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FINAL

FLORAL & FAUNAL COMPLIANCE STATEMENT FOR THE PROPOSED
KLIPROAD CEMETERY EXPANSION

ZUTARI (PTY) LTD

Kliproad Cemetery,
Cape Town, Western Cape Province



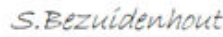
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DECLARATION OF INDEPENDENCE

I, Reuhl Lombard, declare that I act as an independent specialist for the Floral and Faunal Specialist Assessment of this application. I conduct assessments in an objective manner, even when the views and findings might not be favourable to the Applicant. I have the expertise to conduct the assessment and will comply with the Act, regulations and other applicable legislation. I do not have conflicting interests in the undertaking of the activity. I undertake to disclose all material information in my possession that has or may have the potential of influencing any decision to be taken in respect to the application.

SIGNATURE OF SPECIALIST	
REGISTRATIONS	SACNASP Reg No: 128735
DATE	02/2025

INDEMNITY STATEMENT

Although Biosphere Enviro Solutions (Pty) Ltd exercises due care and diligence in rendering services and preparing documents, the client takes full responsibility for this report and its implementation in terms of the National Environmental Management Act of 1998, and National Water Act (Act 36 of 1998).

This statement exempts Biosphere Enviro Solutions and its associates and their sub-contractors from any legal responsibility based on the timing of the assessment, the result and the duration thereof, which has an influence on the credibility and accuracy of this report.

Biosphere Enviro Solutions accepts no liability, and the client, by receiving this document, indemnifies Biosphere Enviro Solutions and its directors, managers, agents and employees against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by Biosphere Enviro Solutions and by the use of the information contained in this report.

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LIST OF ABBREVIATIONS

CARA	Conservation of Agricultural Resources Act
CBA	Critical Biodiversity Areas
CR	Critically Endangered
CSIR	Council for Scientific and Industrial Research
DFFE	Department of Forestry, Fisheries and the Environment
DWAF	Department of Water Affairs and Forestry
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EN	Endangered
ENPAT	Environmental Potential Atlas, South Africa
ESA	Ecological Support Areas
ESO	Environmental Site Officer
IBA	Important Bird Areas
LC	Least Concern
NEMA	National Environmental Management Act
NEMBA	National Environmental Management: Biodiversity Act
NFEPA	National Freshwater Ecosystem Protected Areas
NPAES	National Protected Area Expansion Strategy
NT	Near Threatened
NWM5	National Wetland Map 5
PA	Protected Areas
SANBI	South African National Biodiversity Institute
SCC	Species of Conservation Concern
SWSA	Strategic Water Source Areas
VU	Vulnerable

INTRODUCTION

Biosphere Enviro Solutions (Pty) Ltd is appointed by Zutari (Pty) Ltd to undertake a Floral and Faunal Specialist Assessment in support of the proposed upgrade and transformation works to be undertaken at the Kliproad Cemetery, Cape Town, Western Cape Province.

TERMS OF REFERENCE

Government Notice (GN) 1150 of October 2020 provides protocols and criteria for the assessment and reporting of impacts on terrestrial biodiversity for any activity requiring environmental authorisation. The assessment and minimum reporting requirements of this protocol are associated with detected levels of environmental sensitivity identified by the national web based environmental screening tool (screening tool). The requirements for terrestrial biodiversity are dictated by landscapes or sites which support various levels of biodiversity, inclusive of the presence of potential species of concern.

Prior to commencing with the assessment, the current use of the land and the potential environmental sensitivity of the site under consideration, as identified by the screening tool, were confirmed. As part of the site sensitivity verification, a desktop analysis for the site was completed and followed up by a preliminary on-site inspection. The Environmental Screening Tool Report can be viewed under **Addendum 1**.

An applicant intending to undertake an activity identified in the scope of GN 1150, on a site identified on the screening tool as being of "very high sensitivity" for terrestrial biodiversity, must submit a Terrestrial Biodiversity Specialist Assessment. However, where the information gathered from the site sensitivity verification differs from the screening tool designation of "very high" or "high", for terrestrial animal species sensitivity and it is found to be of a "low" sensitivity, then a Terrestrial Animal Species Compliance Statement must be submitted. Based on the Site Sensitivity Verification report (**Addendum 2**), the site in question has a Low to Very Low site sensitivity, and as such requires the compilation of a Terrestrial Biodiversity Compliance Statement (this report).

LEGAL FRAMEWORK

- The National Environmental Management Act (107 of 1998).
- National Environmental Management: Biodiversity Act (10 of 2004).
- National Environmental Management: Biodiversity Act (10 of 2004): Draft lists of threatened and protected species, 2005.
- National Environmental Management: Biodiversity Act (10 of 2004). Alien and invasive species lists, 2020.
- The National Forest Act: Protected tree species.
- Environmental Impact Assessment (EIA) regulations.
- Terrestrial Biodiversity, Plant and Animal Species protocols, gazetted 30 October 2020 (Government Notice number 1150).
- Western Cape Nature Conservation Ordinance (Ordinance 19 of 1974, as amended).

- Western Cape Nature Conservation Laws Amendment Act (Act No. 3 of 2000).
- Western Cape Biodiversity Act, 2021 (Act 6 of 2021).
- Draft Western Cape Biodiversity Bill (2019).

The National Environmental Management Act (NEMA, Act 107 of 1998) and the National Environmental Management Biodiversity Act (NEMBA, Act 10 Of 2004) ensure the protection of ecological processes, natural systems and the preservation of biotic diversity within the natural environment. They also ensure the protection of the environment against disturbance, deterioration, defacement or destruction as a result of man-made structures, installations, processes, products or activities.

ASSUMPTIONS AND LIMITATIONS

- In order to obtain a comprehensive understanding of the dynamics of the biodiversity of the study area, surveys should ideally be replicated over several seasons and over a number of years. However, due to project time constraints such long-term studies are not feasible. This survey was conducted during February 2025 which is not the ideal flowering period. Nevertheless, adequate rainfall has occurred during the current summer period to allow for sufficient growth.
- Since environmental studies deal with dynamic natural systems, additional information may come to light at a later stage.
- Despite these limitations, a comprehensive desktop study was also conducted, in conjunction with the detailed results from the current survey, and as such there is a high confidence in the information provided.
- Floral identifications of each species on site were documented and were confirmed with family experts located at SANBI.

INFORMATION SOURCES

The following information sources were obtained:

- Relevant maps through GIS mapping, and information on the natural environment of the area concerned.
- Legislation pertaining to the fauna and flora study as relevant.
- The vegetation of South Africa, Lesotho and Swaziland (Mucina and Rutherford, 2006).
- Red data species lists from the South African National Biodiversity Institute (SANBI).
- The Biodiversity and Development Institute – The Virtual Museum data (sourced directly following closure of the portal).
- Relevant plant and animal field guides (see Reference list).
- CapeFarmMapper3 Web-based Mapping Application
- City of Cape Town Open Data Portals – ArcGIS

BACKGROUND TO THE STUDY AREA

The project will entail the expansion of an existing cemetery within the following location:

Table 1: Structure to be developed

Development Description	Type	QDG1	Corner Coordinates	Central Coordinate	Activity
Kliproad Cemetery	Expansion	3418AB	34° 2'27.05"S 18°29'24.71"E	34° 2'21.69"S 18°29'27.87"E	Expansion of a formal existing Cemetery
			34° 2'10.19"S 18°29'39.54"E		
			34° 2'29.33"S 18°29'36.72"E		
			34° 2'33.82"S 18°29'29.13"E		

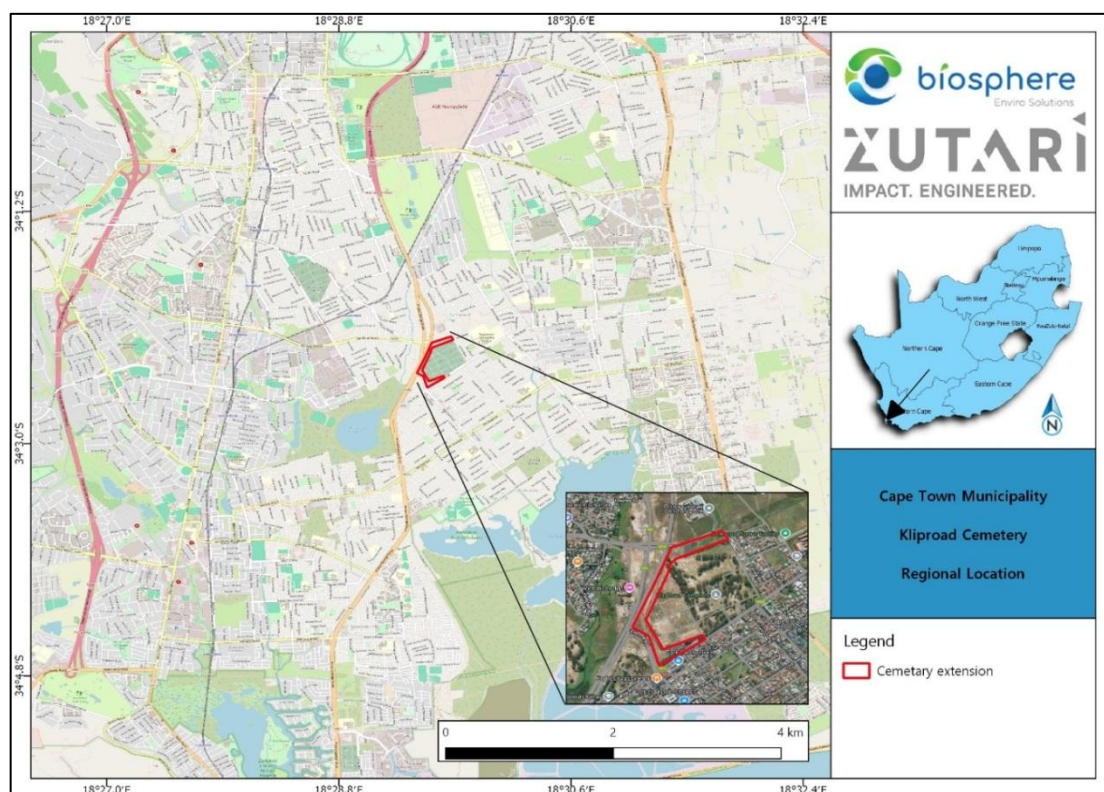


Figure 1: Regional setting of project

The key activities that require environmental authorisation relate to the expansion of the existing Kliproad Cemetery. The structures in question and the project as a whole triggered themes and sensitivities (Table 2) and Site Sensitivity Verification, followed by the relevant level of environmental assessment.

1 Quarter Degree Grid cell wherein the project is located

Table 2: Screening Tool outcomes

Theme/specialist assessment	Sensitivity	Rationale
Animal Species	High	Sensitive species (medium)
Plant Species	Medium	Sensitive species (medium)
Terrestrial Biodiversity	Very High	SWSA (SW) _Table Mountain CR_Cape Flats Sand Fynbos

LOCATION

The Kliproad Cemetery site is located in the central area of Cape Town, situated between the surrounding residential areas and the mountain slopes. It is bordered by Kliproad to the north, residential properties to the south and west, and the M5 which runs along the western boundary of the project area. The cemetery expansion itself occupies a site of approximately 5ha in extent

The Kliproad Cemetery site is located within a semi-urban zone characterized by a mix of residential and commercial land use. The cemetery itself is well-maintained with a mix of cleared and vegetated areas, the latter featuring scattered trees and shrubbery. The surrounding landscape is dominated by a mosaic of residential properties and small-scale commercial activities, typical of central urban areas.

CLIMATE

The site falls within a winter-rainfall regime, with rainfall peaking from May to August, and varying from 350 mm – 560 mm per annum across the vegetation type. The mean daily maximum temperature is 26.7°C in February, and the mean daily minimum is 7.5°C in July. Frost is uncommon whilst mists are frequent in winter (Mucina & Rutherford 2006).

VEGETATION

South Africa has been recognized as having remarkable plant diversity with high levels of endemism. South Africa hosts a wide range of ecosystems, of which the Fynbos biome is of relevance to this project. (Mucina & Rutherford, 2006). The Fynbos biome is characterised three major vegetation complexes; fynbos, rhenosterveld and strandveld. The site falls within the fynbos vegetation complex which is defined by evergreen, fire-prone shrubland characterised by the presence of wiry graminoids of the Restionaceae, a high cover of fine-leaved ericoid shrubs, and the common occurrence of proteoid shrubs (exclusively Proteaceae). The ecology is driven by intense summer wildfires that typically occur every 10-30 years, though this can range from 5 to 50 years. These fires are sustained by the abundant fine plant material, particularly from the Restionaceae plants. Fynbos primarily grows in poor, sandy soils, but can also be found in other soil types including limestone, weathered clay soils (originating from shale and granite), and rocky soils formed from hardened surface deposits and alluvial sediments (Mucina & Rutherford, 2006).

The project area is situated in the **Cape Flats Sand Fynbos** vegetation unit which historically occurred on the lowland sand plains (altitude 20 – 200 masl) of the Cape Flats in South Africa, specifically in the area between Table Mountain and the Hottentots Holland mountains near Cape Town. This vegetation is characterized by sandy, nutrient-poor soils and is home to numerous endemic plant species.

The habitat is characterised by moderately undulating and flat sandy plains historically housing a series of seasonal depression wetlands during winter, with dry soft sands in summer. Cape Flats Sand Fynbos consists of a dense, moderately tall, ericoid shrubland containing scattered, emergent, tall shrubs. Proteoid and Restioid Fynbos are dominant, with Asteraceous and Ericaceous Fynbos occurring in drier and wetter areas, respectively. Annuals and bulbs are prominent in spring. In comparison to Sand Fynbos types to the north, Cape Flats Sand Fynbos has more ericas, proteas and other shrub species and more vleis. The National Biodiversity Assessment lists this vegetation unit as **Critically Endangered** with this being the most transformed Sand fynbos type. Over 85% has already been lost to urban sprawl and smallholding cultivation. The areas remaining are small and patchy occurring in pockets surrounded by urban areas. Most of these areas have been identified as “core flora conservation sites”.

METHODS

A site sensitivity verification (refer **Addendum 2**) was conducted to dispute the Screening Tool findings, concluding that a Terrestrial Biodiversity Compliance Statement is required to fulfil the specific themes cover by this report.

BASIC ENVIRONMENT SURVEY

A desktop survey was completed to determine whether the project area is located in any sensitive areas, such as Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA), National Freshwater Ecosystem Priority Areas (NFEPA), Important Bird Areas (IBA), Nationally Threatened Ecosystems etc. Climate and vegetation were also discussed for the project area. This information is provided in the section above.

FLORA SURVEY

An initial desktop study was completed to find out into which vegetation unit, according to Mucina and Rutherford (2006), the project area falls. A field survey was then completed on the 4th of February 2025, during which vegetation was thoroughly surveyed. The survey consisted of methodically covering the proposed development site and assessing the floristic composition of the habitats present. All floral species encountered were photographed and recorded.

A search for any Species of Conservation Concern (SCC) as listed in the EIA screening tool was also conducted.

Vegetation was described in terms of dominant and protected species (if any) and environmental factors (such as soil type and land use). The red list category, endemism and invasive category are given for each species recorded.

FAUNA SURVEY

A desktop survey was completed to determine which fauna species of conservation concern may be found in the area, according to the Virtual Museum records (full data set retrieved) as well as records verified on iNaturalist. Habitats defined for the floral survey were applicable to fauna as well. Thus, these habitats were assessed for suitability of species that might be present in the area according to their distribution as well as species identified during the field survey.

SENSITIVITY ANALYSIS AND ZONING

The ecological sensitivity of any piece of land is based on its inherent ecosystem service and overall preservation of biodiversity. The project area will be assessed by calculating the Site Ecological Importance (SEI) as per the Species Assessment Guidelines (2022). SEI is considered to be 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]) and will consider the following:

Conservation importance (CI) - *The importance of a site for supporting biodiversity features of conservation concern present.*

CI is evaluated in accordance with recognised established internationally acceptable principles and criteria for the determination of biodiversity related value, including the IUCN Red List of Species, Red List of Ecosystems and Key Biodiversity Areas.

Functional integrity (FI) – *the 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.*

The FI of the receptor (e.g. the vegetation/fauna community or habitat type) is defined here as the receptors current ability to maintain the structure and functions that define it, compared to its known or predicted state under ideal conditions.

Receptor Resilience (RR) – *intrinsic capacity of the receptor to resist major damage from disturbance and/or to recover to its original state with limited or no human intervention*

The fulfilling criteria to evaluate RR are based on the estimated recovery time required to restore an appreciable portion of functionality to the receptor.

Given the above, sites are assessed according to their SEI on a scale of Low – Very High, which can then be interpreted according to the development activities.

Table 3: Guidelines to interpret SEI in context of proposed developments (Species Environmental Assessment Guidelines, 2022)

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 low	Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.

The SEI of the habitats give an indication of the site sensitivity, examples of sensitivity can be generalised as below.

Sensitivity scale

High – sensitive ecosystem with either low inherent resistance or low resilience towards disturbance factors or highly dynamic systems considered being important for the maintenance of ecosystem integrity. Most of these systems represent ecosystems with high connectivity with other important ecological systems or with high species diversity and usually provide suitable habitat for a number of threatened or rare species. These areas should be protected.

Medium – These are slightly modified systems which occur along gradients of disturbances of low-medium intensity with some degree of connectivity with other ecological systems or ecosystems with intermediate levels of species diversity but may include potential ephemeral habitat for threatened species; and

Low – Degraded and highly disturbed / transformed systems with little ecological function and are generally very poor in species diversity.

SENSITIVITY ANALYSIS AND CONSERVATION ANALYSIS TOOLS

There are several assessments for South Africa as a whole, as well as on provincial levels that allow for detailed conservation planning as well as meeting biodiversity targets for the country's variety of ecosystems. These guides are essential to consult for development projects and will form an important part of the sensitivity analysis. Areas earmarked for conservation in the future, or that are essential to meet biodiversity and conservation targets should not be developed and have a high sensitivity as they are necessary for overall functioning. In addition, sensitivity analysis in the field based on much finer scale data can be used to ground truth the larger scale assessments and put it into a more localised context.

Of particular relevance for this project is the Biodiversity Network for the City of Cape Town which used a systematic biodiversity planning approach to prioritise remnant indigenous vegetation (discussed below).

CRITICAL BIODIVERSITY AREAS AND ECOLOGICAL SUPPORT AREAS

Critical Biodiversity Areas (CBA) are areas required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan. Ecological Support Areas (ESA) are not essential for meeting biodiversity targets but play an important role in supporting the ecological functioning of Critical Biodiversity Areas and/or in delivering ecosystem services. Critical Biodiversity Areas and Ecological Support Areas may be terrestrial or aquatic.

The primary purpose of a map of Critical Biodiversity Areas and Ecological Support Areas is to guide decision-making about where best to locate development. It should inform land-use planning, environmental assessment and authorisations, and natural resource management, by a range of sectors whose policies and decisions impact on biodiversity. It is the biodiversity sector's input into multi-sectoral planning and decision-making processes (SANBI Biodiversity Advisor, 2017).

The fine-scale systematic biodiversity plan for Cape Town, known as the Biodiversity Network or BioNet was recently updated and now comprises maps for the Terrestrial BioNet 2023, Aquatic BioNet 2023, and combined BioNet 2023 with extended planning domain (10 km buffer around the City and all of Cape Town's major water supply dams and their associated sub-catchments). According to the BioNet (2023), the eastern portion of the site bordering on Kromboom Parkway road is classified as an ESA2 in an intensely, irreversibly modified condition (Table 4). The site is separated from nearby biodiversity areas by major road infrastructure which limits the connectivity of the site for animal movement. These areas are classified as CBA1a or 1b, which are CBAs in a natural or near natural ecological condition.

Table 4: Overall sensitivities

Structure	Screening Tool and Biodiversity Network	Observations
Kliproad Cemetery Expansion	No CBAs or ESAs overlapping with site CBA 1b – 1.3 km south-west CBA 1d – 30m west CBA 2 – 470m south-west	No CBAs or ESAs overlapping with site
	Strategic Waters Source Area – Table Mountain	Noted – area already disturbed and impacted in terms of run-off
	Critically Endangered Cape Flats Sand Fynbos	Site not representative of regional vegetation type - altered, degraded and invaded

PROTECTED AREAS (PA) AND NATIONAL PROTECTED AREA EXPANSION STRATEGY (NPAES)

Officially protected areas, either provincially or nationally that occur close to a project site could have consequences as far as impacts on these areas are concerned. The National Protected Area Expansion

Strategy (NPAES) sets targets for protected area expansion, provides maps of the most important areas for protected area expansion, and makes recommendations on mechanisms for protected area expansion.

The project area is not located in a protected area or in a NPAES focus area. The nearest protected area, the False Bay Nature Reserve, is located approximately 1.8km south-east of the proposed project site. In addition, a single CapeNature Stewardship Site (City Parks) surrounding the Princess and Little Princess Vleis is located on the opposite side of the M5.

Important Bird Areas (Key Biodiversity Areas): Important Bird Areas (IBAs) are sites of global significance for bird conservation (Marnewick *et al.*, 2015). The project area is located approximately 1.7km from the edge of the Rondvlei Bird Sanctuary IBA.

Nationally threatened ecosystems: The Biodiversity Act (Act 10 of 2004) provides for listing threatened or protected ecosystems, in one of four categories: critically endangered (CR), endangered (EN), vulnerable (VU) or protected. The purpose of listing threatened ecosystems is primarily to reduce the rate of ecosystem and species extinction. This includes preventing further degradation and loss of structure, function and composition of threatened ecosystems. The purpose of listing protected ecosystems is primarily to preserve sites of exceptionally high conservation value.

The initial mapping of terrestrial ecosystems was based on the South African vegetation map, national forest types recognized by DWAF, priority areas identified in a provincial systematic biodiversity plan, or high irreplaceability forest patches or clusters systematically identified by DWAF (SANBI, 2011). This has since been updated to include additional identified sensitive ecosystems (National List of Threatened Ecosystems, 2022)

The project area is located broadly in a nationally threatened ecosystems, namely the Cape Flat Sand Fynbos which is considered critically endangered (SANBI, 2011; SANBI, 2018, Vegmap 2024 BETA).

National Freshwater Ecosystem Priority Areas (NFEPA) and National Wetland Map 5: South Africa's freshwater ecosystems are diverse, ranging from sub-tropical in the north-eastern part of the country, to semi-arid and arid in the interior, to the cool and temperate rivers of the fynbos. "Freshwater ecosystems" refer to all inland water bodies whether fresh or saline, including rivers, lakes, wetlands, sub-surface waters and estuaries. Consistent with global trends, high levels of threat have been reported for freshwater ecosystems. According to the National Biodiversity Assessment 2018 nearly 80% of inland wetland ecosystem types in South Africa are threatened and approximately 75% of inland wetland ecosystem types are both threatened and under-protected (SANBI, 2019). South Africa's freshwater fauna also displays high levels of threat: at least one third of freshwater fish indigenous to South Africa are reported as threatened, and a recent southern African study on the conservation status of major freshwater-dependent taxonomic groups (fishes, molluscs, dragonflies, crabs and vascular plants) reported far higher levels of threat in South Africa than in the rest of the region.

Urgent attention is needed to ensure that we conserve some representative natural examples of the different ecosystems that make up the natural heritage of this country for current and future generations. NFEPA responds to this need, providing strategic spatial priorities for conserving South Africa's freshwater ecosystems and supporting sustainable use of water resources (Driver *et al.*, 2011). However, the NFEPA database is largely outdated.

The National Wetland Map version 5 (NWM5), an output from the NBA 2018 assessment, shows the distribution of inland wetland ecosystem types across South Africa and includes estuaries and the extent of some rivers (CSIR, 2018). These delineated wetlands are generally more accurate than the older NFEPA database. Even more representative of the wetlands in the project vicinity are the wetlands delineated in the City of Cape Town Wetlands (2017) data, which forms part of the updated Aquatic BioNet data (2023).

The NWM5 and Aquatic BioNet data largely overlap, however more wetlands in areas surrounding the site are delineated by the Aquatic BioNet data. These data indicate that depressions wetlands are located approximately 400m east and 600m (Princess Vlei) south-west of the site. In addition to these, floodplain wetlands associated with the inlet of the Princess Vlei system are located 80m west of the site.

RESULTS AND JUSTIFICATION OF SENSITIVITIES

PLANTS

A list of 2448 plant species have been recorded in the quarter degree squares 3418AB encompassing the project area as a whole, of which 188 were listed as SCC. The Screening Tool identified 142 additional/inclusive species to be considered.

Table 5: Plants SCC known to occur in the vicinity of the project site

Family	Taxon with collector	IUCN	Site status
Asteraceae	<i>Arctotis angustifolia</i> L.	CR	Not observed on site
Asteraceae	<i>Cotula myriophylloides</i> Harv.	CR	Not observed on site
Asteraceae	<i>Senecio foeniculoides</i> Harv.	CR	Not observed on site
Campanulaceae	<i>Wahlenbergia pyrophila</i> Lammers	CR	Not observed on site
Cytinaceae	<i>Cytinus capensis</i> Marloth	CR	Not observed on site
Ericaceae	<i>Erica heleogena</i> T.M.Salter	CR	Not observed on site
Ericaceae	<i>Erica margaritacea</i> Aiton	CR	Not observed on site
Ericaceae	<i>Erica ribisaria</i> Guthrie & Bolus	CR	Not observed on site
Ericaceae	<i>Erica sociorum</i> L.Bolus	CR	Not observed on site
Fabaceae	<i>Amphithalea ericifolia</i> subsp. <i>erecta</i> Granby	CR	Not observed on site
Fabaceae	<i>Cyclopia latifolia</i> DC.	CR	Not observed on site
Fabaceae	<i>Psoralea glaucina</i> Harv.	CR	Not observed on site
Iridaceae	<i>Aristea pauciflora</i> Wolley-	CR	Not observed on site

	<i>Dod</i>		
Iridaceae	<i>Gladiolus aureus</i> Baker	CR	Not observed on site
Iridaceae	<i>Moraea angulata</i> Goldblatt	CR	Not observed on site
Iridaceae	<i>Watsonia humilis</i> Mill.	CR	Not observed on site
Malvaceae	<i>Hermannia procumbens</i> Cav. <i>subsp. procumbens</i>	CR	Not observed on site
Orchidaceae	<i>Disa brachyceras</i> Lindl.	CR	Not observed on site
Orchidaceae	<i>Holothrix longicornu</i> <i>G.J.Lewis</i>	CR	Not observed on site
Oxalidaceae	<i>Oxalis natans</i> Thunb.	CR	Not observed on site
Potamogetonaceae	<i>Pseudalthenia aschersoniana</i> <i>(Graebn.) Hartog</i>	CR	Not observed on site
Proteaceae	<i>Leucadendron levisanus</i> (L.) <i>P.J.Bergius</i>	CR	Not observed on site
Proteaceae	<i>Leucadendron macowanii</i> <i>E.Phillips</i>	CR	Not observed on site
Proteaceae	<i>Serruria aemula</i> Salisb. ex <i>Knight</i>	CR	Not observed on site
Proteaceae	<i>Serruria pinnata</i> (Andr.) R.Br.	CR	Not observed on site
Aizoaceae	<i>Lampranthus glomeratus</i> (L.) <i>N.E.Br.</i>	EN	Not observed on site
Aizoaceae	<i>Lampranthus scaber</i> (L.) <i>N.E.Br.</i>	EN	Not observed on site
Aizoaceae	<i>Lampranthus stenus</i> (Haw.) <i>N.E.Br.</i>	EN	Not observed on site
Aizoaceae	<i>Lampranthus tenuifolius</i> (L.) <i>N.E.Br.</i>	EN	Not observed on site
Amaryllidaceae	<i>Cyrtanthus leucanthus</i> Schltr.	EN	Not observed on site
Amaryllidaceae	<i>Gethyllis kaapensis</i> D.Mull. - <i>Doblies</i>	EN	Not observed on site
Amaryllidaceae	<i>Hessea cinnamomea</i> (L'Her.) <i>T.Durand & Schinz</i>	EN	Not observed on site
Apiaceae	<i>Centella tridentata</i> (L.f.) <i>Drude ex Domin</i>	EN	Not observed on site
Apiaceae	<i>Dasispermum perennans</i> <i>Magee & B.-E.van Wyk</i>	EN	Not observed on site
Asteraceae	<i>Athanasia capitata</i> (L.) L.	EN	Not observed on site
Asteraceae	<i>Senecio verbascifolius</i> Burm.f.	EN	Not observed on site
Ericaceae	<i>Erica caterviflora</i> Salisb. var. <i>caterviflora</i>	EN	Not observed on site
Ericaceae	<i>Erica ecklonii</i> E.G.H.Oliv.	EN	Not observed on site
Fabaceae	<i>Aspalathus globulosa</i> E.Mey.	EN	Not observed on site

Fabaceae	<i>Aspalathus macrantha</i> Harv.	EN	Not observed on site
Fabaceae	<i>Aspalathus tylodes</i> Eckl. & Zeyh.	EN	Not observed on site
Fabaceae	<i>Aspalathus varians</i> Eckl. & Zeyh.	EN	Not observed on site
Fabaceae	<i>Indigofera psoraloides</i> (L.) L.	EN	Not observed on site
Fabaceae	<i>Lebeckia meyeriana</i> Eckl. & Zeyh.	EN	Not observed on site
Fabaceae	<i>Lebeckia plukenetiana</i> E.Mey.	EN	Not observed on site
Fabaceae	<i>Liparia angustifolia</i> (Eckl. & Zeyh.) A.L.Schutte	EN	Not observed on site
Fabaceae	<i>Podalyria argentea</i> (Salisb.) Salisb.	EN	Not observed on site
Fabaceae	<i>Xiphotheca reflexa</i> (Thunb.) A.L.Schutte & B.-E.van Wyk	EN	Not observed on site
Geraniaceae	<i>Pelargonium ellaphieae</i> E.M.Marais	EN	Not observed on site
Hyacinthaceae	<i>Lachenalia reflexa</i> Thunb.	EN	Not observed on site
Hypoxidaceae	<i>Spiloxene canaliculata</i> Garside	EN	Not observed on site
Iridaceae	<i>Babiana pygmaea</i> (Burm.f.) Baker	EN	Not observed on site
Iridaceae	<i>Codonorhiza azurea</i> (Eckl. ex Baker) Goldblatt & J.C.Manning	EN	Not observed on site
Iridaceae	<i>Geissorhiza brehmii</i> Eckl. ex Klatt	EN	Not observed on site
Iridaceae	<i>Geissorhiza pusilla</i> (Andrews) Klatt	EN	Not observed on site
Iridaceae	<i>Gladiolus jonquilliodorus</i> Eckl. ex G.J.Lewis	EN	Not observed on site
Iridaceae	<i>Hesperantha spicata</i> subsp. <i>graminifolia</i> (Sweet) Goldblatt	EN	Not observed on site
Iridaceae	<i>Ixia monadelpha</i> D.Delaroche	EN	Not observed on site
Iridaceae	<i>Sparaxis grandiflora</i> (D.Delaroche) Ker Gawl. subsp. <i>grandiflora</i>	EN	Not observed on site
Molluginaceae	<i>Adenogramma rigida</i> (Bartl.) Sond.	EN	Not observed on site
Orchidaceae	<i>Disa draconis</i> (L.f.) Sw.	EN	Not observed on site
Orchidaceae	<i>Disa longicornu</i> L.f.	EN	Not observed on site
Orchidaceae	<i>Disa sabulosa</i> Bolus	EN	Not observed on site
Orchidaceae	<i>Pterygodium cruciferum</i>	EN	Not observed on site

	<i>Sond.</i>		
Orchidaceae	<i>Pterygodium microglossum</i> (Lindl.) Schltr.	EN	Not observed on site
Orchidaceae	<i>Satyrium hallackii</i> Bolus subsp. <i>hallackii</i>	EN	Not observed on site
Penaeaceae	<i>Stylapterus fruticosus</i> (L.f.) A.Juss.	EN	Not observed on site
Poaceae	<i>Pentameris bachmannii</i> (McClean) Galley & H.P.Linder	EN	Not observed on site
Polygalaceae	<i>Muraltia mitior</i> (P.J.Bergius) Levyms	EN	Not observed on site
Proteaceae	<i>Diastella proteoides</i> (L.) Druce	EN	Not observed on site
Proteaceae	<i>Leucadendron floridum</i> R.Br.	EN	Not observed on site
Proteaceae	<i>Leucospermum</i> <i>hypophyllocarpodendron</i> subsp. <i>canaliculatum</i> (H.Buek ex Meisn.) Rourke	EN	Not observed on site
Proteaceae	<i>Leucospermum</i> <i>hypophyllocarpodendron</i> (L.) Druce subsp. <i>hypophyllocarpodendron</i>	EN	Not observed on site
Proteaceae	<i>Serruria collina</i> Salisb. ex Knight	EN	Not observed on site
Proteaceae	<i>Serruria decumbens</i> (Thunb.) R.Br.	EN	Not observed on site
Proteaceae	<i>Serruria meisneriana</i> Schltr.	EN	Not observed on site
Restionaceae	<i>Hypodiscus rugosus</i> Mast.	EN	Not observed on site
Restionaceae	<i>Restio harveyi</i> Mast.	EN	Not observed on site
Restionaceae	<i>Restio micans</i> Nees	EN	Not observed on site
Rosaceae	<i>Cliffortia ericifolia</i> L.f.	EN	Not observed on site
Rosaceae	<i>Cliffortia hirta</i> Burm.f.	EN	Not observed on site
Rutaceae	<i>Adenandra villosa</i> subsp. <i>biseriata</i> (E.Mey. ex Bartl. & H.L.Wendl.) Strid	EN	Not observed on site
Rutaceae	<i>Agathosma glabrata</i> Bartl. & H.L.Wendl.	EN	Not observed on site
Rutaceae	<i>Macrostylis villosa</i> (Thunb.) Sond. subsp. <i>villosa</i>	EN	Not observed on site
Scrophulariaceae	<i>Microdon capitatus</i> (P.J.Bergius) Levyms	EN	Not observed on site
Thymelaeaceae	<i>Gnidia humilis</i> Meisn.	EN	Not observed on site

Thymelaeaceae	<i>Passerina paludosa</i> Thoday	EN	Not observed on site
Orchidaceae	<i>Satyrium hallackii</i> Bolus <i>subsp. hallackii</i>	EN	Not observed on site
Penaeaceae	<i>Stylapterus fruticosus</i> (L.f.) A.Juss.	EN	Not observed on site
Poaceae	<i>Pentameris bachmannii</i> (McClean) Galley & H.P.Linder	EN	Not observed on site
Polygalaceae	<i>Muraltia mitior</i> (P.J.Bergius) Levyms	EN	Not observed on site
Proteaceae	<i>Diastella proteoides</i> (L.) Druce	EN	Not observed on site
Proteaceae	<i>Leucadendron floridum</i> R.Br.	EN	Not observed on site
Proteaceae	<i>Leucospermum</i> <i>hypophyllocarpodendron</i> <i>subsp. canaliculatum</i> (H.Buek ex Meisn.) Rourke	EN	Not observed on site
Proteaceae	<i>Leucospermum</i> <i>hypophyllocarpodendron</i> (L.) Druce <i>subsp.</i> <i>hypophyllocarpodendron</i>	EN	Not observed on site
Proteaceae	<i>Serruria collina</i> Salisb. ex Knight	EN	Not observed on site
Proteaceae	<i>Serruria decumbens</i> (Thunb.) R.Br.	EN	Not observed on site
Proteaceae	<i>Serruria meisneriana</i> Schltr.	EN	Not observed on site
Restionaceae	<i>Hypodiscus rugosus</i> Mast.	EN	Not observed on site
Restionaceae	<i>Restio harveyi</i> Mast.	EN	Not observed on site
Restionaceae	<i>Restio micans</i> Nees	EN	Not observed on site
Rosaceae	<i>Cliffortia ericifolia</i> L.f.	EN	Not observed on site
Rosaceae	<i>Cliffortia hirta</i> Burm.f.	EN	Not observed on site
Rutaceae	<i>Adenandra villosa subsp.</i> <i>biseriata</i> (E.Mey. ex Bartl. & H.L.Wendl.) Strid	EN	Not observed on site
Rutaceae	<i>Agathosma glabrata</i> Bartl. & H.L.Wendl.	EN	Not observed on site
Rutaceae	<i>Macrostylis villosa</i> (Thunb.) Sond. <i>subsp. villosa</i>	EN	Not observed on site
Scrophulariaceae	<i>Microdon capitatus</i> (P.J.Bergius) Levyms	EN	Not observed on site
Thymelaeaceae	<i>Gnidia humilis</i> Meisn.	EN	Not observed on site
Thymelaeaceae	<i>Passerina paludosa</i> Thoday	EN	Not observed on site
Aizoaceae	<i>Cheiridopsis rostrata</i> (L.)	VU	Not observed on site

	<i>N.E.Br.</i>		
Aizoaceae	<i>Erepsia patula</i> (Haw.) <i>Schwantes</i>	VU	Not observed on site
Aizoaceae	<i>Lampranthus filicaulis</i> (Haw.) <i>N.E.Br.</i>	VU	Not observed on site
Aizoaceae	<i>Ruschia geminiflora</i> (Haw.) <i>Schwantes</i>	VU	Not observed on site
Aizoaceae	<i>Skiatophytum tripolium</i> (L.) <i>L.Bolus</i>	VU	Not observed on site
Apiaceae	<i>Centella caespitosa</i> Adamson	VU	Not observed on site
Apocynaceae	<i>Cynanchum zeyheri</i> Schltr.	VU	Not observed on site
Asphodelaceae	<i>Aloe commixta</i> A.Berger	VU	Not observed on site
Asphodelaceae	<i>Aloiampelos commixta</i> (A.Berger) Klopper & Gideon <i>F.Sm.</i>	VU	Not observed on site
Asphodelaceae	<i>Trachyandra chlamydophylla</i> (Baker) Oberm.	VU	Not observed on site
Asphodelaceae	<i>Trachyandra filiformis</i> (Aiton) Oberm.	VU	Not observed on site
Asteraceae	<i>Amellus asteroides</i> subsp. <i>mollis</i> Rommel	VU	Not observed on site
Asteraceae	<i>Cullumia squarrosa</i> (L.) R.Br.	VU	Not observed on site
Asteraceae	<i>Metalasia capitata</i> (Lam.) Less.	VU	Not observed on site
Asteraceae	<i>Polyarrhena reflexa</i> (L.) Cass. subsp. <i>reflexa</i>	VU	Not observed on site
Asteraceae	<i>Steirodiscus tagetes</i> (L.) Schltr.	VU	Not observed on site
Brassicaceae	<i>Heliophila cinerea</i> Marais	VU	Not observed on site
Brassicaceae	<i>Heliophila promontorii</i> Marais	VU	Not observed on site
Brassicaceae	<i>Heliophila tabularis</i> Wolley- Dod	VU	Not observed on site
Campanulaceae	<i>Roella goodiana</i> Adamson	VU	Not observed on site
Colchicaceae	<i>Wurmbea hiemalis</i> B.Nord.	VU	Not observed on site
Colchicaceae	<i>Wurmbea inusta</i> (Baker) B.Nord.	VU	Not observed on site
Cyperaceae	<i>Ficinia elatior</i> Levyns	VU	Not observed on site
Cyperaceae	<i>Ficinia pinguior</i> C.B.Clarke	VU	Not observed on site
Cyperaceae	<i>Isolepis venustula</i> Kunth	VU	Not observed on site
Cyperaceae	<i>Tetraria graminifolia</i> Levyns	VU	Not observed on site
Ericaceae	<i>Erica amoena</i> J.C.Wendl.	VU	Not observed on site

Ericaceae	<i>Erica annectens</i> L.Guthrie & Bolus	VU	Not observed on site
Ericaceae	<i>Erica brachialis</i> Salisb.	VU	Not observed on site
Ericaceae	<i>Erica capensis</i> T.M.Salter	VU	Not observed on site
Ericaceae	<i>Erica cyrilliflora</i> Salisb.	VU	Not observed on site
Ericaceae	<i>Erica diosmifolia</i> Salisb.	VU	Not observed on site
Ericaceae	<i>Erica eburnea</i> T.M.Salter	VU	Not observed on site
Ericaceae	<i>Erica fairii</i> Bolus	VU	Not observed on site
Ericaceae	<i>Erica fontana</i> L.Bolus	VU	Not observed on site
Ericaceae	<i>Erica hendricksei</i> H.A.Baker var. <i>hendricksei</i>	VU	Not observed on site
Ericaceae	<i>Erica limosa</i> L.Bolus	VU	Not observed on site
Ericaceae	<i>Erica marifolia</i> Aiton	VU	Not observed on site
Ericaceae	<i>Erica paludicola</i> L.Bolus	VU	Not observed on site
Ericaceae	<i>Erica urna-viridis</i> Bolus	VU	Not observed on site
Fabaceae	<i>Argyrolobium velutinum</i> Eckl. & Zeyh.	VU	Not observed on site
Fabaceae	<i>Aspalathus angustifolia</i> subsp. <i>robusta</i> (E.Phillips) R.Dahlgren	VU	Not observed on site
Fabaceae	<i>Aspalathus araneosa</i> L.	VU	Not observed on site
Fabaceae	<i>Aspalathus barbata</i> (Lam.) R.Dahlgren	VU	Not observed on site
Fabaceae	<i>Aspalathus capitata</i> L.	VU	Not observed on site
Fabaceae	<i>Aspalathus lotoides</i> Thunb. subsp. <i>lotoides</i>	VU	Not observed on site
Fabaceae	<i>Liparia laevigata</i> (L.) Thunb.	VU	Not observed on site
Fabaceae	<i>Liparia parva</i> Vogel ex Walp.	VU	Not observed on site
Fabaceae	<i>Liparia splendens</i> (Burm.f.) Bos & de Wit subsp. <i>splendens</i>	VU	Not observed on site
Fabaceae	<i>Podalyria sericea</i> (Andrews) R.Br.	VU	Not observed on site
Fabaceae	<i>Psoralea alata</i> (Thunb.) T.M.Salter	VU	Not observed on site
Fabaceae	<i>Psoralea fascicularis</i> DC.	VU	Not observed on site
Grubbiaceae	<i>Grubbia rosmarinifolia</i> subsp. <i>gracilis</i> (T.M.Salter) Carlquist	VU	Not observed on site
Haemodoraceae	<i>Wachendorfia brachyandra</i> W.F.Barker	VU	Not observed on site
Hyacinthaceae	<i>Lachenalia capensis</i> W.F.Barker	VU	Not observed on site

Hyacinthaceae	<i>Lachenalia fistulosa Baker</i>	VU	Not observed on site
Hypoxidaceae	<i>Pauridia alba (Thunb.) Snijman & Kocyan</i>	VU	Not observed on site
Iridaceae	<i>Babiana stricta (Aiton) Ker Gawl.</i>	VU	Not observed on site
Iridaceae	<i>Geissorhiza humilis (Thunb.) Ker Gawl.</i>	VU	Not observed on site
Iridaceae	<i>Moraea versicolor (Salisb. ex Klatt) Goldblatt</i>	VU	Not observed on site
Juncaginaceae	<i>Triglochin bulbosa subsp. tenuifolia (Adamson) Horn</i>	VU	Not observed on site
Menyanthaceae	<i>Villarsia goldblattiana Ornduff</i>	VU	Not observed on site
Orchidaceae	<i>Acrolophia bolusii Rolfe</i>	VU	Not observed on site
Orchidaceae	<i>Acrolophia ustulata (Bolus) Schltr. & Bolus</i>	VU	Not observed on site
Orchidaceae	<i>Disa venusta Bolus</i>	VU	Not observed on site
Orchidaceae	<i>Satyrium striatum Thunb.</i>	VU	Not observed on site
Poaceae	<i>Ehrharta setacea subsp. uniflora (Burch. ex Stapf) Gibbs Russ.</i>	VU	Not observed on site
Polygalaceae	<i>Muraltia brachypetala Wolley-Dod</i>	VU	Not observed on site
Polygalaceae	<i>Muraltia brevicornu DC.</i>	VU	Not observed on site
Polygalaceae	<i>Muraltia comptonii Levyns</i>	VU	Not observed on site
Polygalaceae	<i>Muraltia orbicularis Hutch.</i>	VU	Not observed on site
Proteaceae	<i>Leucadendron argenteum (L.) R.Br.</i>	VU	Not observed on site
Proteaceae	<i>Leucadendron discolor E.Phillips & Hutch.</i>	VU	Not observed on site
Proteaceae	<i>Leucospermum vestitum (Lam.) Rourke</i>	VU	Not observed on site
Proteaceae	<i>Mimetes capitulatus R.Br.</i>	VU	Not observed on site
Proteaceae	<i>Mimetes hirtus (L.) Salisb. ex Knight</i>	VU	Not observed on site
Proteaceae	<i>Protea aspera E.Phillips</i>	VU	Not observed on site
Proteaceae	<i>Protea scolymocephala (L.) Reichard</i>	VU	Not observed on site
Proteaceae	<i>Serruria cyanoides (L.) R.Br.</i>	VU	Not observed on site
Proteaceae	<i>Serruria flagellifolia Salisb. ex Knight</i>	VU	Not observed on site
Proteaceae	<i>Serruria hirsuta R.Br.</i>	VU	Not observed on site

Restionaceae	<i>Elegia prominens</i> Pillans	VU	Not observed on site
Restionaceae	<i>Restio communis</i> Pillans	VU	Not observed on site
Restionaceae	<i>Restio dodii</i> Pillans var. <i>dodii</i>	VU	Not observed on site
Restionaceae	<i>Restio paludosus</i> Pillans	VU	Not observed on site
Restionaceae	<i>Restio papillosus</i> (Esterh.) H.P.Linder & C.R.Hardy	VU	Not observed on site
Restionaceae	<i>Willdenowia rugosa</i> Esterh.	VU	Not observed on site
Rhamnaceae	<i>Phylica dioica</i> L.	VU	Not observed on site
Rhamnaceae	<i>Phylica harveyi</i> (Arn.) Pillans	VU	Not observed on site
Rhamnaceae	<i>Phylica plumosa</i> var. <i>horizontalis</i> (Vent.) Sond.	VU	Not observed on site
Rosaceae	<i>Cliffortia longifolia</i> (Eckl. & Zeyh.) Weim.	VU	Not observed on site
Rutaceae	<i>Agathosma hookeri</i> Sond.	VU	Not observed on site
Rutaceae	<i>Agathosma lanceolata</i> (L.) Engl.	VU	Not observed on site
Thymelaeaceae	<i>Gnidia spicata</i> (L.f.) Gilg	VU	Not observed on site
Thymelaeaceae	<i>Lachnaea capitata</i> (L.) Crantz	VU	Not observed on site
Thymelaeaceae	<i>Lachnaea grandiflora</i> (L.f.) Baill.	VU	Not observed on site
Thymelaeaceae	<i>Lachnaea uniflora</i> (L.) Crantz	VU	Not observed on site

Table 6: Screening tool plants

Family	Scientific name	Sensitivity	Site status
Aizoaceae	<i>Antimima aristulata</i>	Medium	Not observed on site
Aizoaceae	<i>Cleretum clavatum</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus debilis</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus filicaulis</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus glaucus</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus glomeratus</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus leptaleon</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus scaber</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus spiniformis</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus stenopetalus</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus stenus</i>	Medium	Not observed on site
Aizoaceae	<i>Lampranthus tenuifolius</i>	Medium	Not observed on site
Aizoaceae	<i>Ruschia geminiflora</i>	Medium	Not observed on site
Amaryllidaceae	<i>Hessea cinnamomea</i>	Medium	Not observed on site
Apocynaceae	<i>Cynanchum zeyheri</i>	Medium	Not observed on site
Asteraceae	<i>Arctotheca forbesiana</i>	Medium	Not observed on site
Asteraceae	<i>Arctotis angustifolia</i>	Medium	Not observed on site

Asteraceae	<i>Cotula eckloniana</i>	Medium	Not observed on site
Asteraceae	<i>Cotula pusilla</i>	Medium	Not observed on site
Asteraceae	<i>Cullumia squarrosa</i>	Medium	Not observed on site
Asteraceae	<i>Lachnaea capitata</i>	Medium	Not observed on site
Asteraceae	<i>Lachnaea grandiflora</i>	Medium	Not observed on site
Asteraceae	<i>Pseudalthenia aschersoniana</i>	Medium	Not observed on site
Asteraceae	<i>Senecio foeniculoides</i>	Medium	Not observed on site
Asteraceae	<i>Steirodiscus tagetes</i>	Medium	Not observed on site
Brassicaceae	<i>Heliophila promontorii</i>	Medium	Not observed on site
Cyperaceae	<i>Isolepis inconspicua</i>	Medium	Not observed on site
Cyperaceae	<i>Isolepis venustula</i>	Medium	Not observed on site
Cyperaceae	<i>Trianoptiles solitaria</i>	Medium	Not observed on site
Ericaceae	<i>Erica capillaris</i> var. <i>capillaris</i>	Medium	Not observed on site
Ericaceae	<i>Erica patersonii</i>	Medium	Not observed on site
Fabaceae	<i>Argyrobium velutinum</i>	Medium	Not observed on site
Fabaceae	<i>Aspalathus globulosa</i>	Medium	Not observed on site
Fabaceae	<i>Aspalathus lebeckioides</i>	Medium	Not observed on site
Fabaceae	<i>Aspalathus lotoides</i> subsp. <i>lotoides</i>	Medium	Not observed on site
Fabaceae	<i>Aspalathus retroflexa</i> subsp. <i>bicolor</i>	Medium	Not observed on site
Fabaceae	<i>Aspalathus tylodes</i>	Medium	Not observed on site
Fabaceae	<i>Lebeckia plukenetiana</i>	Medium	Not observed on site
Fabaceae	<i>Lessertia argentea</i>	Medium	Not observed on site
Fabaceae	<i>Liparia splendens</i> subsp. <i>splendens</i>	Medium	Not observed on site
Fabaceae	<i>Podalyria argentea</i>	Medium	Not observed on site
Fabaceae	<i>Podalyria sericea</i>	Medium	Not observed on site
Fabaceae	<i>Psoralea alata</i>	Medium	Not observed on site
Fabaceae	<i>Psoralea glaucina</i>	Medium	Not observed on site
Fabaceae	<i>Rafnia angulata</i> subsp. <i>humilis</i>	Medium	Not observed on site
Fabaceae	<i>Thesium ecklonianum</i>	Medium	Not observed on site
Haemodoraceae	<i>Wachendorfia brachyandra</i>	Medium	Not observed on site
Iridaceae	<i>Geissorhiza bonaspei</i>	Medium	Not observed on site
Iridaceae	<i>Geissorhiza brehmii</i>	Medium	Not observed on site
Iridaceae	<i>Geissorhiza humilis</i>	Medium	Not observed on site
Iridaceae	<i>Ixia monadelpha</i>	Medium	Not observed on site
Iridaceae	<i>Pauridia alba</i>	Medium	Not observed on site
Iridaceae	<i>Pauridia canaliculata</i>	Medium	Not observed on site
Iridaceae	<i>Pauridia pygmaea</i>	Medium	Not observed on site
Iridaceae	<i>Wurmbea hiemalis</i>	Medium	Not observed on site

Iridaceae	<i>Wurmbea inusta</i>	Medium	Not observed on site
Iridaceae	<i>Xiphotheca reflexa</i>	Medium	Not observed on site
Isoetaceae	<i>Isoetes capensis</i>	Medium	Not observed on site
Melanthaceae	<i>Muraltia brevicornu</i>	Medium	Not observed on site
Melanthaceae	<i>Muraltia macropetala</i>	Medium	Not observed on site
Melanthaceae	<i>Muraltia mitior</i>	Medium	Not observed on site
Orchidaceae	<i>Acrolophia bolusii</i>	Medium	Not observed on site
Orchidaceae	<i>Pterygodium cruciferum</i>	Medium	Not observed on site
Orchidaceae	<i>Pterygodium microglossum</i>	Medium	Not observed on site
Oxalidaceae	<i>Oxalis natans</i>	Medium	Not observed on site
Plumbaginaceae	<i>Limonium depauperatum</i>	Medium	Not observed on site
Poaceae	<i>Ehrharta setacea</i> subsp. <i>uniflora</i>	Medium	Not observed on site
Poaceae	<i>Microdon capitatus</i>	Medium	Not observed on site
Poaceae	<i>Pentameris bachmannii</i>	Medium	Not observed on site
Poaceae	<i>Pentameris pholiuroides</i>	Medium	Not observed on site
Polygalaceae	<i>Sebaea rara</i>	Medium	Not observed on site
Primulaceae	<i>Poecilolepis maritima</i>	Medium	Not observed on site
Proteaceae	<i>Diastella proteoides</i>	Medium	Not observed on site
Proteaceae	<i>Leucadendron cinereum</i>	Medium	Not observed on site
Proteaceae	<i>Leucadendron floridum</i>	Medium	Not observed on site
Proteaceae	<i>Leucadendron levisanus</i>	Medium	Not observed on site
Proteaceae	<i>Leucadendron linifolium</i>	Medium	Not observed on site
Proteaceae	<i>Leucospermum</i> <i>hypophyllocarpodendron</i> subsp. <i>hypophyllocarpodendron</i>	Medium	Not observed on site
Proteaceae	<i>Phyllica dioica</i>	Medium	Not observed on site
Proteaceae	<i>Phyllica harveyi</i>	Medium	Not observed on site
Proteaceae	<i>Phyllica plumosa</i> var. <i>squarrosa</i>	Medium	Not observed on site
Proteaceae	<i>Protea burchellii</i>	Medium	Not observed on site
Proteaceae	<i>Protea scolymocephala</i>	Medium	Not observed on site
Proteaceae	<i>Serruria aemula</i>	Medium	Not observed on site
Proteaceae	<i>Serruria cyanoides</i>	Medium	Not observed on site
Proteaceae	<i>Serruria glomerata</i>	Medium	Not observed on site
Proteaceae	<i>Serruria trilopha</i>	Medium	Not observed on site
Restionaceae	<i>Elegia prominens</i>	Medium	Not observed on site
Restionaceae	<i>Elegia verreauxii</i>	Medium	Not observed on site
Restionaceae	<i>Ficinia elatior</i>	Medium	Not observed on site
Restionaceae	<i>Ficinia pinguior</i>	Medium	Not observed on site
Restionaceae	<i>Restio duthieae</i>	Medium	Not observed on site

Restionaceae	<i>Restio micans</i>	Medium	Not observed on site
Restionaceae	<i>Restio paludosus</i>	Medium	Not observed on site
Restionaceae	<i>Restio papillosus</i>	Medium	Not observed on site
Restionaceae	<i>Restio pratensis</i>	Medium	Not observed on site
Restionaceae	<i>Restio rigoratus</i>	Medium	Not observed on site
Restionaceae	<i>Restio sabulosus</i>	Medium	Not observed on site
Rosaceae	<i>Cliffortia ericifolia</i>	Medium	Not observed on site
Rosaceae	<i>Cliffortia hirta</i>	Medium	Not observed on site
Rutaceae	<i>Adenandra villosa subsp. biseriata</i>	Medium	Not observed on site
Rutaceae	<i>Agathosma corymbosa</i>	Medium	Not observed on site
Rutaceae	<i>Agathosma glabrata</i>	Medium	Not observed on site
Rutaceae	<i>Diosma dichotoma</i>	Medium	Not observed on site
Rutaceae	<i>Macrostylis villosa subsp. villosa</i>	Medium	Not observed on site
Scrophulariaceae	<i>Skiatophytum skiatophytoides</i>	Medium	Not observed on site
Thymelaeaceae	<i>Gnidia spicata</i>	Medium	Not observed on site
Thymelaeaceae	<i>Lachnaea uniflora</i>	Medium	Not observed on site
Thymelaeaceae	<i>Passerina paludosa</i>	Medium	Not observed on site
Thymelaeaceae	<i>Stylapterus fruticulosus</i>	Medium	Not observed on site
Zingiberaceae	<i>Adenogramma rigida</i>	Medium	Not observed on site
Sensitive species numbers	533; 878, 881, 683, 830, 493, 497, 133, 985, 120, 1139, 214, 158, 1265, 599, 53, 654	Medium	Not observed on site

MAMMALS

Very few mammal species have been recorded previously in the quarter degree cell in which the sites fall. To be thorough, neighbouring areas were included to get fair representation of the complete mammal assemblage in the area. A total of 102 mammal (including marine mammal) species have been recorded in the quarter degree grid cells in the vicinity of the project site (3418AB, 3318CD), of which only three species are listed as a SCC. The Screening Tool did not identify any further mammal species to be investigated.

Table 6: Mammal SCC known to occur in the vicinity of the project site

Scientific name	Common name	Status	Site status
<i>Damaliscus pygargus pygargus</i>	Bontebok	VU	Not present on site
<i>Equus zebra zebra</i>	Mountain Zebra	VU	Not present on site
<i>Hippotragus niger niger</i>	Sable Antelope	VU	Not present on site

REPTILES AND AMPHIBIANS

A list of 55 reptile and 24 amphibian species have been recorded in the quarter degree square encompassing the project area (3418AB, 3318CD). Four amphibian Species of Conservation Concern were identified from the data in conjunction with the Screen Tool.

Table 7: Reptiles and Amphibians SCC known to occur in the vicinity of the project site

Scientific name	Common name	Status	Site status
<i>Capensibufo rosei</i>	Rose's Toadlet	CR	Not present on site. Site does not overlap with the known locations for this species.
<i>Sclerophrys pantherina</i>	Panther Toad	EN	Not present on site. Species requires foraging areas in close proximity to freshwater habitats, which are not present on site.
<i>Xenopus gilli</i>	Cape Platanna	EN	Not present on site. Species requires freshwater habitats, which are not present on site.
<i>Microbatrachella capensis</i>	Micro Frog	CR	Not present on site. Specialised habitat requirements are not present on site (or within close proximity)

OTHER

The Screening Tool identified one Insecta SCC that needs to be considered and investigated.

Table 8: Insecta SCC known to occur in the vicinity of the project site

Scientific Name	Common name	Status	Site Status
<i>Insecta-Kedestes lenis lenis</i>	Gentle Skipper	CR	Host plant required by this species is not present on site, therefore no impact to this species expected. Species also not observed on site, nor known to be present.

SENSITIVITY ANALYSIS FOR THE PROJECT AREA

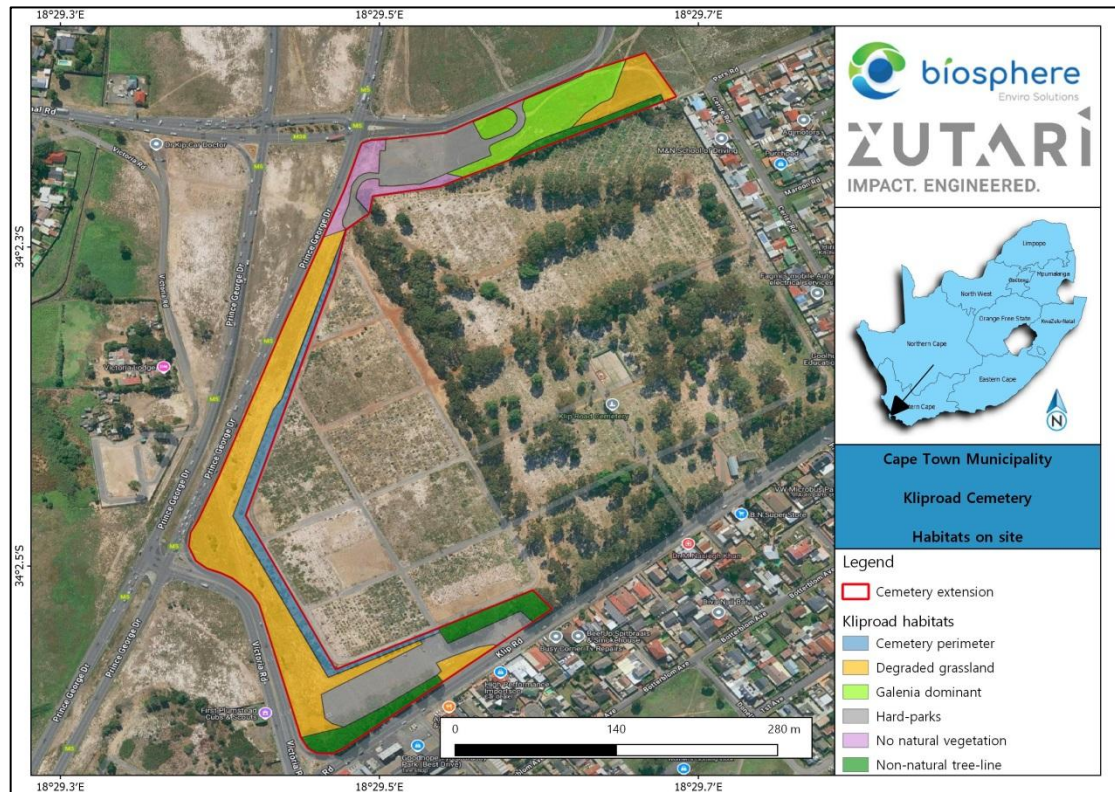


Figure 2: Habitat types

Table 7: SEI Summary

SEI Summary per habitat type	
Habitat	Rating
Cemetery perimeter	CI: Low FI: Low BI: Low RR: Medium Site Ecological Importance: Low
Degraded grassland	CI: Very Low FI: Low BI: Very Low RR: Medium Site Ecological Importance: Very Low
Galenia dominant	CI: Very Low FI: Medium BI: Very Low RR: Very Low Site Ecological Importance: Low

Hard parks	CI: Very Low FI: Very Low BI: Very Low RR: Very High Site Ecological Importance: Very Low
No-natural vegetation	CI: Very Low FI: Low BI: Very Low RR: Low Site Ecological Importance: Very Low
Non-natural tree-line	CI: Very Low FI: Medium BI: Very Low RR: High Site Ecological Importance: Very Low

Biodiversity importance		Conservation importance				
		Very high	High	Medium	Low	Very low
Functional integrity	Very high	Very high	Very high	High	Medium	Low
	High	Very high	High	Medium	Medium	Low
	Medium	High	Medium	Medium	Low	Very low
	Low	Medium	Medium	Low	Low	Very low
	Very low	Medium	Low	Very low	Very low	Very low

Site ecological importance		Biodiversity importance				
		Very high	High	Medium	Low	Very low
Receptor resilience	Very low	Very high	Very high	High	Medium	Low
	Low	Very high	Very high	High	Medium	Very low
	Medium	Very high	High	Medium	Low	Very low
	High	High	Medium	Low	Very low	Very low
	Very high	Medium	Low	Very low	Very low	Very low

Overall, from a floral and faunal perspective the site can be classified as having and overall **Very Low** sensitivity, with patches of **Low** sensitivity.



Figure 3: Site vegetation (A: *Galenia* dominant, B: Degraded grassland, C: Hard parks, D & E: No-natural vegetation, F: Non-natural tree-line, G: Cemetery perimeter)

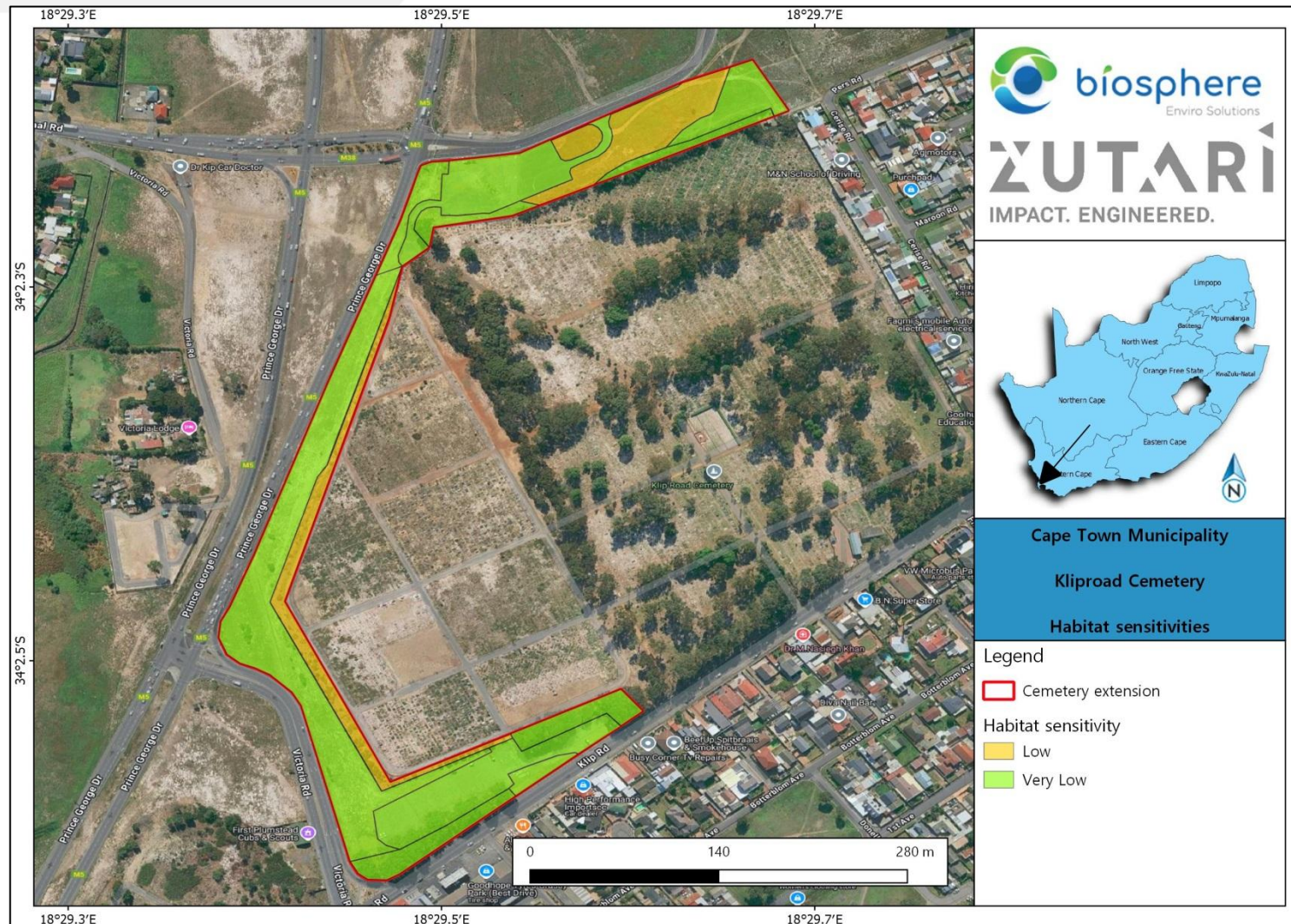


Figure 4: Sensitivity map

POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

An environmental impact is defined as a change in the environment, be it the physical/chemical, biological, cultural and or socio-economic environment. Any impact can be related to certain aspects of human activities in this environment and this impact can be either positive or negative. It could also affect the environment directly or indirectly and the effect of it can be cumulative.

There are three major categories of impacts on biodiversity namely:

- Impacts on habitat resulting in loss, degradation and / or fragmentation.
- Direct impacts on fauna and flora and species, for example plants and animals that are endemic / threatened / specially adapted to a habitat, will not be able to survive if that habitat is destroyed or altered by the development.
- Impact on natural environmental processes and ecosystem functioning. This can lead to an accumulated effect on both habitat and species.

Due to the degraded and altered nature of the site in question, should the expansion of the cemetery be authorised, any potential impact that could arise would fall within an insignificant category (i.e. Very Low possible impact). The following management actions are proposed to mitigate any potential damage:

- The impact should be restricted to the smallest footprint possible.
- Compliance with industry best practice standards related to potential hydrocarbon pollution from spills must be adhered to.
- Vegetation and soil removal should be limited to the smallest footprint possible and should only be removed where necessary.
- Disturbed soils are prone to alien invasive species establishment, thus the site should be monitored for alien species germination along with the necessary removal and management thereof (i.e. Alien Invasive Plant Species Management Plan).

DISCUSSION & CONCLUSION

Biosphere Enviro Solutions (Pty) Ltd was appointed by Zutari (Pty) Ltd to undertake a Floral and Faunal Specialist Assessment in support of the proposed upgrade and transformation works to be undertaken at the Kliproad Cemetery, Cape Town, Western Cape Province.

According to the national web-based environmental screening tool in terms of National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), the site has the following sensitivities:

- Animal Species - High
- Plant Species - Medium
- Terrestrial Biodiversity - Very High

These sensitivities were subsequently refuted through Site Sensitivity Verification (**Addendum 2**), triggering the requirements of a Terrestrial Biodiversity Compliance Statement inclusive of the Animal and Plant themes.

In the context of much of the site being in a degraded state, but still having a low ecological functioning, apart from the broad management actions mentioned in this report, there are no conditions to which this compliance statement is subjected.

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ADDENDUM 1: SCREENING TOOL REPORT

ADDENDUM 2: SITE SENSITIVITY VERIFICATION REPORT