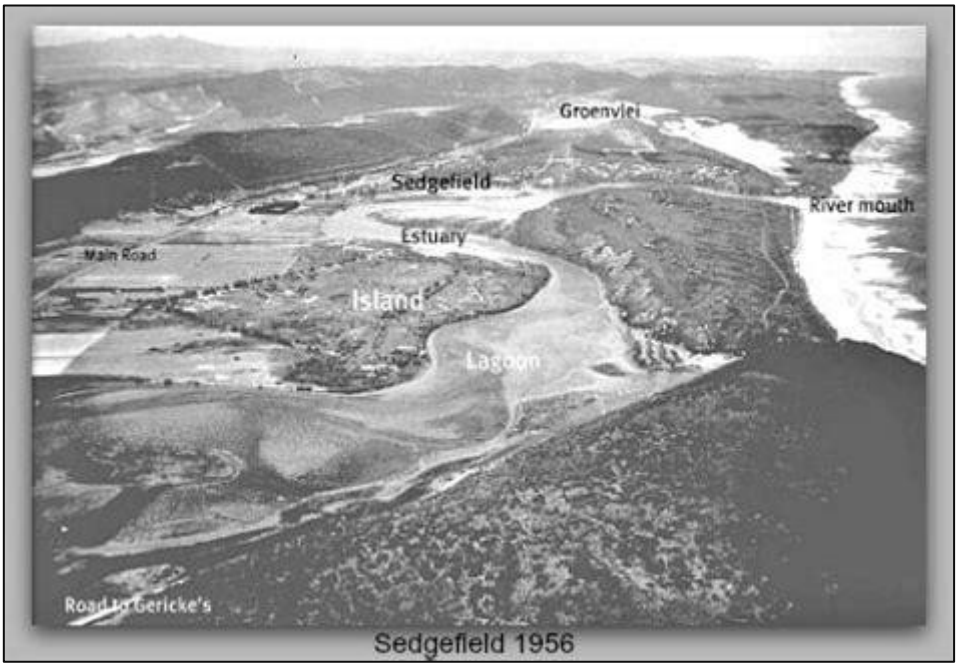


Figure 2: Showing an early photograph of Sedgefield (ca. 1956) with the study area cleared of vegetation.

[1] Government Gazette No. 43110, GN No. 320 (2020) National Environmental Management Act, 1998 (Act No. 107 of 1998) Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for environmental authorisation.

3 Site sensitivity verification and minimum content requirements for reporting

3.1 Scope of assessment - screening tool

The Department of Forestry, Fisheries and Environment (DFEE) screening report generated for the Remainder of Erf 1627 for "transformation of land - indigenous vegetation" identified*, inter alia*, that a terrestrial biodiversity impact assessment be undertaken based on the Very High Terrestrial Biodiversity Sensitivity of the area, High Animal Species Sensitivity with a Medium Relative Plant Species Sensitivity.

This report complies with the minimum requirements for terrestrial biodiversity assessments.

3.2 Site sensitivity verification

The current land use and site sensitivity was ascertained to confirm and / or refute the findings of the screening tool report.

3.2.1 The site verification was undertaken by the author as a specialist.

3.2.2 The site area was analyzed using desktop satellite imagery (Google Earth and Cape Farm Mapper), and geo-referenced biodiversity informants (SANBI BGIS) viewed and verified in Quantum GIS (QGIS) prior to and following site surveying. Verification and assessment of the sensitivity of the receiving environment was conducted by surveys on foot in August of 2021 where plant species were observed and recorded and select waypoints were taken with a GPS. The waypoints were used as a reference to orientate with vegetation patterning of the study area. A comprehensive plant species checklist was compiled for the survey included in the vegetation description.

3.3 Landuse and vegetation status

3.3.1 The proposed development area was ground-truthed to ascertain the environmental sensitivity and impact of construction of a mixed-use development within disturbed and partly degraded fynbos habitat. The property is currently vacant and undeveloped, with previous agricultural land use and thus partly transformed with vegetation generally of a secondary nature. The site was heavily degraded by an infestation of Invasive Alien Species (AIS), and the applicant is committed to their removal and control.

Thus, the findings of the screening report are refuted for the property containing vegetation of a Very High Terrestrial Biodiversity Sensitivity.

This report describes the vegetation status and sensitivity occurring within the verified Southern Cape Dune Fynbos habitat at the property. The study area has a mixture of transformed or disturbed and near-natural vegetation of Low to Medium Terrestrial Biodiversity Sensitivity, a Medium Animal Species Sensitivity with a Low to Medium Plant Species Sensitivity. Thus, an impact on biodiversity is foreseen. With mitigation by clearing invasive alien plants and rehabilitation of degraded set aside areas the biodiversity and condition of the habitat shall be improved.

3.3.2 The report contains a description of the vegetation and sensitivity with photographic evidence to confirm the findings.

4 The property and location

The Remainder of Erf 1627 (26.50563 ha) is presumably zoned Undetermined Zone I and located west of Sedgefield at the Island and adjacent to the National Route N2, with the main access derived from Dr Malan Street with an alternative access via Erf 5008 (Mosaic & Scarab Village Market) in Sedgefield and is hereinafter referred to as the "property" (see Figs. 3 and 4).

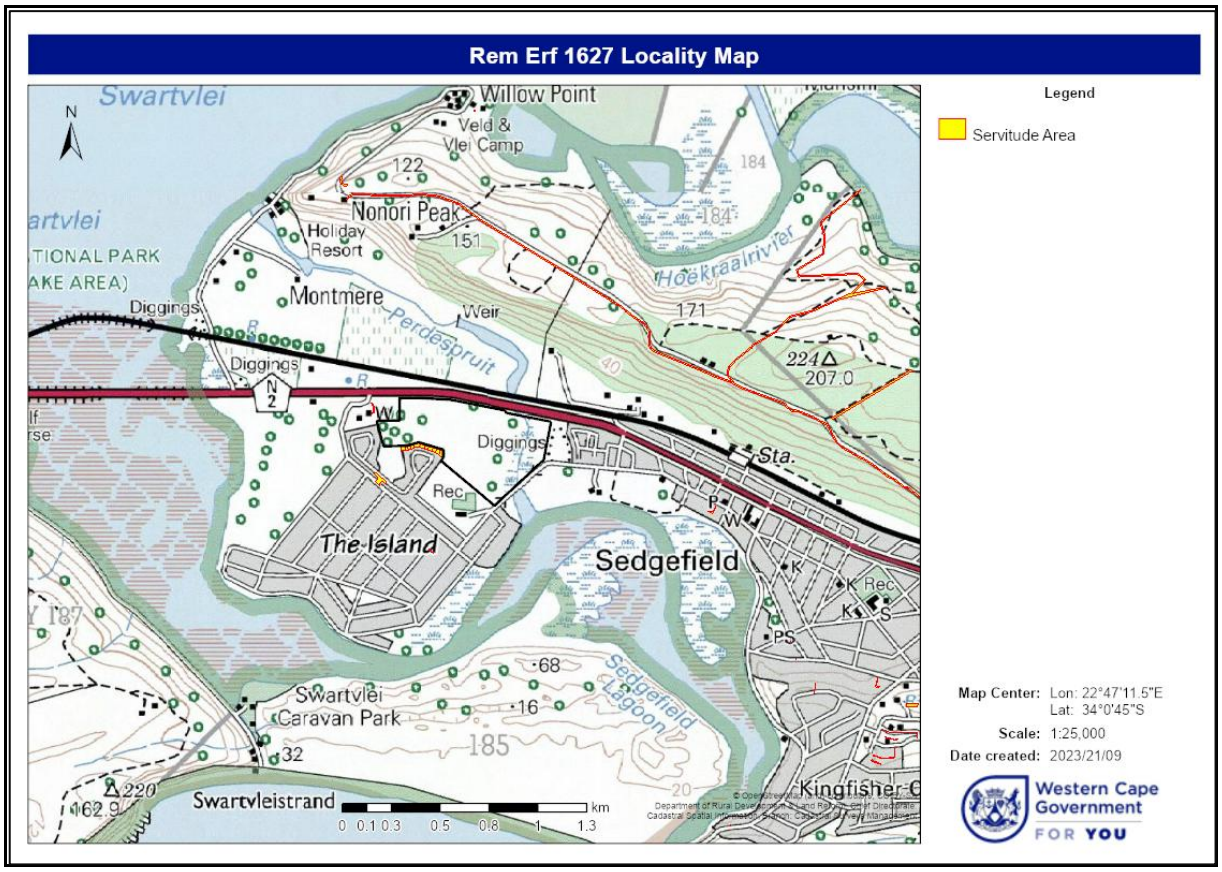


Figure 3: Locality map for the Remainder of Erf 1627 (black polygon) at the Island in Sedgefield (image courtesy of Cape Farm Mapper).

The undeveloped property has been used for agricultural purposes as early as 1936 based on aerial imagery and was cleared of vegetation ostensibly for pastureland or forestry. The property is disturbed and degraded from vegetation clearing and Invasive Alien Species (IAS) like Cluster Pine, Port Jackson Willow and Rooikrans (see Fig. 5). The Google Earth aerial imagery of the property during 2020 show a decrease in density of invasive plant species like Cluster Pine, Port Jackson Willow and Rooikrans following their clearing (see Fig. 6). The habitat appears to be suitable for Dune Fynbos vegetation as an ecotonal area to the Perdespruit Wetland area.

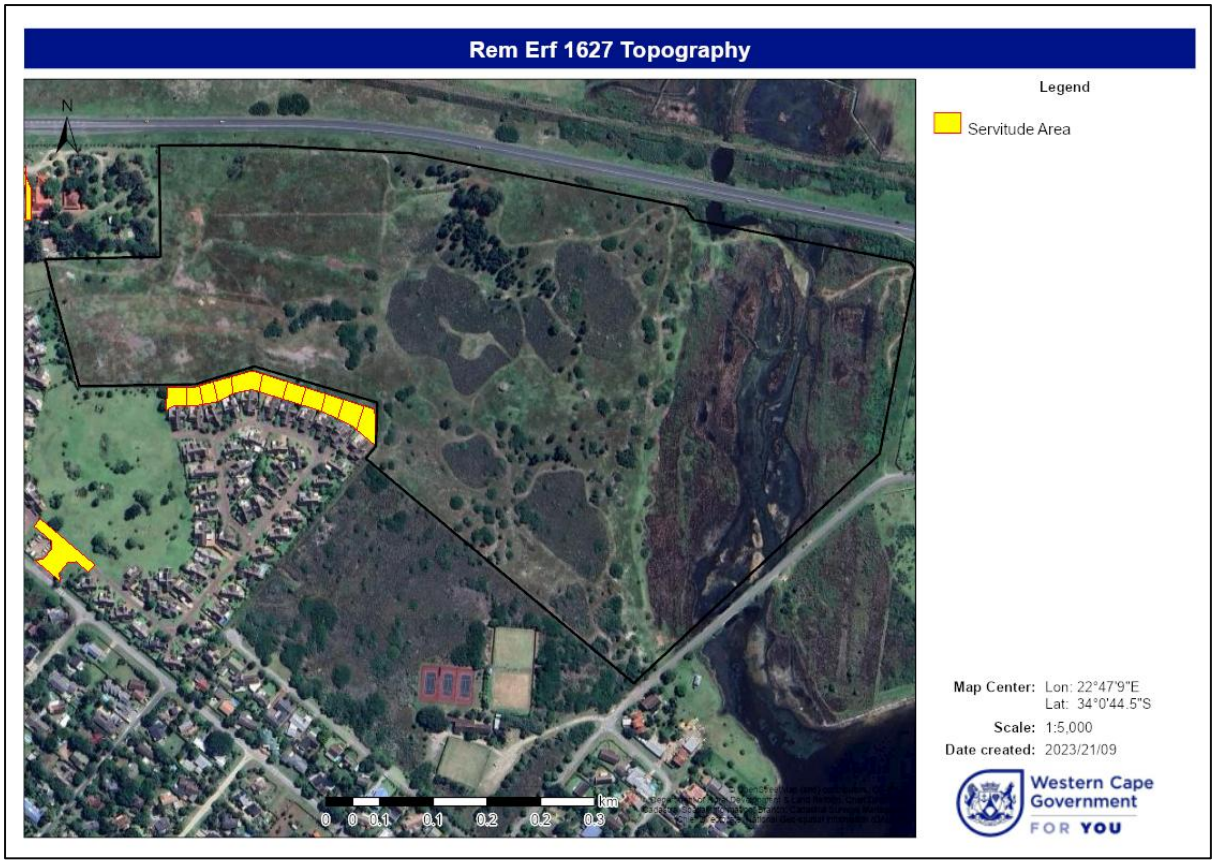


Figure 4: Showing the low-lying property (black polygon) south of the National Route N2 with the Perdespruit Wetland at the eastern extent (image courtesy of Cape Farm Mapper).

Thus, the receiving environment is currently mostly transformed by historical agricultural land use and with successive invasions by Invasive Alien Species has caused degradation of the fynbos ecosystem. The Dune Fynbos vegetation is patchy and healthy in part from natural secondary succession and otherwise transformed as grassy areas with ruderal plant species.

Figures 5 & 6: Showing the vegetation at the property ca. 2000 with encroaching Pine trees and Rooikrans, above, and ca. 2020 with most Pine trees cleared and mown areas, below (images courtesy of Cape Farm Mapper).

5 Proposed development footprint

The Basic Assessment application concerns the proposed construction of a mixed-use development and associated infrastructure, as according to alternative Site Development Plans by Lizemarie Botha for VPM Planning and Planning Space Town & Regional Planners. The project area of influence (PAOI) is confined to the development footprint for the terrestrial and animal ecosystems survey and includes the Perdespruit Wetland area concerning ecological processes.

The development proposal comprises a layout of 70 Residential Zone 1 group housing units of approximately 522 m^2 each in size clustered in the centre of the property. The existing traders and food market at the western extent of the property is proposed to be amalgamated with a Private Open Space II consent use area for recreational and tourism facility; and an agriculture area. An Open Space III zone is proposed to include the Perdespruit Wetland and the areas surrounding the residential area. The Nature Conservation Area can accommodate various consent uses, with "sic" "*the objective to provide for the conservation of natural resources in areas that have not been proclaimed as nature areas (as non-statutory conservation), in order to sustain flora and fauna and protect areas of undeveloped landscape including woodlands, ridges, wetlands and the coastline*" as described in the Zoning Scheme By-laws for Knysna (2022).

<u>Option 1: 1627 Sedgefield Option 4rev1</u>:

The proposed mixed use development (26.63 ha), as per the Site Development Plan entails the construction of:

- A business zone for a tourist facility, restaurants, and food markets (1.16 ha).
- A general residential Zone II for semidetached townhouses (3.91 ha).
- A general residential Zone I for Group Housing (4.72 ha).
- An agriculture Zone II smallholding area for intensive agriculture (3.12 ha).
- An Open Space Zone III conservation area, tourist facility and accommodation, including the Perdespruit Wetland (12.58 ha).
- A transport zone (0.99 & 0.15 ha).

<u>Option 2: 1627 Sedgefield Option 8</u>:

The proposed mixed use development (26.63 ha), as per the Site Development Plan entails the construction of:

- A Private Open Space Zone II for a tourist facility, restaurants, and food markets (3.6 ha).
- A general residential Zone I for Group Housing (3.10 ha).
- A general residential Zone II of three erven for sectional titles units (2.6 ha).

- An Open Space Zone III conservation area for the residential estate, including the Perdespruit Wetland (15.9 ha).
- A transport zone (1.4 ha).

Option 3: 1627 Sedgefield Option 10:

This alternative layout plan is similar to the option 7 drafted in 2023, except for the inclusion of a recreational area, and replaces it here. The proposed mixed use development (26.62 ha), as per the Site Development Plan entails the construction of:

- A Private Open Space Zone II (Erf 73) for consent use as a recreational & tourist facility, restaurants, and food markets, and intensive peri-urban agriculture (5.43 ha).
- A general residential Zone I for 70 Group Housing units (3.10 ha).
- An Open Space Zone III conservation area (Erf 72) for the residential estate, including the Perdespruit Wetland (16.34 ha).
- A transport zone (Erf 71; 1.18 ha).

Figure 7 below shows the transformed and mown areas at the western extent of the property, outside of sensitive areas and of Low Terrestrial Biodiversity Sensitivity.

Figure 7: Showing the transformed habitat recently cleared of Invasive Alien Species and currently mowed.

6 Provisions of Acts related to vegetation clearing activities.

As the property is within the Outeniqua Sensitive Coastal Area extension boundary (OSCAE), it is subject to the Outeniqua Sensitive Coastal Area Regulations[2] list of scheduled activities for, *inter alia*, "disturbance of vegetation" and "earthworks". Disturbance of vegetation is defined as: *trampling, cutting or removal of vegetation; whereas earthworks is defined as: excavation, moving, removal, depositing or compacting of soil, sand, rock, or rubble*.

The National Environmental Management Act (NEMA) EIA Regulations of 2014[3], as amended, stipulates that, in terms of Listing Notice 1 activity 27, if more than 1 hectares (10 000 m^2) of indigenous vegetation is cleared then a Basic Assessment application for environmental authorization is required. The total development footprint area is above this

[2] Government Gazette No. 19493, GN No. R. 1526 (1998) Environment Conservation Act, 1 1998 (Act No. 73 of 1989): Identification of activities which may have a detrimental effect on the environment: Outeniqua Sensitive Coastal Area Extension Regulations.

[3] Government Gazette No. 38282, GN No. 982 (2014) National Environmental Management Act, 1998 (Act No. 107 of 1998) Environmental Impact Assessment Regulations.

threshold, and consequently a Basic Assessment application process for environmental authorisation has been undertaken.

The National Environmental Management Biodiversity Act (NEMBA) published the "National List of Ecosystems that are Threatened and in need of Protection", where in terms of Listing Notice 3 activity 12(i)(i) (of the EIA Regulations of 2014, as amended) if more than 300 m^2 of Endangered or Critically Endangered indigenous vegetation is cleared then a Basic Assessment application for environmental authorization is required. The proposed development footprint is greater than 300 m^2 however the vegetation unit is of least concern and thus the activity cannot be triggered.

As defined in the EIA Regulations "indigenous vegetation" refers to "*vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years*."

The National Forest Act (NFA), 1998 (Act No. 84 of 1998), as amended, stipulates that i.t.o. section 15(1), a licence is required to (a) *cut, disturb, damage or destroy any protected tree, or* (b) *possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, or any forest product derived from a protected tree*. Protected tree species like Cheesewood occur at the property outside of development footprint areas. A Forestry Licence is recommended to be obtained for potential disturbance of Protected Tree species should they be required to be disturbed or fall within a development footprint.

7 Freshwater Ecosystem Priority Areas (FEPAs)

Concerning the "description of significant terrestrial landscape features like SWSAs, FEPAs" for the minimum content reporting, this report primarily focuses on the terrestrial biodiversity features of the property; and does not purport to document the fine-scale aquatic features at the property. The area is indicated by the screening tool as having a Very High Relative Aquatic Biodiversity theme, as a Strategic Water Source Area (SWSA) and FEPA of the *Moderately Protected* Swartvlei Estuary and Wetlands.

Measures should therefore be implemented to prevent erosion and increased storm water runoff and erosion or pollutants from impacting on land, groundwater and surface watercourses during clearing activities, construction, and the operational lifespan of the development.

THE BIODIVERSITY IMPORTANCE OF THE SITE AND SURROUNDING RECEIVING ENVIRONMENT

8 Vegetation description

According to the updated Vegetation Map of South Africa, Lesotho & Swaziland (VegMap) the main mapped vegetation unit occurring at the property (see Fig. 8) is Southern Cape Dune Fynbos (FFd 11) of the South Strandveld Bioregion of the Fynbos Biome; with a Non-terrestrial (Estuarine Functional Zone) wetland area called the Perdespruit. Southern Cape Dune Fynbos is Least Threatened i.t.o. the National Environmental Management Biodiversity Act's, revized list of threatened ecosystems[4]. The property resembles a suitable Dune Fynbos habitat with accompanying elements where undisturbed and is otherwise transformed as lawned areas with a now light infestation of remaining Cluster Pine.

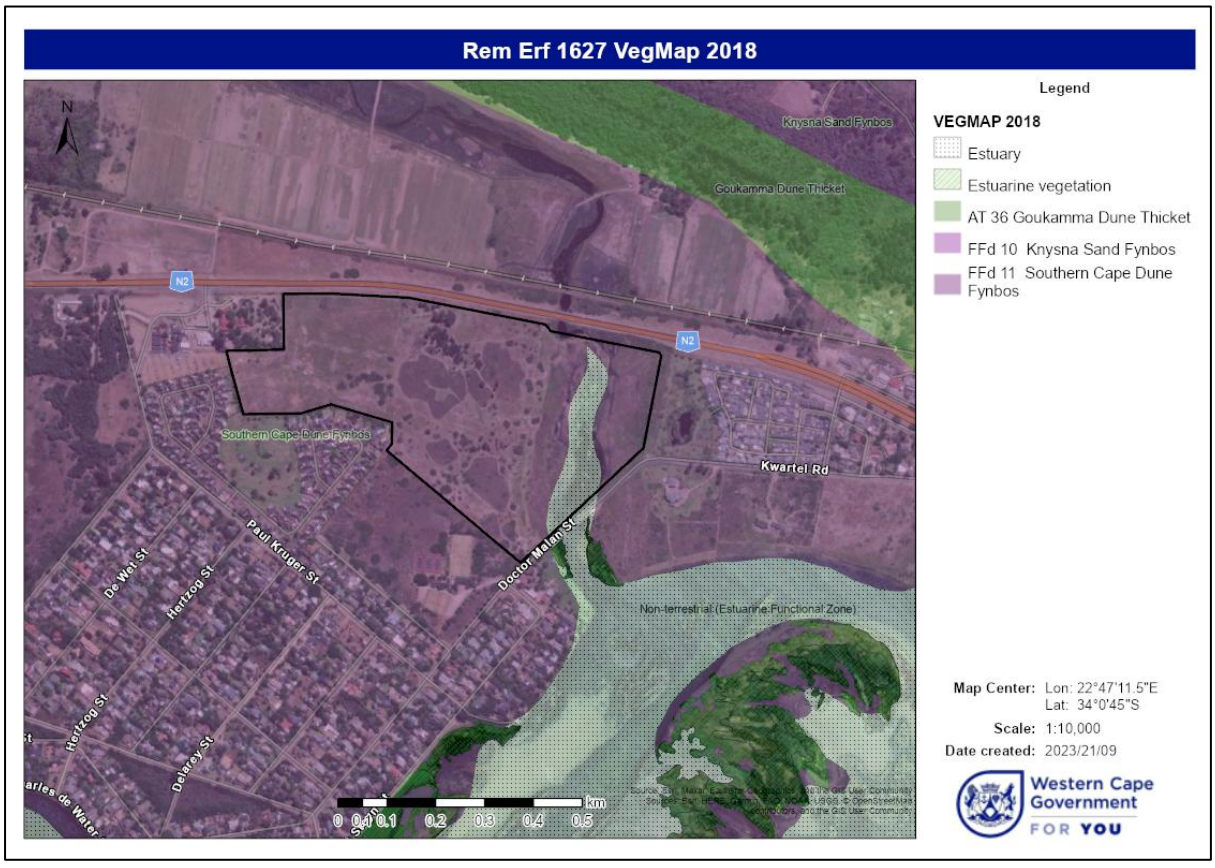


Figure 8: The property in context of national vegetation units indicated within Southern Cape Dune Fynbos.

[4] Government Gazette No. 47256, GN No. 2747 (2022) National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004): The Revised National List of Ecosystems that are Threatened and in need of Protection.

Southern Cape Dune Fynbos is similar in vegetation patterning to Goukamma Dune Thicket and colonize coastal dune cordons and flats as in Sedgefield. According to the Vegetation Map of South Africa the vegetation unit is characterized by sclerophyllous shrubs and restioids (reeds). Exclusion of natural fire cycle intervals has enabled indigenous woody elements to advance into Dune Fynbos as well as invasive *Acacia cyclops* (Rooikrans) and *Acacia saligna* (Port Jackson Willow). The invasive plant species allow for further ingress of thicket vegetation which form bushclumps and displace Dune Fynbos elements in certain instances. The bushclump thickets are not species rich with *Pterocelastrus tricuspidatus*, *Rhus lucida*, *Sideroxylon inerme* and *Tarchonanthus littoralis* as the dominant species."

The composite fine-scale Vegetation Map for the Garden Route[5] delineated broad habitat types with associated vegetation variants, here as: *Sedgefield Coastal Grassland* over most of the property; and dissected by the Perdespruit mapped as *Wilderness Estuary* with *Sedgefield Thicket Sandplain Fynbos* at the eastern extent of the property; broadly corresponding with the baseline habitats occurring on site (see Fig. 9); and in this instance depicting the habitat type as Grassy Fynbos.

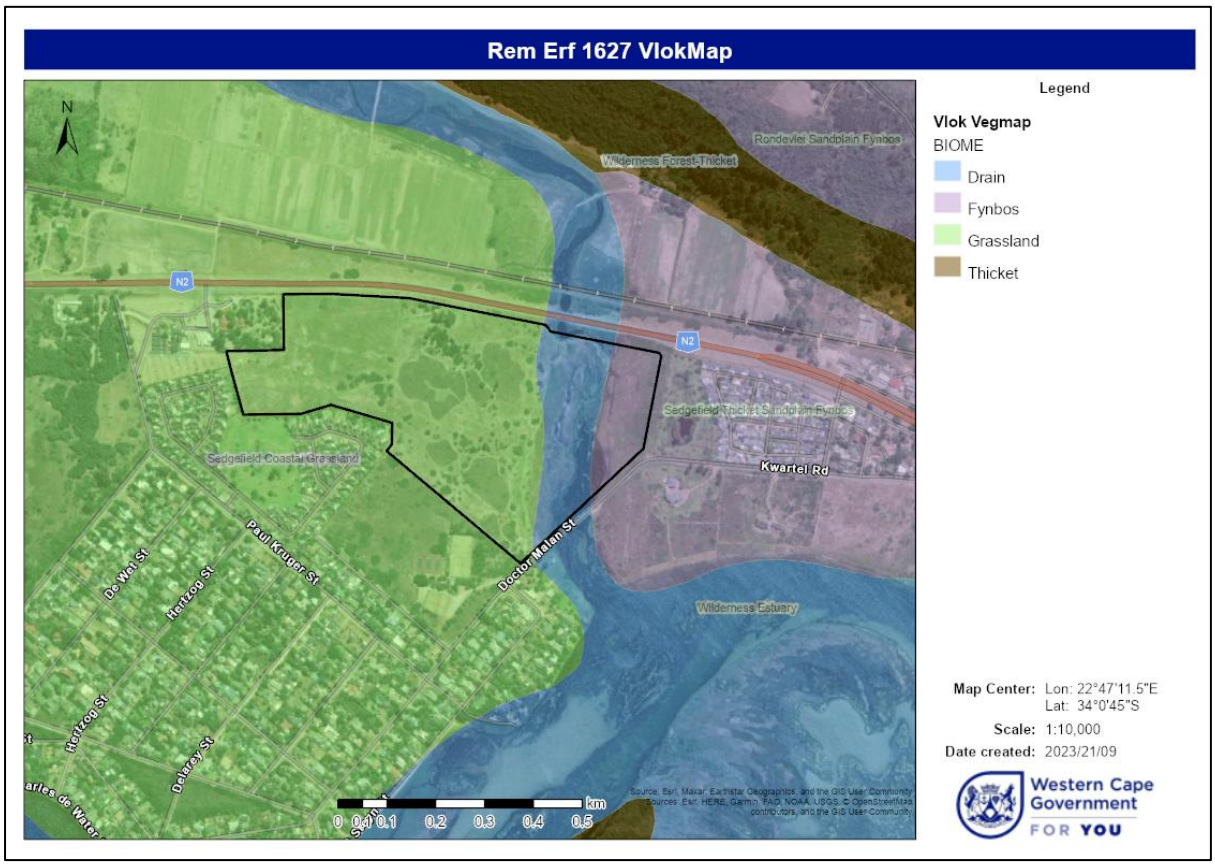


Figure 9: The property in context of the fine-scale vegetation variants as indicated within *Sedgefield Coastal Grassland*, *Wilderness Estuary* and *Sedgefield Thicket Sandplain Fynbos*.

[5] Vlok JHJ, Euston-Brown DIW and Wolf T (2008) Vegetation Map for the Garden Route Initiative. Unpublished 1:50 000 maps and reports supported by CAPE FSP task team.

Fragmentation of biodiversity patterning has occurred at the property due to probable past agricultural activities, subsequent infestations by Invasive Alien Species and thicket species overshadowing the Dune Fynbos habitat, and successive vegetation clearing. Removal of IAS like Cluster Pine will increase the available natural habitat on site and improve the habitat condition, and lead to natural functional ecological corridors. Thus, disturbed vegetation occurs at the property with remnant Dune Fynbos vegetation situated within the development footprint areas in the central section of the property.

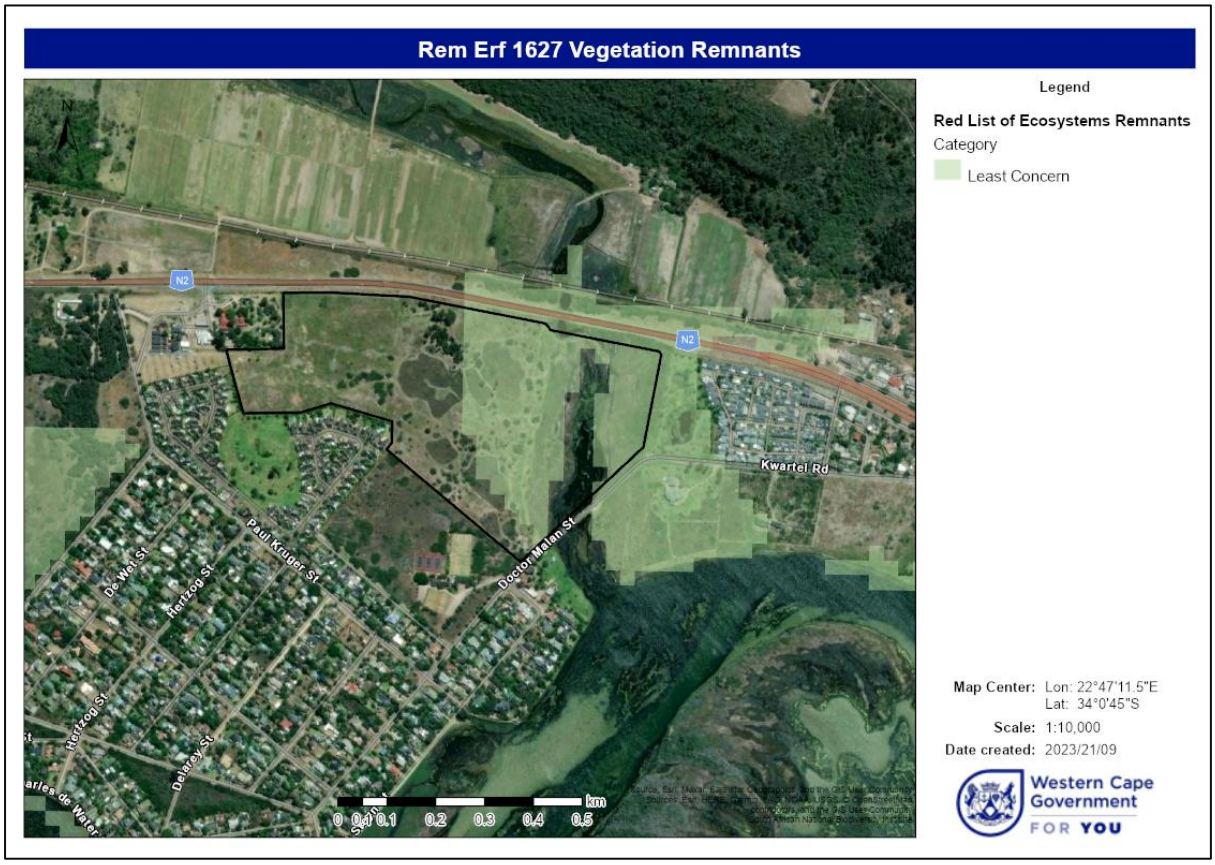


Figure 10: The property in context of the mapped remnants of threatened ecosystems, namely Southern Cape Dune Fynbos of Least Concern, and excluding the western extent.

Figure 10 above shows the coarse mapped remnants[6] of Least Threatened Southern Cape Dune Fynbos (FFd 11) over the property. It should be noted that the vegetation at the receiving environment is mostly secondary in nature and transformed from various disturbance factors mentioned above.

[6] South African National Biodiversity Institute & Department of Environment, Forestry and Fisheries (2021) Red List of Terrestrial Ecosystems of South Africa June 2021 – version for public comments. South African National Biodiversity Institute. Pretoria, South Africa

According to VegMap Healthy Southern Cape Dune Fynbos comprises the following taxa (where d = diagnostic):

Important Taxa Tall Shrubs: *Olea exasperata* (d), *Passerina corymbosa*, *Rhus crenata*, *R. glauca*, *R. laevigata*, *R. lucida*. Low Shrubs: *Agathosma ovata* (d), *Metalasia muricata* (d), *Passerina rigida* (d), *Phylica litoralis* (d), *Agathosma apiculata*, *A. stenopetala*, *Anthospermum aethiopicum*, *Aspalathus spinosa* subsp. *spinosa*, *Chironia baccifera*, *Erica fourcadei*, *E. glumiflora*, *E. zeyheriana*, *Felicia echinata*, *Gnidia anthylloides*, *Helichrysum teretifolium*, *Indigofera sulcata*, *Jamesbrittenia microphylla*, *Leucadendron salignum*, *Morella quercifolia*, *Muraltia satureioides*, *M. squarrosa*, *Otholobium bracteolatum*, *Pelargonium betulinum*, *Phylica ericoides*, *Polygala ericaefolia*, *Struthiola parviflora*. Semiparasitic Shrub: *Thesidium fragile*. Geophytic Herbs: *Satyrium princeps* (d). *Cyrtanthus loddigesianus*, *C. obliquus*. Graminoids: *Ischyrolepis eleocharis* (d), *Ehrharta calycina*, *Ficinia dunensis*, *Ischyrolepis leptoclados*, *Pentaschistis heptamera*, *Tetraria cuspidata*, *Thamnochortus cinereus*, *Tribolium obtusifolium*.

Endemic Taxa Low Shrubs: *Aspalathus cliffortiifolia* (possibly extinct), *Erica chloroloma*. Succulent Shrub: *Lampranthus algoensis*. Graminoids: *Pentameris barbata*.

Note that some taxa have had name changes due to taxonomic revisions. Many taxa listed above were absent from the site. Bulbous plants like *Brunsvigia orientalis* (Candelabra Lily) have been observed in the vicinity of the study area in and around the markets (Wild Oats and Mosaic) and are easily rescuable. The bulbous orchid *Satyrium princeps* was not observed at the study area or surrounds and has most likely been removed by historical clearing. Typical Fynbos elements like the Ericoid component (Erica spp.), Proteoid component (*Leucadendron salignum*) and the Restoid component (*Ischyrolepis* spp.) were not observed at the study area.

Based on site surveying the study area contains plant species representative of Dune Fynbos and Wetland ecosystems, aside from the grassy lawn areas. The screening tool mapped the study area as having a Very High Terrestrial Biodiversity Sensitivity and Medium Relative Plant Species sensitivity. It is the opinion of the author that based on the representative plant species and disturbance factors the study area contains vegetation with a Low to Medium Relative Plant Species Sensitivity and Medium Relative Plant Species sensitivity.

THE BIODIVERSITY IMPORTANCE OF THE AREA IN CONTEXT OF A LANDSCAPE PERSPECTIVE

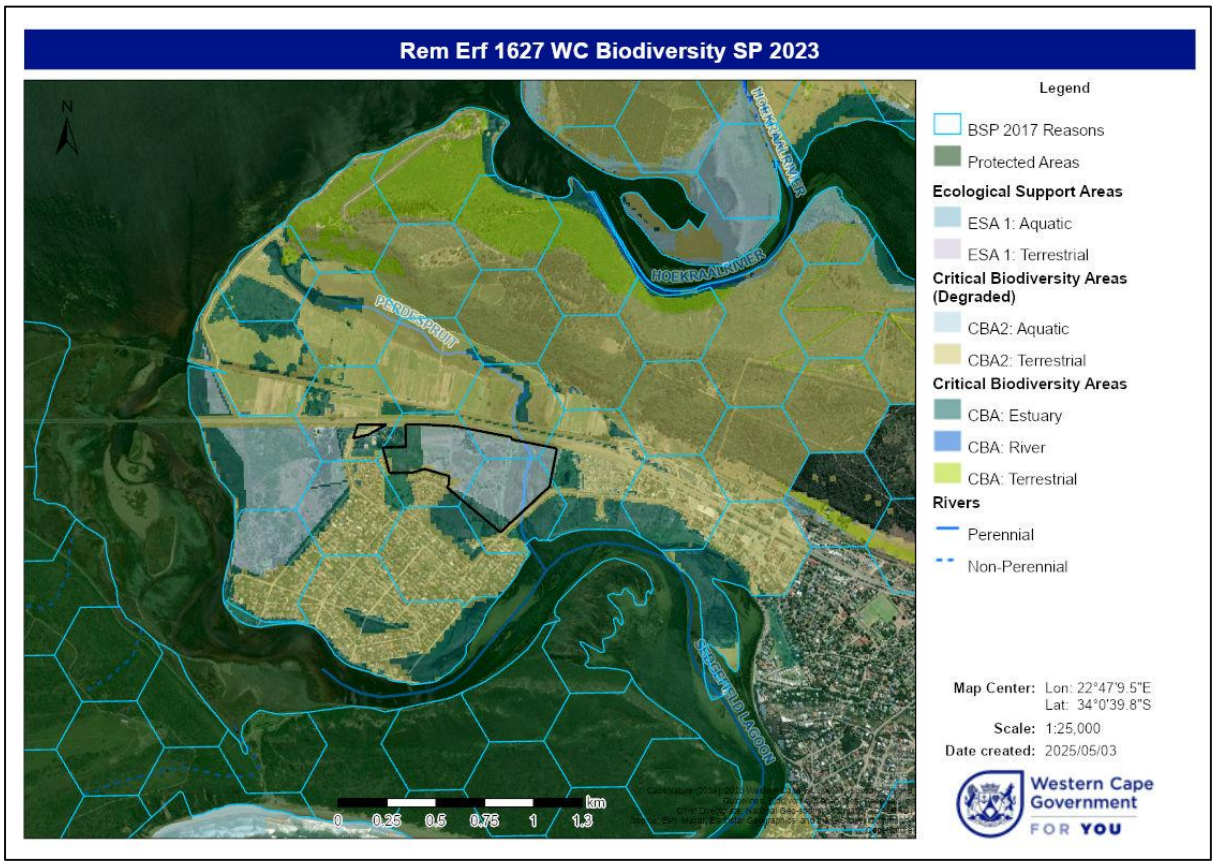


Figure 11: The property and surrounds in context of the Biodiversity Spatial Plan, 2023.

9 The Biodiversity Spatial Plan

The property is situated on the Sedgefield Island area just west of Sedgefield and is within the Wilderness Protected Environment (previously the National Lakes Area), buffered around the proclaimed Wilderness National Park managed by SANParks. The property is within the Garden Route Environmental Management Framework area corresponding with the Protected Areas, Forest, and Lakes Areas.

The Biodiversity Spatial Plan[7] (BSP) has identified important remaining biodiverse sites across the Western Cape Province and indicates that most of the property is within a designated sensitive area (see Figs. 11 & 12), namely a small primary aquatic Critical Biodiversity Area (CBA 1) overlay at the western and southern extent; and with most of the property indicated within a secondary degraded terrestrial Critical Biodiversity Area (CBA 2).

[7] http://bgis.sanbi.org/Projects/Detail/194

The receiving environment is adjacent to sensitive areas of ecological importance although disturbed, with varying levels of Invasive Alien Species and disturbed to near-natural Dune Fynbos vegetation as well as the Perdespruit Wetland area. The four (a)hexagonal spatial planning units overlaying the property have the following specific geographic features, based on an estuary (Swartvlei Estuary Core), water resource protection area, critically endangered vegetation variant (Sedgefield Coastal Grassland), unique vegetation unit and ecological processes:

Feature 1: Cape Estuarine Salt Marshes (LT).

Feature 2: FEPA River Corridor.

Feature 3: Sedgefield Coastal Grassland (Vlok variant- CR).

Feature 4: Southern Cape Dune Fynbos.

Feature 5: Swartvlei (Core) Estuary.

Feature 6: Water source protection- Swartvlei.

Feature 7: Watercourse protection- South Eastern Coastal Belt.

The specific geographic features mentioned above pertain to the regional importance of the landscape and the existing ecological processes, water sources and watercourses, with an associated Dune Fynbos ecosystem worthy of protection. The property itself is important for connectivity for pollinators, amphibia, avifauna, and small and large mammals.

The prescribed conservation management objectives for Critical Biodiversity Area (CBAs):

Secondary CBAs in a degraded condition are still important and required to meet biodiversity targets, for species, ecosystems or ecological processes and ecological infrastructure. The prescribed management objective for sensitive areas, as well as in terms of the Duty of Care principle (section 28 of the NEMA), is to maintain them in a natural or near- natural state, with prevention of further loss of habitat. Whereas degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate within CBAs. Secondary aquatic CBAs here overlay most of the property as a buffer area to the Perdespruit Wetland.

The prescribed conservation management objectives for Ecological Support Area:

Primary and secondary ESAs are areas that are not essential for meeting biodiversity targets, however they are important for supporting the functioning of Protected Areas or Critical Biodiversity Areas and are often vital for ecosystem service delivery. Thus, secondary ESAs should be restored and/or managed to minimize impacts on ecological processes and ecological infrastructure functioning, especially soil and water-related services, and to allow for faunal movement. No ESAs are currently shown at the property in the revised Biodiversity Spatial Plan.

Following rehabilitation of the development area and restoration of set-aside areas it should be managed appropriately for biodiversity with minimal negative impacts following thereafter. Rehabilitation or restoration of the habitat and reducing the impacts on ecological processes and structural functioning is key for ecosystem services of water sources and indigenous vegetation and allowing for movement of avifauna and fauna.

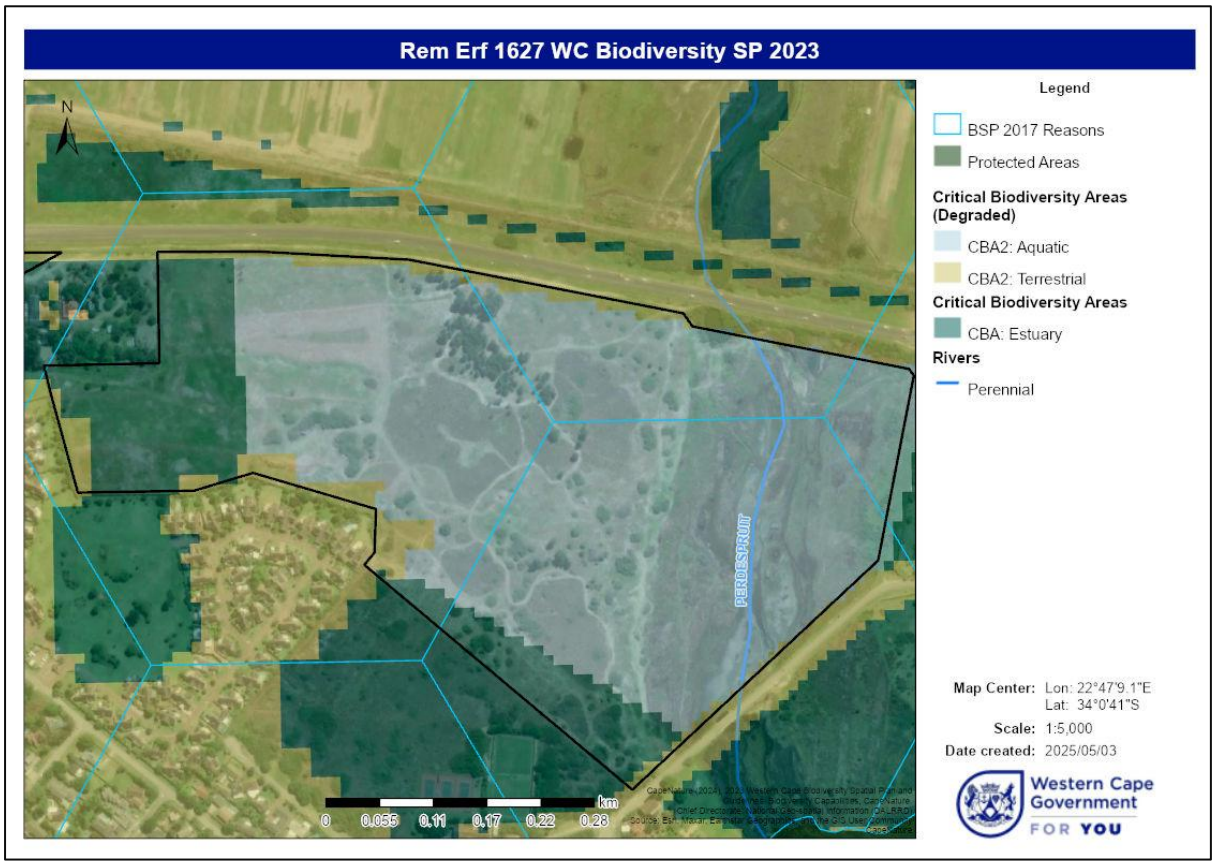


Figure 12: The property in context of the Biodiversity Spatial Plan 2023, showing a primary aquatic Critical Biodiversity Area (CBA 1) overlay at the western and southern extent; with most of the property indicated within a secondary degraded terrestrial CBA.

Figure 12 above shows that the property is mostly within a secondary degraded terrestrial Critical Biodiversity Area.

10 Terrestrial biodiversity specialist assessment of the site and protocols for reporting

Baseline description of the site with the following features

10.1 The ecological processes affecting a fynbos type ecosystem are largely dependent on aspect, soil patterning and fire frequency, which may be affected in part by loss of habitat due to transformation and suppression of fire processes. Fynbos is dependent on fire for

plant succession and turnover of species occupying the same niche with different lifecycles and times of maturity, thus contributing to overall plant species richness. Bulbous flowering plant species thrive and flower following wildfires in the absence of dominant shrubs excluding or reducing light. Thereafter shrubs continue to grow and representative fynbos elements like Proteaceae flower and hold seed following their maturity cycle of up to 15 years. Fire intervals of less than 15 years, or less than the maturity life cycle of locally occurring species, are detrimental to succession and recruitment of seedlings. The proposed development will impact on some ecological pattern and processes where remnant Dune Fynbos occurs.

10.2 Primary ecological functioning and processes that operate within the untransformed part of the property are characteristic of near-natural Dune Fynbos habitat, as a haven for pollinators, avifauna, and small and large mammals.

10.3 The development activity will have an impact on vegetation and wildlife movement corridors unless impermeable perimeter fencing is used.

10.4 The property is overlain with significant landscape features of Very High Relative Aquatic and Terrestrial Biodiversity Sensitivities namely a Strategic Water Source Area (SWSA) and primary CBA as indicated by the screening tool.

Based on the results of the site assessment at the property, the following:

10.5 Aquatic Critical Biodiversity Areas (CBA) occur at the property.

10.5.1 The reasons why it's a CBA are explained above, *inter alia*, as containing specific geographic features like the threatened Sedgefield Coastal Grassland variant, Swartvlei Estuary Core, Salt Marshes, a Watercourse and Water source area.

10.5.2 The proposed development activity will impact on secondary degraded CBAs and may be inconsistent with the management objectives thereof.

10.5.3 The proposed activity will impact on species composition and vegetation structure of vegetation communities of Low to Medium Terrestrial Biodiversity Sensitivity. The activity will not affect the remaining extent of threatened ecosystems or threatened plant species' ranges as the development activity occurs in an already disturbed and degraded area.

10.5.4 The impact will not elevate the ecosystems threat status of the remaining extent of Least Threatened Southern Cape Dune Fynbos.

10.5.5 The impact on explicit subtypes is unknown, and no subtypes are documented for Southern Cape Dune Fynbos.

10.5.6 The impact on overall species and ecosystem diversity of the site is of low to medium intensity.

10.5.7 There is no foreseen impact on the threat status of species of special concern, as none were observed at the property.

10.6 The property is not mapped as containing Ecological Support Areas (ESA).

10.6.1 Ecological services within and across the site will be affected by the development proposal and may be positively impacted by the clearing and control of IAS and post development rehabilitation.

10.6.2 The proposed activity will have a moderate impact on ecological processes and ESA functionality.

10.6.3 It is likely that the proposed activity may reduce ecological connectivity for wildlife during the construction and operational phases of the development.

10.7 The development proposal is not inconsistent with the objectives of Protected Area management within the Garden Route Environmental Framework area.

10.8 The development proposal will not compromize the local Protected Area Expansion Strategy of SANParks.

10.9 The property is within a Strategic Water Source Area, where (a) there will be a low impact on the terrestrial component; and (b) there may be a limited impact on water quality and quantity if spillage and contamination occur.

10.10 The property is within a Strategic Water Source Area (SWSA) and River Freshwater Ecosystem Priority Area of the *Moderately Protected* Swartvlei Estuary and Wetlands. A moderate impact on species and habitat condition within the FEPA sub-catchment is foreseen.

10.11 The proposal will have a no impact on the ecological integrity of indigenous Coastal Forest.

SITE SENSITIVITY VERIFICATION

11 A description of the condition of the habitat at the study area

Figure 13: Showing an area in the middle of the property with a remnant patch of Dune Fynbos.

Based on an initial site meeting held on the 9th of August 2021 and ground surveying conducted on the 23rd of August and 8th of October 2021, respectively, the property is situated on a level low-lying area in Sedgefield with the Perdespruit wetland area at the eastern extent. A large section of the property is proposed for a mixed use development excluding the Perdespruit area and some remnant Dune Fynbos patches (see Fig. 13).

Dune Fynbos plant community: The community of plants occurring within the study area at the various intact fynbos patches are representative of Dune Fynbos; and are composed of: *Anthospermum paniculatum*; *Carpobrotus deliciosus* (Delicious Sourfig); *Carpobrotus edulis* (Edible Sourfig); *Cenchrus clandestinus* (Kikuyu Grass); *Chironia baccifera* (Christmas Berry); *Cyperus polystachyos*; *Dischisma ciliatum* (Fringe Falseslugwort); *Ehrharta villosa* var. *villosa* (Common Pipe Grass); *Felicia amoena* ssp. *latifolia*; *Felicia echinata*; *Geranium incanum*

(Carpet Crane's-Bill); *Gladiolus carinatus* (Blue Afrikaner; see Fig. 14); *Grewia occidentalis* (Kruisbessie); *Helichrysum cymosum* subsp. *cymosum*; *Helichrysum foetidum*; *Helichrysum patulum*; *Helichrysum teretifolium*; *Metalasia muricata* (Strandveld Blombush); *Oxalis obtusa* (Reverse Sorrel); *Passerina corymbosa* (Common Gonna); *Pelargonium capitatum*; *Pentameris barbata*; *Salvia aurea* (Brown Sage); *Searsia crenata* (Bluefruit Currantrhus); *Searsia glauca* (Blue Kunirhus); *Searsia lucida* (Glossy Currantrhus); *Senecio purpureus*; *Stenotaphrum secundatum* (Buffalo grass); and *Trachyandra ciliata* (Common Capespinach).

Figure 14: Bulbous species like *Gladiolus carinatus* (Blue Afrikaner) occur in the Dune Fynbos patches and elsewhere.

Bushclump plant community:

Bushclumps are naturally interspersed across the Dune Fynbos habitat and are a haven for birdlife and small mammals. The community of plants within the bushclumps are composed of: *Acacia cyclops* (Rooikrans); *Acacia saligna* (Port Jackson Willow); *Anthospermum paniculatum*; *Cynanchum ellipticum* (Monkeyrope Buckhorn); *Ficinia bulbosa* (Bulbous Sedge); *Grewia occidentalis* (Kruisbessie); *Helichrysum cymosum* subsp. *cymosum*; *Helichrysum foetidum*; *Lysimachia arvensis* (Scarlet Pimpernel); *Pelargonium capitatum*; *Pittosporum viridiflorum* (Cheesewood - Protected); *Rumex sagittatus* (Climbing Dock); *Searsia glauca* (Blue Kunirhus); *Senecio purpureus*; *Silene undulata* ssp. *undulata* (Common

Cape Catchfly); *Sideroxylon inerme* subsp. *inerme* (White Milkwood - Protected); *Solanum africanum* (Drunken Berry); and *Trachyandra ciliata* (Common Capespinach).

Old Field open mowed areas:

Most of the property has been transformed by mowing of vegetation and consequent removal of woody shrubs and herbs, with only prostrate plants, annuals and some herbs remaining. The property was infested with Invasive Alien Species which have now mostly been removed by the applicant. The open areas are composed of: *Arctotheca prostrata* (Prostrate Capeweed); *Carpobrotus deliciosus* (Delicious Sourfig); *Cerastium capense* (Cape Mouse-ear Chickweed); *Chenopodiastrum murale* (Nettle-leaved Goosefoot); *Commelina benghalensis* (Benghal Dayflower); *Conicosia pugioniformis* subsp. *muiri*; Crassula weedy; *Cynodon dactylon*; *Cyperus polystachyos*; *Dischisma ciliatum* (Fringe Falseslugwort); *Ehrharta villosa* var. *villosa* (Common Pipe Grass); *Eragrostis curvula*; *Ficinia incomtula*; *Fumaria officinalis* (Common Fumitory); *Geranium incanum* (Carpet Crane's-Bill); *Lolium perenne* (Perennial Ryegrass); *Malva* sp.; *Medicago polymorpha* (Bur Clover); *Osteospermum moniliferum* (Bietou); *Oxalis caprina* (Goat Sorrel); *Oxalis obtusa* (Reverse Sorrel); *Passerina corymbosa* (Common Gonna); *Pelargonium capitatum*; *Phytolacca octandra* (Inkweed); *Pinus pinaster*; *Pittosporum viridiflorum* (Cheesewood - Protected); *Raphanus raphanistrum* (Jointed Charlock); *Rumex hypogaeus* (Prickly Jack); *Senecio burchellii*; *Senecio elegans* (Red-purple Ragwort); *Senecio ilicifolius*; *Sonchus asper* (Prickly Sowthistle); *Stellaria media* (Common Chickweed); *Tetragonia fruticosa* (Sprawling Seacoral); *Trachyandra ciliata* (Common Capespinach) and *Trifolium repens* (White Clover).

Many of the plant species occurring in the open areas are characteristic of previous agricultural land use - i.e., ruderal species typical of old fields and cultivation.

Wetland area: (see Figs. 15 & 16).

Atriplex vestita; *Carpobrotus deliciosus* (Delicious Sourfig); *Cyperus polystachyos*; *Elegia tectorum* (Cape Deckreed); *Falkia repens* (Pink Ear); *Ficinia incomtula* (Isolepis); *Ficinia nodosa* (Stembract Clubrush); *Grewia occidentalis* (Kruisbessie); *Nidorella ivifolia* (Ivy Vleiweed); *Osteospermum moniliferum* (Bietou); *Oxalis caprina* (Goat Sorrel); *Salicornia meyeriana* (Annual Glasswort); *Searsia crenata* (Bluefruit Currantrhus); *Sonchus asper* (Prickly Sowthistle); *Stenotaphrum secundatum* (Buffalo grass); *Triglochin elongata* (Upper Tidal Arrowgrass); and *Phragmites australis* ssp. *australis* (Common Reed). Appendix 1 has a table listing plant species occurring at the property and as observed within the Sedgefield Island Conservancy area.

Figure 15: Showing the Perdespruit Wetland area proposed for conservation.

Planted exotic, and Invasive Alien Species and plant species favouring disturbance occurring at the property:

Acacia cyclops (Rooikrans); *Acacia saligna* (Port Jackson Willow); *Anredera cordifolia* (Madeira Vine) - localized on a rubble pile; *Bidens pilosa* (Blackjack); *Cestrum laevigatum* (Inkberry); *Phytolacca octandra* (Inkberry), and *Pinus pinaster* (NEMBA Cat. 1b).

The habitat at the receiving environment is degraded and disturbed from previous agricultural activities, infestations of Invasive Alien Species and vegetation clearing. The vegetation is composed of a mosaic of exotic ruderal plant species and common indigenous Dune Fynbos and Bushclump plant species in secondary succession (see Fig. 14). The vegetation is generally of a Low Terrestrial Biodiversity Environmental Sensitivity in the transformed and mowed areas whereas the remnant patches of Dune Fynbos are of a Medium Terrestrial Biodiversity Environmental Sensitivity with a Medium Relative Plant Species Sensitivity, and there appears to be no species of special concern at the property. Patches of vegetation with a Medium Terrestrial Biodiversity Environmental Sensitivity contain a richer assemblage of indigenous plant species.

Figure 16: Showing the Perdespruit, channelled under the N2, which attracts many bird species like Cormorants.

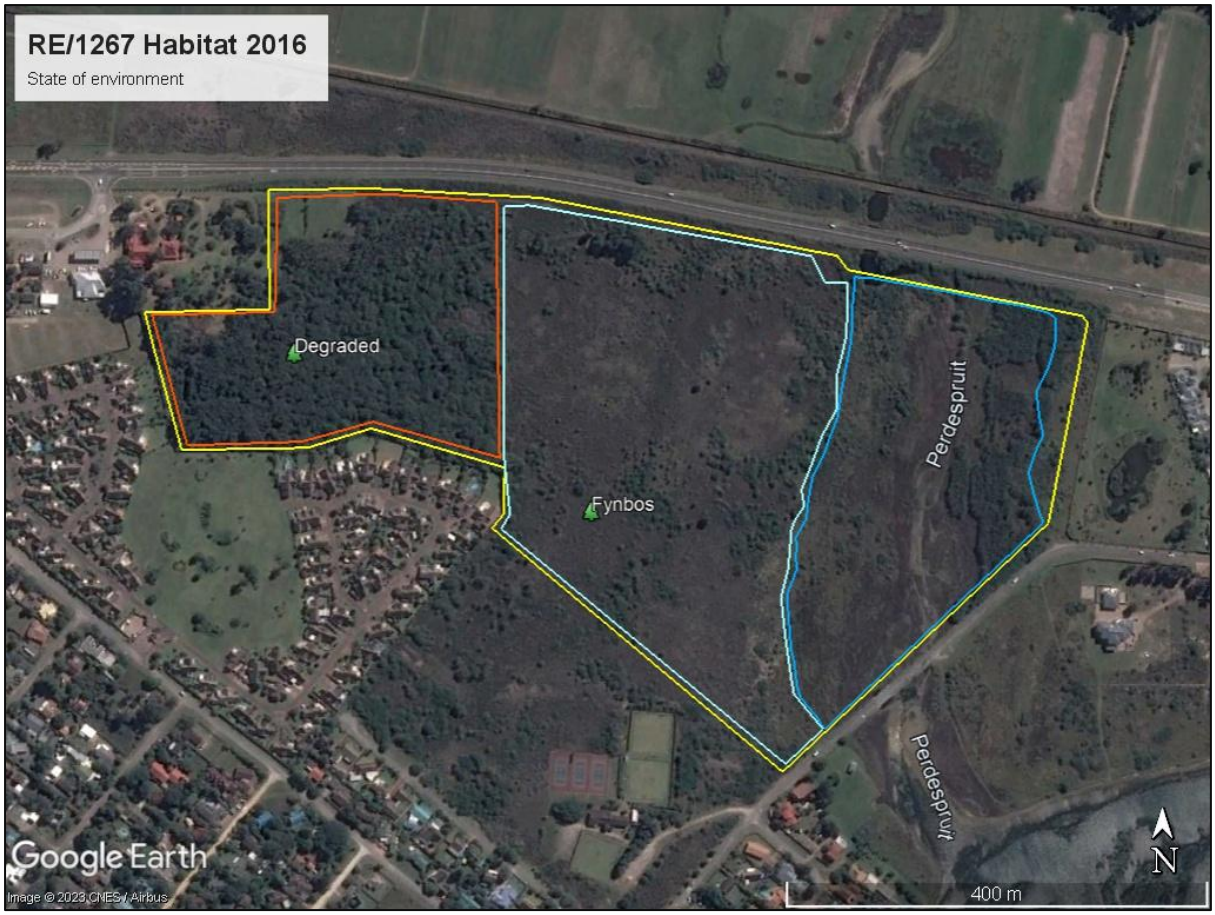


Figure 17: Showing three broad habitats at the property during 2016.

Three broad habitats are depicted in the above image. Heavily degraded Fynbos habitat covered in Pinus pinaster and various other woody plants; Fynbos habitat in the middle and the Perdespruit at the eastern extent of the property with terrestrial and non-terrestrial vegetation within the Estuarine Functional Zone.

Figure 18 below show the three broad habitats during 2023. The heavily degraded Fynbos habitat at west is now transformed from infestations of invasive plants and clearing of woody vegetation. The middle section is still suitable Fynbos habitat but is partly degraded with distinct patches of Fynbos vegetation. The Perdespruit Wetland area at the eastern extent of the property shows flushing of the ecosystem by recent rainfall events.

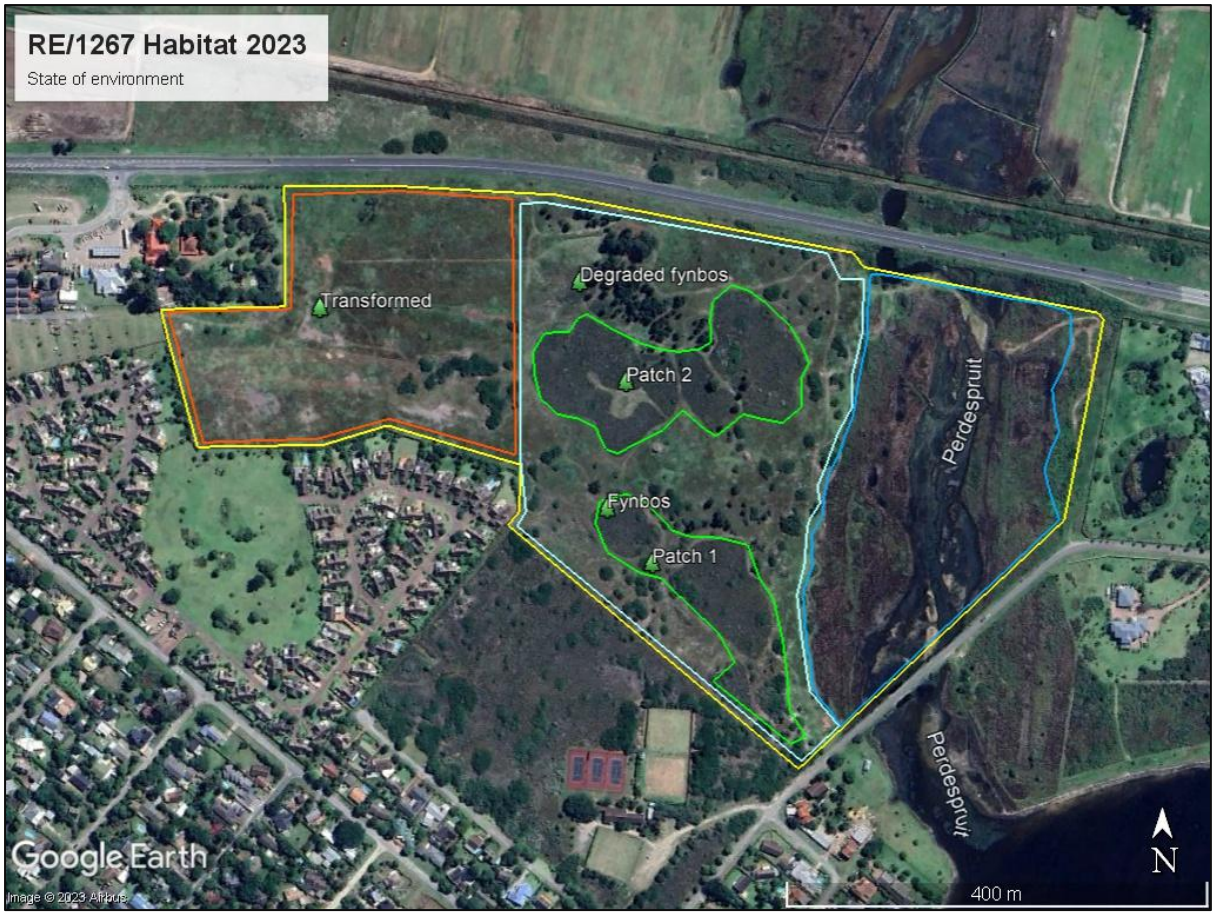


Figure 18: Showing three broad habitats at the property during 2023.

12 List of Plant and Animal Species of Special Concern (SSC)

The screening tool reports' list of all confirmed occurring and potentially occurring plants of SCC within the vicinity of the proposed development footprint/PAOI are shown in Table 1 below. The property was investigated for their presence, yet only Cape Dwarf-Eelgrass was likely to occur near the Perdespruit in the Swartvlei Estuary. Based on personal observations most of the SSC listed in the screening report do not occur in tertiary sands but rather occur in acidic sands or shale.

Table 1: indicates the list of species of medium relative plant species sensitivity List of plant SCC and their estimated geographic area of occurrence.

FAMILY	TAXON	Common name	IUCN status	Distribution	Habitat	Occupancy (km^2)	Occurrence probability
	Lebeckia gracilis	Slender ganna	Endangered	Gansbaai – Port Elizabeth	GDT/KSF	1.49	Very low-not present
	Selago burchellii	Garden Route Bitterbush	Vulnerable	Mossel Bay - Bitou	Fynbos	No data	Medium – not present
	Erica glandulosa	Ridged Glandular	Vulnerable	Mossel Bay - Bitou	GDT	55.42	Very low – not present

	subsp. fourcadei	Heath					
	Sensitive species 1032		Vulnerable	Wilderness to Port Alfred	Fynbos	40.64	Medium – not present
	Cotula myriophylloides	Floating Buttons	Critically Endangered	Overberg	Wetland	No data	Very low-not present
	Muraltia knysnaensis	Garden Route Purplegorse	Endangered	Albertinia - Bitou	Fynbos	10.99	Medium – not present
	Erica glumiflora	Gloomy Heath	Vulnerable	Sedgefield - Bitou	GDT	24.24	Very low – not present
	Zostera capensis	Cape Dwarf-Eelgrass	Endangered	Langebaan–Port Alfred & Richards Bay	Wetland	1.05	Medium – in vicinity in Swartvlei

Based on the iNaturalist observations from Sedgefield Island Conservancy domain, including the property and the Perdespruit, there are approximately 109 bird species potentially occurring at the property. As the property includes the Perdespruit Wetland many bird species observations are based on their occurrence in the Wetland.

Table 2: indicates the list of species of high & medium relative animal species sensitivity List of plant SCC and their estimated geographic area of occurrence.

Family	**Taxon**	**Common name**	**IUCN status**	**Distribution**	**Habitat**	**EOO (km²)**	**Occurrence probability**
Aves	Circus ranivorus	African Marsh Harrier	Endangered	South Africa - Sudan	Wetland	12615.35	Medium – in vicinity
Aves	Hydroprogne caspia	Caspian Tern	Vulnerable (ZA)	Sub-cosmopolitan	Lakes & Coast		High - at Swartvlei
Aves	Bradypterus sylvaticus	Knysna Warbler	Vulnerable	Cape Town – East London - Durban	Forest - scrub	2519.99	Low – in vicinity
Aves	(Gorsachius leuconotus) *Calherodius leuconotus*	White-backed Night Heron	Vulnerable	Central & Southern Africa	Forest & Wetland	301.73	High-N2 Perdespruit & Erf 4655
Aves	Stephanoaetus coronatus	Crowned Eagle	Vulnerable	Eastern South Africa	Forest	23373.95	Low-Saasveld & Harkerville
Aves	Neotis denhami subsp. stanleyi	Denham's Bustard	Vulnerable	Southern Coast	Shrubland, farmland – Dry marshland	13633.16	Low
Invertebrate	Aneuryphymus montanus	Yellow-winged Agile Grasshopper	Vulnerable	Overberg	Fynbos	55010.12	Very low
Mammalia	Chlorotalpa duthieae	Duthie's Golden Mole	Vulnerable	George - Bitou	Grassland, pastureland, Forest	0.17	Low
Mammalia	Sensitive		Vulnerable			30.37	Very Low

	species 8						

For the bird SSC listed in the screening report only the White-backed Night Heron has been observed in the vicinity at the bridge with the N2 National Route (Fig. 16) and at the eastern neighbouring property in a large Eucalyptus tree.

The Caspian Tern has been observed at Swartvlei's sandbanks in the vicinity of the property but not at Perdespruit itself.

The Knysna Warbler has been observed in the vicinity within dense vegetation near Swartvlei mouth and is unlikely to occur here in the open areas.

The Crowned Eagle has been observed in areas with dense Coastal Forest vegetation and prefers tree perches and may visit the area, but it is unlikely.

Denham's Bustard is highly unlikely to occur in the vicinity pasted on historical disturbances in the area.

The Yellow-winged Agile Grasshopper is unlikely to occur in the Dune Fynbos habitat.

Duthie's Golden Mole is unlikely to occur at the property as it favours forested habitat.

13 Site Ecological Importance (SEI)

According to the Species Environmental Assessment Guideline the SEI is a function of the biodiversity importance (BI) of the receptor (e.g., species of conservation concern, the vegetation/fauna community or habitat type present on the site) and its resilience to impacts (receptor resilience [RR]) as follows:

$$SEI = BI + RR$$

BI in turn is a function of conservation importance (CI) and the functional integrity (FI) of the receptor as follows: BI = CI + FI.

Conservation importance (CI) is defined as: "*The importance of a site for supporting biodiversity features of conservation concern present, e.g., populations of IUCN threatened and Near Threatened species (CR, EN, VU and NT), Rare species, range-restricted species, globally significant populations of congregatory species, and areas of threatened ecosystem types, through predominantly natural processes*".

Functional integrity (FI) is defined as: "*A measure of the ecological condition of the impact receptor as determined by its remaining intact and functional area, its connectivity to other natural areas and the degree of current persistent ecological impacts*".

Table 3: Site Ecological Importance of habitats occurring at the site.

Habitat	Conservation importance	Functional integrity	Receptor resilience	Site ecological importance
Degraded Dune Fynbos	Medium	Medium	Medium	SEI =Medium BI = Medium
Bushclump Thicket	Medium	Medium	Medium	SEI = Medium

				BI = Medium
Transformed Old Fields	Very low	Low	Medium	SEI = Very low BI = Very low
Wetland	Very High Population of a EN plant species with an EOO < 2 km^2 (Zostera capensis)	High	Low	SEI =Very High BI =Very High

Thus, as in the above Table 3, the Degraded Dune Fynbos and Bushclump Thicket habitat has a Medium Site Ecological Importance, with the Transformed Old Field habitat having a Very Low SEI. The Perdespruit Wetland area has a Very High SEI and is not resilient to major ecological impacts.

Table 4: Guidelines for interpreting the SEI in the context of the proposed development activities.

Site Ecological Importance	**Interpretation in relation to proposed development activities**
Very High	Avoidance mitigation – no destructive development activities should be considered. Offset mitigation not acceptable/not possible (i.e., last remaining populations of species, last remaining good condition patches of ecosystems/unique species assemblages). Destructive impacts for species/ecosystems where persistence target remains.
High	Avoidance mitigation wherever possible. Minimisation mitigation – changes to project infrastructure design to limit the amount of habitat impacted, limited development activities of low impact acceptable. Offset mitigation may be required for high impact activities.
Medium	Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
Low	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities.
Very High	Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.

14 Sensitivity Map and Assessment of impact

The proposed development will impact on a section of transformed or disturbed and degraded mosaic of exotic ruderal and invasive species, and Dune Fynbos elements of Low to Medium Terrestrial Biodiversity Environmental Sensitivity. To summarize, the vegetation at the receiving environment is mostly secondary in nature following transformative landuse and successive infestations of invasive plants like Rooikrans. The dominant plants in vegetated areas are common indigenous plants like *Anthospermum paniculatum*; *Dischisma ciliatum*; *Ehrharta villosa* var. *villosa*; *Geranium incanum*; *Helichrysum* spp.; *Metalasia muricata*; *Passerina corymbosa*; *Pentameris barbata*; *Salvia aurea*; *Searsia* spp.; *Trachyandra ciliata* and scattered individual indigenous tree species.

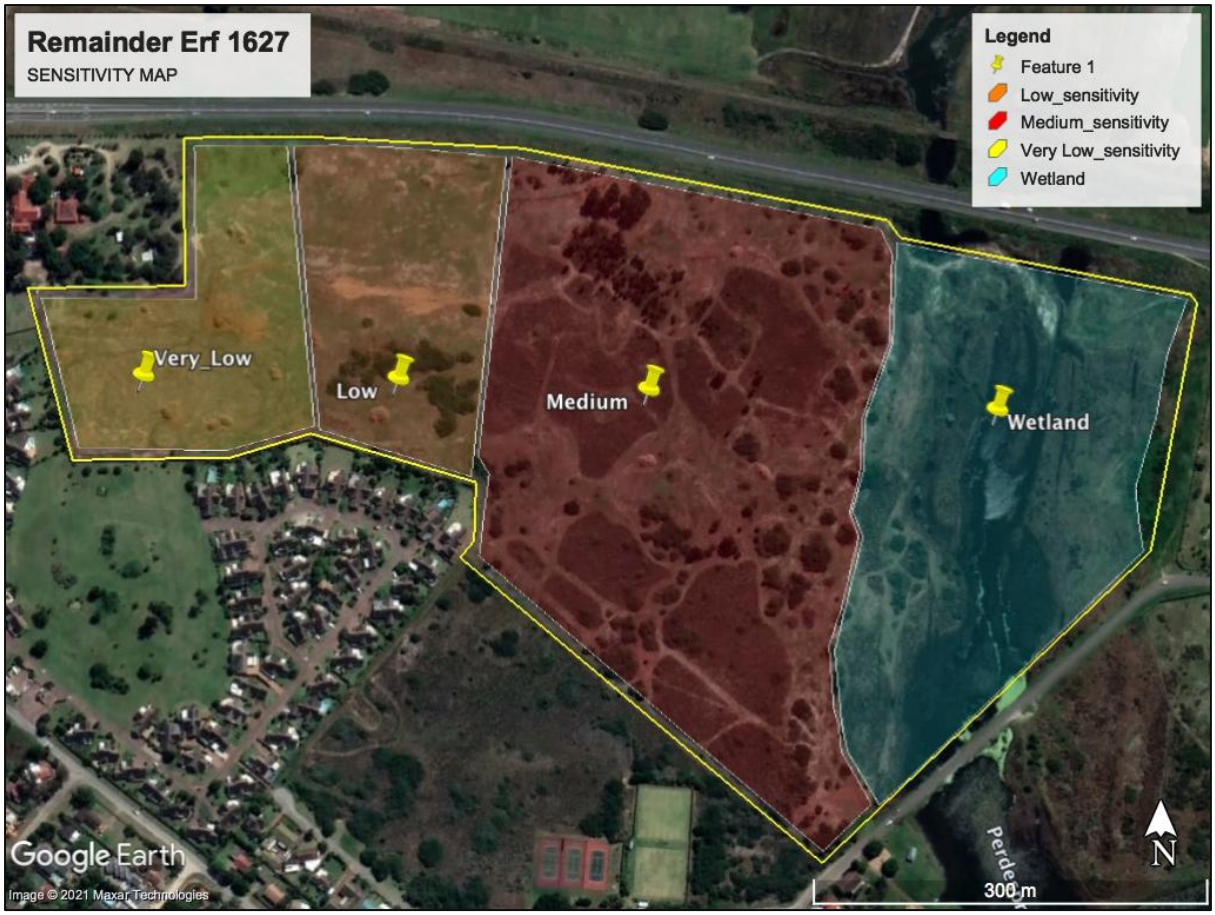


Figure 19: Showing the sensitivity map of the property.

The receiving environment has mixed sensitivities as shown above in Figure 19. The western extent is the most transformed area at the property, and is currently mowed and consists of ruderal, exotic and common indigenous annual and perennial indigenous plants. It is of Very Low Terrestrial Biodiversity Environmental Sensitivity with a Low Relative Plant Species Sensitivity.

Adjacent to the above area is an area of Low Terrestrial Biodiversity Environmental Sensitivity with a Medium Relative Plant Species Sensitivity.

The middle section of the property is of Medium Terrestrial Biodiversity Environmental Sensitivity with a Medium Relative Plant Species Sensitivity, containing remnant patches of Southern Cape Dune Fynbos.

The Non-terrestrial (Estuarine Functional Zone) being the Perdespruit Wetland area is of High Terrestrial Biodiversity Environmental Sensitivity with a Low Relative Plant Species Sensitivity and is a No-Go area for development.

The development alternatives are:

- Option 1: The initial development layout plan (1627 Sedgefield Option 4rev1; Fig. 20). The proposal shows township development concentrated in the southern section of the

developable area with a business and tourism and agricultural node in the northern section and an Open Space area with a tourism facility and tented camp accommodation at the Perdespruit. An impact on Dune Fynbos of Medium Terrestrial Biodiversity Sensitivity and the Perdespruit Wetland is foreseen.

- Option 2: The alternative development plan (1627 Sedgefield Option 8; Fig. 21). The proposal shows township development concentrated in the central southern section with a conservation area north of it adjacent to the Perdespruit Wetland. Group housing is shown at the western extent surrounding a Private Open Space area with a business and tourism facility. No intensive agricultural node is proposed. An impact on Dune Fynbos of Medium Terrestrial Biodiversity Sensitivity is foreseen.

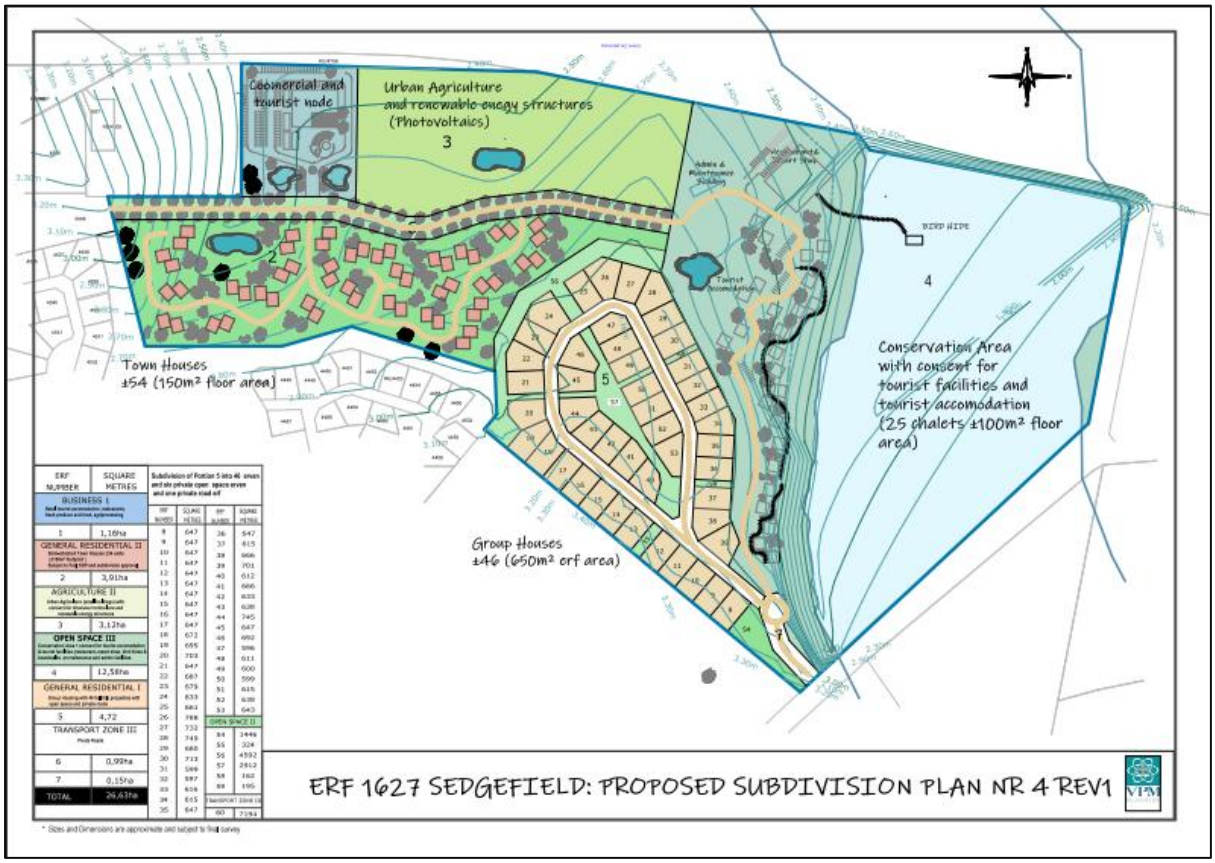


Figure 20: Showing the initial proposed site development plan.

Figure 20 above shows the initial development proposal by Lizemarie Botha of Planning Space Town & Regional Planners (1627 Sedgefield Option 4rev1). The proposal will have an impact over most of the property and will have an impact on the Perdespruit Wetland buffer area.

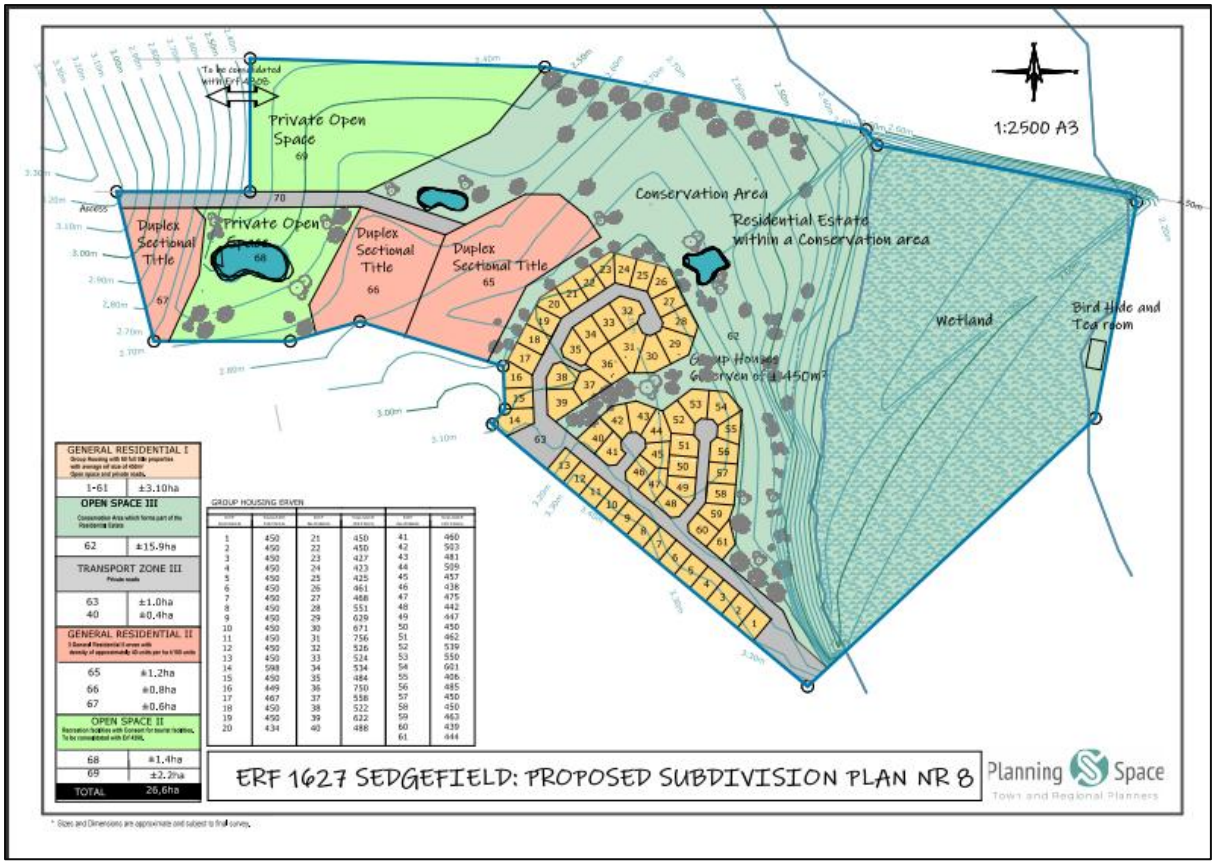


Figure 21: Showing an alternative layout plan for the proposed development.

Figure 21 above shows a sectional title area which will have more hard surfacing and may exacerbate drainage issues and impact to the conservation area, although the area will infill adjacent to existing development.

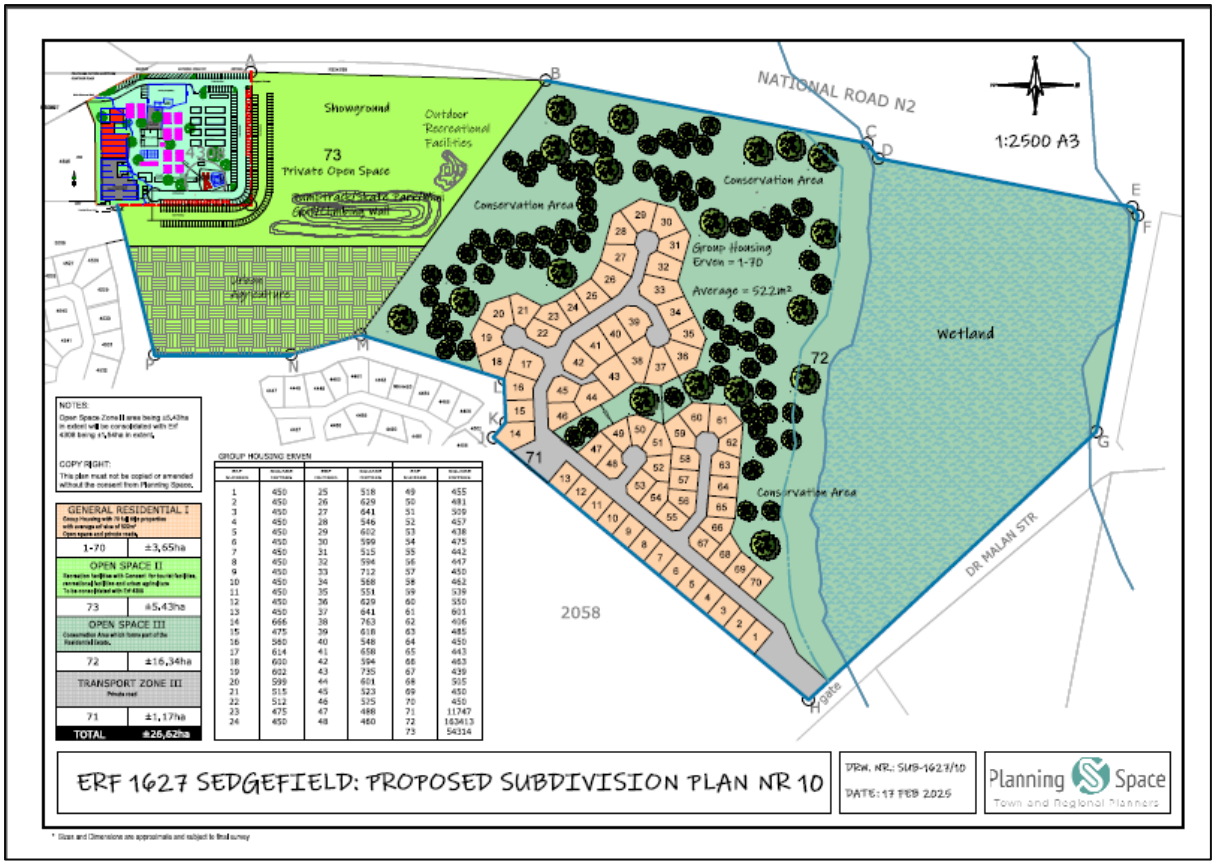


Figure 22: Showing the preferred alternative layout plan for the proposed development.

- Option 3: The preferred alternative development plan (1627 Sedgefield Option 10; Fig. 22). The proposal shows township development concentrated in the central southern section with a conservation area north of it adjacent to the Perdespruit Wetland. Urban intensive agriculture is shown at the western extent south of a Private Open Space area with a business and tourism facility. An impact on Dune Fynbos of Medium Terrestrial Biodiversity Sensitivity is foreseen.

Figure 22 above shows a large agricultural area which may have less hard surfacing and may ameliorate drainage issues and overall impact to the conservation area. Intensive agriculture will align with the growing organic and permaculture practices of the region and support the local economy and food markets.

Table 5 below is a summary of the significance of impacts for all alternatives, with all options similar for the foreseen impact on remnant Dune Fynbos.

Table 5: Impact significance

Layout alternatives	Magnitude	Spatial-functional extent	Duration	Significance	Probability	Confidence
Option 1 (4rev1 initial)	Medium	Regional	Long term	Medium	Probable	Certain
Option 2 (1627 Sedgefield Option 8)	Medium	Regional	Long term	Medium	Probable	Sure
Option 3 (1627 Sedgefield Option 10) (preferred)	Low	Regional	Long term	Medium	Probable	Certain

Table 6 below shows the significance of impacts for each layout alternative, with Option 3 having the least foreseen impact to the receiving environment.

Table 6: Impact rating and significance

Layout¶ options¤	Biodiversity-related· 'sensitivities'¤			Contextual·constraints/potential· biodiversity-related·impact·receptors¶ ¤					Can·conflict·with· constraints/· impacts·on· biodiversity· receptors·be· avoided?'¤	Is·option· acceptable·from· a·biodiversity· perspective?¤	Mitigation·&·rehab· recommendations¤
	Low¤	Medium¤	Very· High¤	CBA¤	ESA¤	RLE¤	PA¤	Other¤	¤	¤	¤
Option· 1¤	Yes¤	Yes¤	¤	Yes¤	No¤	LT¤	Yes¤	OSCAE¶ EFZ¤	No¤	No¤	Avoid·as·No-Go· option.¤
Option· 2¤	Yes¤	Yes¤	¤	Yes¤	No¤	LT¤	Yes¤	OSCAE¶ EFZ¤	Yes¤	Yes¤	Maintain·natural· set-aside·areas·for· conservation.· Rehabilitate· excavated·areas·&· control·and· monitor·erosion.¤
Option· 3¤	Yes¤	Yes¤	°¤	Yes¤	No¤	LT¤	Yes¤	OSCAE·¶ EFZ¤	Yes¤	Yes¤	Maintain·natural· set-aside·areas·for· conservation.· Rehabilitate· excavated·areas·&·

In the above table: CBA=Critical Biodiversity Areas, ESA=Ecological Support Areas, RLE is the Red Listed Ecosystem, namely Least Threatened Southern Cape Dune Fynbos, and PA=Protected Areas.

From a Botanical perspective the condition of the disturbed and / or degraded Dune Fynbos vegetation over most of the receiving environment is of Low to Medium Terrestrial Biodiversity Sensitivity in part with a Medium Relative Plant Species Sensitivity.

The study area according to the BSP is mapped as sensitive for ecological processes, water sources and watercourses, with associated indigenous Dune Fynbos, Estuary and Salt Marsh ecosystems, the latter of High Terrestrial Biodiversity Sensitivity to be conserved and rehabilitated.

However, the development impact of transforming disturbed or degraded Fynbos areas of Low to Medium Terrestrial Biodiversity Sensitivity, is a negative impact for local plant community functioning and ecosystem services, and positive impact for suburban development.

The impact is regional in extent to the study area and surrounding adjacent environment. The activities will have impacts on land and watercourse functioning downstream if erosion and pollution is unmanaged.

The duration of the impact is permanent should development proceed. With mitigation and partial rehabilitation around development footprints and active and passive vegetation succession in the undeveloped set-aside areas the impact will be of a medium term. Clearing of Invasive Alien Species (IAS) will mitigate impacts to the remainder of the property if controlled and managed for conservation.

The impact is of medium intensity on biodiversity as a large amount of pattern and process will be altered or lost by development. It is predicted that the control of IAS will be positive for the recovery of vegetation patterning and ecosystem functioning and ecological services at the set-aside areas.

The impact on pristine Fynbos habitat is improbable based on the history of previous agricultural use at the study area.

The impact on Fynbos habitat and effect on biodiversity, predicted with a high level of confidence in the assessment, is of medium significance.

15 Conservation and Rehabilitation

Although the majority of the property is transformed with a series of contour and access tracks it is important for conservation of biodiversity and maintenance of ecological and structural functioning and associated ecosystem services. Restoration and reducing impacts on ecological processes and structural functioning is key for biodiversity and ecosystem services provided by indigenous vegetation, estuaries, and watercourses, and for movement of fauna and avifauna. Following rehabilitation of the area around the proposed development at the receiving environment the applicant must ensure that IAS are controlled, and their spread prevented.

It is not foreseen that an impact to protected areas in the vicinity and watercourses will occur, should spillage be prevented from occurring and wastewater remain contained and appropriately disposed of.

16 Mitigation and Recommendations for management

16.1 As sections of the property are sensitive the applicant must conduct activities carefully and reuse or relocate as much bulk plant material as is practical prior to construction. As there is a potential for dispersal and supply of indigenous plant propagules at the property it is recommended that natural succession occur following the activity as passive rehabilitation.

16.2 Following clearing of the development area all plant material should be chipped and the mulch stacked in rows for later use in rehabilitation.

16.3 Topsoil must be lifted and placed in rows adjacent to the mulched plant material for later use in rehabilitation.

16.4 Only locally occurring and suitable indigenous plant species much be used for supplementary planting and landscaping around and adjacent to the development footprint areas.

16.5 The intensive agricultural area must remain intact until development proceeds. It is advised that orchard trees, food crops and vegetables be planted in raised composted beds.

16.6 The No-go areas (remaining natural vegetation & agricultural zone) outside of the various development footprints must be cordoned off from access and disturbance before construction commences. The western buffer to the Perdespruit Wetland must temporarily fenced in also, to prevent access. Construction staff should be made aware of the sensitivity of the site in the form of a short verbal induction and only conduct activities within the development footprint area for construction.

16.7 Excavation and earthworks proposed to be conducted must remain within the precise development footprints and be demarcated from the remaining areas.

16.8 All concrete mixing must be contained within sealed containers or tarpaulin sheets to prevent excessive soil contamination; as well as for painting activities. No mixing of builder’s products on bare soil should be allowed.

16.9 Waste receptacles (skips) must be placed at various intervals and no littering and pollution of the site allowed.

16.10 During construction exposed surfaces and slopes may be covered with mulch, hessian cloth and / or “chip filled hessian sausage rolls” to prevent loss of soil by natural wind and water erosion.

16.11 Ensure drainage and runoff is managed to prevent erosion and soil loss. Install contour berms with debris and mulch only where erosion has occurred to ensure that no new erosion pathways are formed. Prevent runoff and spillage flowing towards the Perdespruit Wetland.

16.12 Prevent the spread of Invasive Alien Species from entering or dispersing from the set aside natural areas. Removing of Invasive Alien Species must be done carefully without the use of heavy machinery or disturbance of the indigenous vegetation by removing IASs in a phased approach (from least invaded to densely invaded areas).

16.13 Ensure that sewage is disposed of appropriately and measures in place to prevent overflows or spillage.

16.14 Maintain the undeveloped areas for conservation of biodiversity and related ecological processes and functioning.

16.15 Rehabilitate the areas adjacent to the dwelling units and install gardened areas with landscaping and planting of indigenous shrubs and trees mixed with a food garden area.

16.16 An ECO must oversee the rescue and relocation of plant material and initial rehabilitation activities; and thereafter conduct follow up inspections during construction.

16.17 It is recommended that the Perdespruit Wetland area and buffer around the development be rezoned for Conservation use i.t.o. the municipal land use planning bylaw.

Conclusion

The receiving environment was investigated for a Basic Assessment application for environmental authorization for a proposed mixed-use development in Sedgefield.

Although some biodiversity pattern and process will be impacted upon, and fragmentation of the landscape and ecological connectivity of the area reduced it is the opinion of the author that development may proceed over most of the transformed property and a set-aside area be maintained for conservation of the indigenous vegetation and diverse birdlife.

Future mitigation of erosion, invasive plants, and fire risk by persistent control of Invasive Alien Species and conservation of any remaining Dune Fynbos elements will ensure ecological and hydrological services and linkages are maintained in the undeveloped area.

To conclude, from a terrestrial biodiversity perspective Option 3 is recommended and Options 1 and 2 are unfavourable.

References

https://biodiversityadvisor.sanbi.org/

https://gis.elsenburg.com/apps/cfm/

https://www.inaturalist.org

https://www.inaturalist.org/places/sedgefield-island-conservancy

http://redlist.sanbi.org/index.php

https://screening.environment.gov.za/

https://www.discover-sedgefield-south-africa.com/sedgefield-history.html (Figure 2)

Brownlie S (2005) Guideline for involving biodiversity specialists in EIA processes: Edition 1. CSIR Report No ENV-S-C 2005 053 C. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Ecosystem Guidelines for Environmental Assessment in the Western Cape, Edition 2. (2016) Fynbos Forum, Cape Town.

Government Gazette No. 43110, GN No. 320 (2020) National Environmental Management Act, 1998 (Act No. 107 of 1998) Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for environmental authorisation.

Government Gazette No. 47526, GN No. 2747 (2022) National Environmental Management Act, 1998 (Act No. 107 of 1998) Consultation on the intention to adopt the National Web Based Environmental Screening Tool as an Environmental Management Instrument.

Government Gazette No. 46867, GN No. 2464 (2022) National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) The revised National List of Ecosystems that are threatened and in need of protection.

Government of South Africa (2022) South African Red List of Terrestrial Ecosystems: assessment details and ecosystem descriptions. Government Notice 2747, Gazette 4526. Technical Report #7664, SANBI Pretoria, South Africa.

Pool-Stanvliet R, Duffell-Canham A, Pence G & Smart R (2017) The Western Cape Biodiversity Spatial Plan Handbook. Stellenbosch, CapeNature.

QGIS Development Team (2018). QGIS Geographic Information System. Open Source Geospatial Foundation Project. http://qgis.org.

South African National Biodiversity Institute (SANBI) (2020) Species Environmental Assessment Guideline. Guidelines for the implementation of the Terrestrial Fauna and Terrestrial Flora Species Protocols for environmental impact assessments in South Africa. South African National Biodiversity Institute, Pretoria. Version 3.1. 2022.

South African National Biodiversity Institute (2006-2018). The Vegetation Map of South Africa, Lesotho and Swaziland, Mucina L, Rutherford MC & Powrie LW (Editors). http://bgis.sanbi.org/Projects/Detail/186, Version 2018.

Table 7: List of frog species (Class Amphibia) observed within Sedgefield Island Conservancy

Clicking Stream Frog	Strongylopus grayii
Raucous Toad	Sclerophrys capensis

Table 8: List of bird species (Class Aves) observed within Sedgefield Island Conservancy

Common Name	Scientific Name	Conservation status
	Charadrius hiaticula tundrae	
African Black-winged Kite	Elanus caeruleus caeruleus	
African Common Moorhen	Gallinula chloropus meridionalis	
African Fish-Eagle	Icthyophaga vocifer	
African Great Crested Grebe	Podiceps cristatus infuscatus	
African Harrier-Hawk	Polyboroides typus	
African Hoopoe	Upupa epops africana	
African Little Bittern	Ixobrychus minutus payesii	
African Oystercatcher	Haematopus moquini	
African Peregrine Falcon	Falco peregrinus minor	
African Pied Kingfisher	Ceryle rudis rudis	
African Reed Cormorant	Microcarbo africanus africanus	
African Sacred Ibis	Threskiornis aethiopicus	
African Southern Pochard	Netta erythrophthalma brunnea	
African Spoonbill	Platalea alba	
African Spotted Eagle-owl	Bubo africanus africanus	
African Swamphen	Porphyrio madagascariensis	
African Three-banded Plover	Charadrius tricollaris tricollaris	
Bar-throated Apalis	Apalis thoracica	
Black-headed Heron	Ardea melanocephala	
Blacksmith Lapwing	Vanellus armatus	
Black-winged Stilt	Himantopus himantopus	
Burchell's Coucal	Centropus superciliosus burchellii	
Cape Batis	Batis capensis	
Cape Boubou	Laniarius ferrugineus ferrugineus	
Cape Bulbul	Pycnonotus capensis	
Cape Canary	Serinus canicollis	
Cape Common Waxbill	Estrilda astrild astrild	
Cape Gull	Larus dominicanus vetula	
Cape Little Grebe	Tachybaptus ruficollis capensis	
Cape Olive Thrush	Turdus olivaceus olivaceus	
Cape Shoveler	Spatula smithii	
Cape Southern Fiscal	Lanius collaris collaris	
Cape Speckled Mousebird	Colius striatus striatus	
Cape Streaky-head Seedeater	Crithagra gularis humilis	
Cape Sugarbird	Promerops cafer	

Cape Teal	Anas capensis	
Cape Weaver	Ploceus capensis	
Caspian Tern	Hydroprogne caspia	Vulnerable
Coastal Fork-tailed Drongo	Dicrurus adsimilis adsimilis	
Coastal Paradise Flycatcher	Terpsiphone viridis granti	
Common Cape Wagtail	Motacilla capensis capensis	
Common Giant Kingfisher	Megaceryle maxima maxima	
Common Ringed Plover	Charadrius hiaticula	
Dideric Cuckoo	Chrysococcyx caprius	
East African Harrier-Hawk	Polyboroides typus typus	
Eastern Southern Grey Sparrow	Passer diffusus stygiceps	
Egyptian Goose	Alopochen aegyptiaca	
European Starling	Sturnus vulgaris	
Fiscal Flycatcher	Melaenornis silens	
Fynbos Southern Double-Collared Sunbird	Cinnyris chalybeus chalybeus	
Glossy Ibis	Plegadis falcinellus	
Goliath Heron	Ardea goliath	
Great Egret	Ardea alba	
Greater Flamingo	Phoenicopterus roseus	Near Threatened
Greater Striped Swallow	Cecropis cucullata	
Grey Cape White-Eye	Zosterops virens capensis	
Grey-hooded Gull	Chroicocephalus cirrocephalus	
Jackal Buzzard	Buteo rufofuscus	
Karoo Prinia	Prinia maculosa	
Kittlitz's Plover	Anarhynchus pecuarius	
Klaas's Cuckoo	Chrysococcyx klaas	
Lesser Flamingo	Phoeniconaias minor	Near Threatened
Levaillant's Cisticola	Cisticola tinniens	
Little Sparrowhawk	Accipiter minullus	
Mainland African Darter	Anhinga rufa rufa	
Old World Black-crowned Night Heron	Nycticorax nycticorax nycticorax	
Olive Bushshrike	Telophorus olivaceus	
Orange-throated Longclaw	Macronyx capensis	
Pied Avocet	Recurvirostra avosetta	
Pied Crow	Corvus albus	
Pin-tailed Whydah	Vidua macroura	
Piping Cisticola	Cisticola fulvicapilla	
Red-eyed Dove	Streptopelia semitorquata	
Red-knobbed Coot	Fulica cristata	
Ruff	Calidris pugnax	
Southern African Dusky Flycatcher	Muscicapa adusta adusta	
Southern African Water Thick-knee	Burhinus vermiculatus vermiculatus	
Southern Amethyst Sunbird	Chalcomitra amethystina amethystina	
Southern Black-headed Oriole	Oriolus larvatus larvatus	

Southern Bokmakierie	Telophorus zeylonus zeylonus	
Southern Cape Robin-Chat	Cossypha caffra caffra	
Southern Gray-headed Sparrow	Passer diffusus	
Southern Greater Double-collared Sunbird	Cinnyris afer afer	
Southern Hadeda	Bostrychia hagedash hagedash	
Southern Helmeted Guineafowl	Numida meleagris coronatus	
Southern Knysna Turaco	Tauraco corythaix corythaix	
Southern Laughing Dove	Spilopelia senegalensis senegalensis	
Southern Malachite Kingfisher	Corythornis cristatus cristatus	
Southern Malachite Sunbird	Nectarinia famosa famosa	
Southern Olive Woodpecker	Dendropicos griseocephalus griseocephalus	
Southern Red-winged Starling	Onychognathus morio morio	
Southern Rock Martin	Ptyonoprogne fuligula fuligula	
Southern Speckled Pigeon	Columba guinea phaeonota	
Southern Spotted Thick-Knee	Burhinus capensis capensis	
Southern Yellow-billed Duck	Anas undulata undulata	
Squacco Heron	Ardeola ralloides	
Western Cape Ring-necked Dove	Streptopelia capicola capicola	
Western Cattle Egret	Bubulcus ibis ibis	
Western Grey Heron	Ardea cinerea cinerea	
Western Purple Heron	Ardea purpurea purpurea	
Whimbrel	Numenius phaeopus	
White-bellied Barn Swallow	Hirundo rustica rustica	
White-breasted Cormorant	Phalacrocorax carbo lucidus	
White-browed Coucal	Centropus superciliosus	
White-necked Raven	Corvus albicollis	
White-rumped Swift	Apus caffer	
White-throated Swallow	Hirundo albigularis	

Table 9: List of reptile species (Class Reptilia) observed within Sedgefield Island Conservancy

Angulate Tortoise	Chersina angulata
Common Boomslang	Dispholidus typus typus
Common Brown Water Snake	Lycodonomorphus rufulus
Common Dwarf Gecko	Lygodactylus capensis
Common Puff Adder	Bitis arietans arietans
Leopard Tortoise	Stigmochelys pardalis
Marbled Leaf-toed Gecko	Afrogecko porphyreus
Olive Snake	Lycodonomorphus inornatus
Parrot-beaked Tortoise	Homopus areolatus
Red-Sided Skink	Trachylepis homalocephala
Rhombic Night Adder	Causus rhombeatus
Rhombic Skaapsteker	Psammophylax rhombeatus
Southern Slugeater	Duberria lutrix lutrix
Tropical House Gecko	Hemidactylus mabouia

Western Natal Green Snake	Philothamnus occidentalis

Table 10: List of animal species (Class Mammalia) observed within Sedgefield Island Conservancy

Cape Dune Molerat	Bathyergus suillus
Cape Fur Seal	Arctocephalus pusillus pusillus
Cape Golden Mole	Chrysochloris asiatica
Cape Grey Mongoose	Herpestes pulverulentus
Cape Porcupine	Hystrix africaeaustralis
Common Straw-coloured Fruit Bat	Eidolon helvum helvum
Four-striped mice	Rhabdomys
Marsh Mongoose	Atilax paludinosus
Southern Cape Grey Mongoose	Herpestes pulverulentus pulverulentus
Southern Marsh Mongoose	Atilax paludinosus paludinosus
Southern Vervet Monkey	Chlorocebus pygerythrus pygerythrus
Southern Vlei Rat	Otomys irroratus

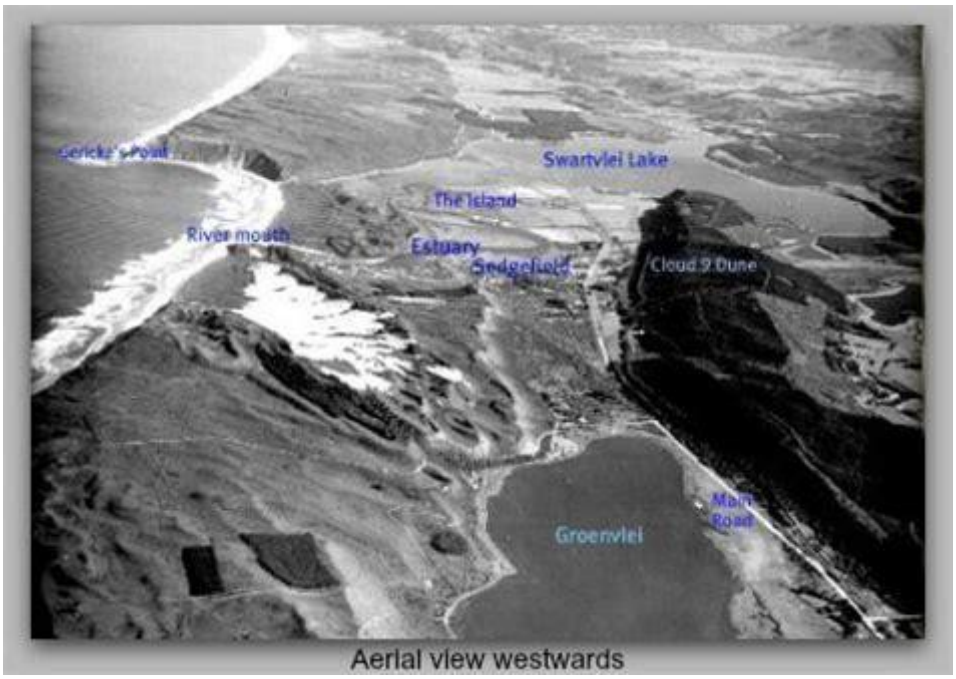


Figure 23: Showing an early photograph of Sedgefield (ca. 1956) with the study area cleared of vegetation.

Table 11: List of plant & moss species observed within Sedgefield Island Conservancy

Scientific Name	Common Name
Abutilon sonneratianum	Butter and cheese
Acacia cyclops	western coastal wattle
Acacia saligna	golden wreath wattle
Afrocarpus falcatus	Outeniqua Yellowwood
Agathosma apiculata	Garlic Buchu
Albuca juncifolia	Rushleaf Tamarak
Alocasia odora	Asian Taro
Aloe arborescens	Candelabra Aloe
Aloe ferox	Cape Aloe
Aloe juvenna	tiger tooth aloe
Aloe maculata	soap aloe
Amaryllis belladonna	Belladonna Lily
Anredera cordifolia	Mignonette vine
Anthospermum aethiopicum	Tall Flowerseed
Apium decumbens	Sprawling Celery
Arctotheca prostrata	Prostrate Capeweed
Argyranthemum frutescens	Marguerite daisy
Asparagus aethiopicus	African Asparagus
Asparagus asparagoides	Cape Smilax
Atriplex patula verreauxii	Cape Orache
Bauhinia tomentosa	Yellow bauhinia
Bonatea speciosa	Green Woodorchid
Brunsvigia orientalis	candelabra lily
Bryum argenteum	Silvery Bryum
Carissa macrocarpa	Natal Plum
Carpobrotus deliciosus	Delicious Sourfig
Carpobrotus edulis	sea fig
Celosia argentea	Quail Grass
Celosia argentea argentea	
Celtis africana	African Elm
Cenchrus clandestinus	Kikuyu Grass
Cestrum laevigatum	inkberry
Chasmanthe aethiopica	Cobra Lily
Chenopodiastrum murale	nettle-leaved goosefoot
Chenopodium album album	White Goosefoot
Chionanthus foveolatus	Pock-ironwood
Chironia baccifera	Christmas Berry
Clivia miniata	Natal Lily
Colchicum eucomoides	Green Men-in-a-Boat
Coleus neochilus	Lobster flower
Colpoon compressum	Cape Sumach

Commelina benghalensis	tropical spiderwort
Conicosia pugioniformis	Pig's-root
Convolvulus sagittatus	arrow bindweed
Coprosma repens	Taupata
Cosmos bipinnatus	garden cosmos
Cotula coronopifolia	Brass Buttons
Cotula discolor	Beach Buttons
Cotyledon orbiculata	pig's ear
Crinum macowanii	River Swamplily
Crocosmia aurea aurea	Many Falling Stars
Cussonia thyrsiflora	Cape Coast Cabbagetree
Cyperus prolifer	Dwarf Papyrus
Cyrtanthus elatus	Scarborough lily
Delosperma inconspicuum	White Gardenroute Sheepfig
Dichondra micrantha	Asian ponysfoot
Dietes bicolor	Yellow Fortnight Lily
Dimorphotheca fruticosa	trailing African daisy
Diospyros dichrophylla	Poison Starapple
Diospyros simii	Climbing Star-Apple
Diplotaxis tenuifolia	Perennial Wall-rocket
Dischisma ciliatum	Fringe Falseslugwort
Dischisma ciliatum erinoides	Toothy Fringe Falseslugwort
Echinopsis oxygona	Easter Lily Cactus
Ehrharta calycina	Perennial Veldtgrass
Ekebergia capensis	Cape Ash
Elegia tectorum	Cape Thatching Reed
Erica cerinthoides cerinthoides	Common Fire Heath
Erigeron bonariensis	Flax-leaved Horseweed
Eriocephalus africanus	Cape Snow Bush
Erythrina caffra	South African Coral Tree
Eucalyptus cladocalyx	sugar gum
Eulophia speciosa	Golden Harlequin
Euphorbia cyathophora	painted leaf
Euphorbia peplus	Petty Spurge
Euryops chrysanthemoides	Paris Daisy
Falkia repens	Pink Ear
Fatsia japonica	Japanese aralia
Felicia echinata	Dune Felicia
Ficinia bulbosa	Bulbous Sedge
Ficinia nodosa	Knobby Clubrush
Ficus burkei	Common Wild Fig
Freesia leichtlinii alba	White Kammetjie
Fumaria muralis	common ramping-fumitory
Fumaria muralis muralis	

Furcraea foetida	Mauritius hemp
Furcraea selloana	Wild Sisal
Gazania rigens	Trailing Treasureflower
Geranium incanum multifidum	Purple Carpet Cranes-bill
Geranium molle	Dove's-foot crane's-bill
Gladiolus carinatus	Blue Afrikaner
Gladiolus carinatus carinatus	
Gladiolus cunonius	Red Pypie
Gladiolus dalenii	Dragon's-head Lily
Grewia occidentalis	Crossberry
Grewia occidentalis occidentalis	Bowwood
Harpephyllum caffrum	African plum
Hebenstretia integrifolia	Summer Slugwort
Helichrysum cymosum	Fume Everlasting
Helichrysum cymosum cymosum	
Helichrysum foetidum	Stinking Everlasting
Helichrysum petiolare	Licorice plant
Helichrysum teretifolium	Needle Everlasting
Heliophila linearis	Needle Sunspurge
Heliophila linearis linearifolia	
Heliophila linearis linearis	Lanceleaf Sunspurge
Hellmuthia membranacea	Helmet Sedge
Hibiscus diversifolius	Prickly Hibiscus
Hypoestes aristata aristata	Ribbon Bush
Hypoestes forskaolii	White Ribbon Flower
Imperata cylindrica	Cogon Grass
Ipomoea cairica cairica	Coast Morning-Glory
Ixia orientalis	Eastern Kalossie
Juncus kraussii	Sea Rush
Kalanchoe delagoensis	Mother of Thousands
Kedrostis nana	Porcupine Potato
Kniphofia uvaria	Red Hot Poker
Lagurus ovatus	Hare's Tail Grass
Lantana camara	common lantana
Leonotis leonurus	Common Lionspaw
Leptospermum laevigatum	Australian Tea Tree
Leucadendron salignum	Common Sunshine Conebush
Leucospermum — hybridum	Pincushion Hybrids
Leucospermum cordifolium — patersonii	High Gold and derived cultivars
Lobelia neglecta	Rough Lobelia
Lobularia maritima	sweet alyssum
Lunularia cruciata	Crescent-cup liverwort
Maytenus procumbens	Dune Koko Tree
Medicago polymorpha	bur clover

Melia azedarach	Chinaberry
Melilotus indicus	small melilot
Mesembryanthemum aitonis	Coast Solfig
Metalasia muricata	White bristle bush
Moraea britteniae	
Moraea bulbillifera	Bulblet Capetulp
Moraea bulbillifera anomala	
Moraea bulbillifera bulbillifera	
Moraea polyanthos	Manyflower Tulp
Mystroxylon aethiopicum	Kooboo-berry
Nemesia affinis	Common Lionface
Nemesia fruticans	Grassveld Lionface
Nidorella ivifolia	Ivy Vleiweed
Nothoscordum gracile	Onion Weed
Nuxia floribunda	Forest Elder
Oenothera biennis	common evening-primrose
Oenothera lindheimeri	clockweed
Osteospermum moniliferum moniliferum	Bietou
Oxalis caprina	Goat's-foot
Oxalis corniculata	Creeping Woodsorrel
Oxalis depressa	Early Sorrel
Oxalis obtusa	yelloweye woodsorrel
Oxalis pes-caprae	Bermuda buttercup
Papaver aculeatum	Bristle Poppy
Parthenocissus quinquefolia	Virginia creeper
Passerina corymbosa	Common Gonna
Pelargonium capitatum	rose-scented geranium
Pelargonium grossularioides	Coconut Geranium
Phormium tenax	New Zealand flax
Phragmites australis	common reed
Phragmites australis australis	European reed
Physalis peruviana	Cape gooseberry
Pinus pinaster	maritime pine
Pittosporum undulatum	Australian Cheesewood
Pittosporum viridiflorum	Cape Cheesewood
Plantago lanceolata	ribwort plantain
Plectranthus verticillatus	Whorled plectranthus
Plumbago auriculata	blue plumbago
Polygala ericifolia	Heathleaf Butterflybush
Polygala myrtifolia myrtifolia	Septemberbush
Psidium cattleyanum	strawberry-guava
Pterocelastrus tricuspidatus	Candlewood
Ranunculus multifidus	African buttercup
Raphanus raphanistrum	Jointed Charlock

Rhaphiolepis indica	Indian Hawthorn
Rhoicissus digitata	Baboon Grape
Rhoicissus tridentata tridentata	Bitter Grape
Salicornia meyeriana	Annual Glasswort
Salvia aurea	Brown Sage
Satyrium princeps	Red Satyre
Scadoxus puniceus	Paintbrush lily
Schinus terebinthifolia	Brazilian pepper
Schoenoplectus scirpoides	
Scilla peruviana	Portuguese squill
Searsia crenata	Crowberry
Searsia glauca	Blue Kunibush
Searsia laevigata	Dune Currantrhus
Searsia lucida lucida	Common Glossy Currantrhus
Secamone alpini	Monkey Rope
Senecio angulatus	creeping groundsel
Senecio burchellii	Kill Ragwort
Senecio elegans	Red-purple Ragwort
Senecio purpureus	Purple Ragwort
Senegalia galpinii	monkey thorn
Sherardia arvensis	Field madder
Sideroxylon inerme inerme	Southern White Milkwood
Silene undulata	African dream root
Solanum africanum	drunken berry
Solanum linnaeanum	Yellow Bitter-apple
Solanum nigrum	black nightshade
Soleirolia soleirolii	Baby's tears
Stachys aethiopica	African Stachys
Stenotaphrum secundatum	Saint Augustine grass
Struthiola argentea	Evening Capespray
Taraxacum officinale	common dandelion
Tarchonanthus littoralis	Coastal Camphorbush
Tecomaria capensis	Cape Honeysuckle
Tetragonia decumbens	Coast Seacoral
Trachyandra ciliata	Common Capespinach
Trifolium repens	white clover
Tropaeolum majus	garden nasturtium
Tulbaghia violacea	Society Garlic
Ursinia chrysanthemoides	Creeping Paraseed
Vachellia sieberiana woodii	Paperbark Thorn
Vachellia xanthophloea	fever tree
Veltheimia bracteata	Forest Lily
Vepris lanceolata	white-ironwood
Vicia benghalensis	reddish tufted vetch

Vinca major	greater periwinkle
Virgilia divaricata	Gardenroute Keurboom
Wachendorfia paniculata	Common Butterflylily
Westringia fruticosa	Coastal Rosemary
Yucca gloriosa	moundlily yucca
Zantedeschia aethiopica	calla lily

DECLARATION OF THE SPECIALIST

I Benjamin Alan Walton, 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.
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all the requirements 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 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.

_____2025/03/07

Signature of the Specialist: Date:

Trading as "*Cape Vegetation Surveys*"

_____

Name of company (if applicable):

Copyright Notice

Disclaimer

The content of this document report is based on information made available to Benjamin Walton at the date of document compilation. Every effort has been made to produce an accurate assessment and provide realistic and practical recommendations. This document report, and information or advice, which it contains, is provided by Benjamin Walton solely for internal use and reliance by its Client in the performance of Benjamin Walton's duties and liabilities under contract with the Client. These terms and conditions should be regarded when considering and / or placing any reliance on the document report. Benjamin Walton cannot be held liable for any errors and / or omissions in this document report, nor for any damages, consequential or otherwise, which the client may sustain from the use or reliance upon this document report and all information contained herein.

Confidentiality Statement

This document report contains confidential information owned by Benjamin Walton and may not be used for any purpose other than that for which the information was provided. Kindly note that this document, its contents and intellectual property, may not be disclosed to any third party without the written consent of Benjamin Walton.