THE BIODIVERSITY AND WETLAND SCOPING ASSESSMENT FOR THE PROPOSED SANNASPOS SOLAR PV DEVELOPMENT

Sannaspos, Free State Province

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CLIENT

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1 Introduction

The Biodiversity Company was appointed to undertake a terrestrial ecology and a wetland delineation and functional scoping assessment for the establishment of a solar photovoltaic (PV) project, namely Sannaspos Solar PV. The project is found 6.5 km south east from Sannaspos in the Free State (Figure 1-1).

ENGIE Sannaspos Solar Project (Pty) Ltd obtained an Environmental Authorisation for the proposed Sannaspos PV Plant Phase 1 and associated infrastructure, located on Portion 0 of Farm 1808 Besemkop and Portion 0 of Farm 2962 Lejwe, within the Mangaung Metropolitan Municipality, Free State Province in May 2013 (DFFE Reference No.: 14/12/16/3/3/2/360). The project has been selected as a Preferred Bidder project under Round 5 of the Renewable Energy Independent Power Producers Procurement Programme (REIPPPP).

The proposed facility will have a contracted capacity of 75MW (90MW installed capacity) and will include the following infrastructure:

- PV arrays and inverters;
- Cabling between project components, laid underground as far as possible;
- An on-site 132kV Independent Power Producer (IPP) substation to facilitate the grid connection;
- Internal access roads;
- Guard house;
- Laydown, Campsite and assembly area; and
- Office and Control centre.

A developmental footprint of 150 ha in extent is authorised for the facility and associated infrastructure. In order to implement the project, an additional 19.9ha is required. This additional area is located within the properties assessed for the project.

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations. 2014 (GNR 326, 7 April 2017) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). The approach has taken cognisance of the recently published Government Notices (GN) 320 (20 March 2020): “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” (Reporting Criteria). The National Web based Environmental Screening Tool has characterised the terrestrial sensitivity of the solar plant as “Very High” and the aquatic sensitivity as “Low” sensitivity.

The purpose of the specialist studies is to provide relevant input into the basic assessment process and provide a report for the proposed activities associated with the project. This report, after taking into consideration the findings and recommendations provided by the specialist herein, should inform and guide the Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making, as to the ecological viability of the proposed project.

1.1 Background

The following specialist reports were reviewed and considered to supplement the project findings:

- Ecology report for the proposed Sannaspos 75MW Solar Energy Facility (Savannah, 2012); and
- Agricultural potential assessment for the proposed Sannaspos 75MW Solar Energy Facility (Viljoen & Associates, 2012).

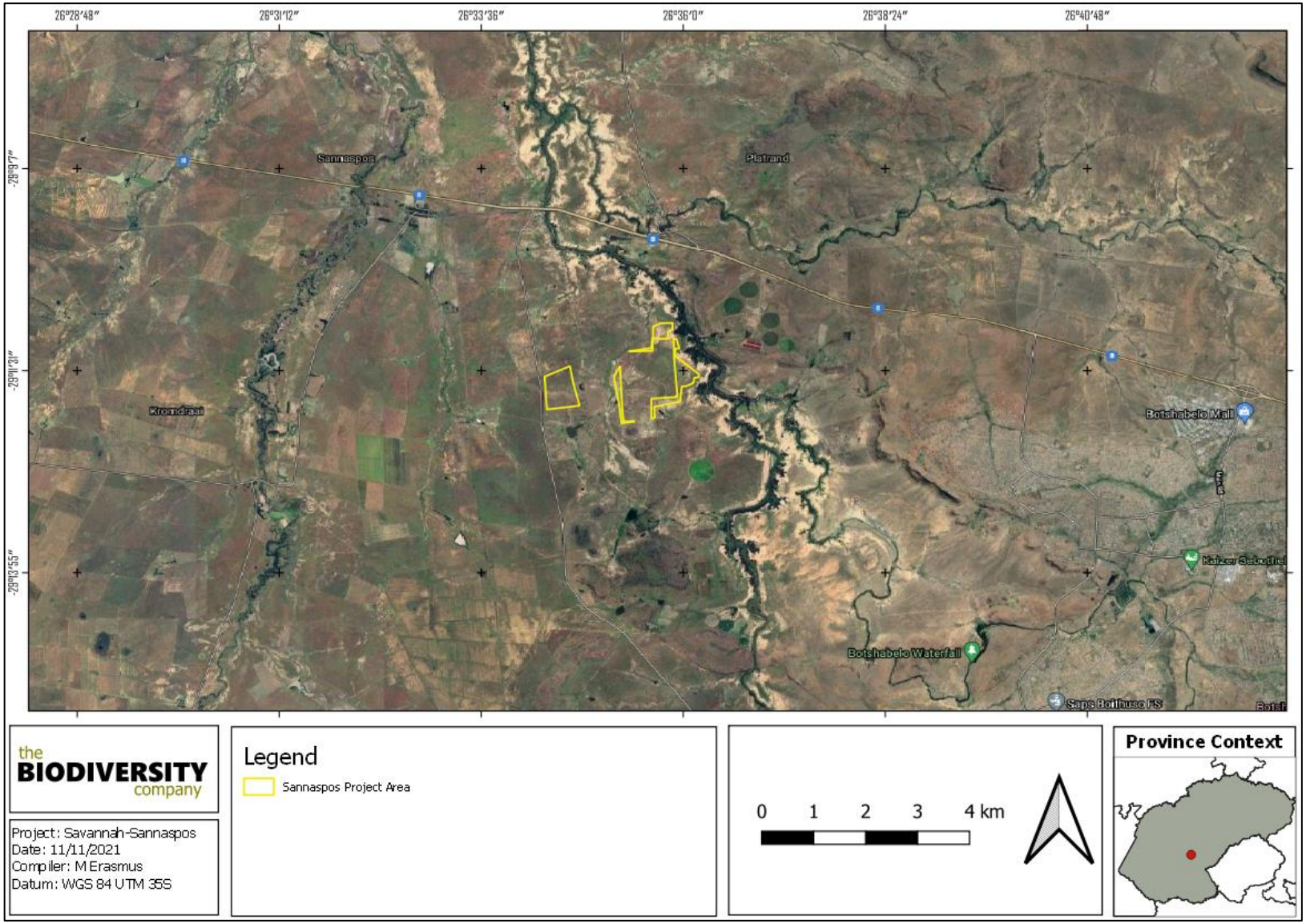

Figure 1-1 Proposed location of the project area in relation to the nearby towns

2 Key Legislative Requirements

The legislation, policies and guidelines listed below in Table 2-1 are applicable to the current project. The list below, although extensive, may not be complete and other legislation, policies and guidelines may apply in addition to those listed below.

Table 2-1 A list of key legislative requirements relevant to biodiversity and conservation in the Free State Province

Region	Legislation / Guideline
International	Convention on Biological Diversity (CBD, 1993)
	The Convention on Wetlands (RAMSAR Convention, 1971)
	The United Nations Framework Convention on Climate Change (UNFCC,1994)
	The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1973)
	The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention, 1979)
National	Constitution of the Republic of South Africa (Act No. 108 of 1996)
	The National Environmental Management Act (NEMA) (Act No. 107 of 1998)
	The National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
	The National Environmental Management: Biodiversity Act (Act No. 10 of 2004), Threatened or Protected Species Regulations
	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, GNR 320 of Government Gazette 43310 (March 2020)
	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, GNR 1150 of Government Gazette 43855 (October 2020)
	The National Environmental Management: Waste Act, 2008 (Act 59 of 2008);
	The Environment Conservation Act (Act No. 73 of 1989)
	National Protected Areas Expansion Strategy (NPAES)
	Natural Scientific Professions Act (Act No. 27 of 2003)
	National Biodiversity Framework (NBF, 2009)
	National Forest Act (Act No. 84 of 1998)
	National Veld and Forest Fire Act (101 of 1998)
	National Water Act (NWA) (Act No. 36 of 1998)
	National Spatial Biodiversity Assessment (NSBA)
	World Heritage Convention Act (Act No. 49 of 1999)
	Municipal Systems Act (Act No. 32 of 2000)
	Alien and Invasive Species Regulations and, Alien and Invasive Species List 20142020, published under NEMBA
	South Africa's National Biodiversity Strategy and Action Plan (NBSAP)
	Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) (CARA)
	Sustainable Utilisation of Agricultural Resources (Draft Legislation).
	White Paper on Biodiversity
Provincial	Boputhatswana Nature Conservation Act 3 of 1973
	Free State Nature Conservation Ordinance 8 of 1969

2.1 National Environmental Management Act (NEMA, 1998)

The National Environmental Management Act (Act No. 107 of 1998 – NEMA) and the associated Regulations as amended in April 2017, states that prior to any development taking place within a wetland

or riparian area, an environmental authorisation application process needs to be followed. This could follow either the Basic Assessment (BA) process or the Environmental Impact Assessment (EIA) process depending on the scale of the impact.

New regulations were gazetted (43110) on the 20 March 2020 which have replaced the requirements of Appendix 6 of the Environmental Impact Assessment Regulations. These regulations provide the criteria and minimum requirements for specialist's assessments in order to consider the impacts on aquatic biodiversity for activities which require Environmental Authorisation (EA).

2.2 National Water Act (NWA, 1998)

The Department of Human Settlements Water and Sanitation (DHSWS) is the custodian of South Africa's water resources and therefore assumes public trusteeship of water resources, which includes watercourses, surface water, estuaries, or aquifers. The National Water Act (Act No. 36 of 1998 – NWA) allows for the protection of water resources, which includes:

- The maintenance of the quality of the water resource to the extent that the water resources may be used in an ecologically sustainable way;
- The prevention of the degradation of the water resource; and
- The rehabilitation of the water resource.

A watercourse means;

- A river or spring;
- A natural channel in which water flows regularly or intermittently;
- A wetland, lake or dam into which, or from which, water flows; and
- Any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

The NWA recognises that the entire ecosystem and not just the water itself, and any given water resource constitutes the resource and as such needs to be conserved. No activity may therefore take place within a watercourse unless it is authorised by the DHSWS. Any area within a wetland or riparian zone is therefore excluded from development unless authorisation is obtained from the DHSWS in terms of Section 21 (c) and (i).

3 Project Area

The project area is 6.5 km southeast from Sannaspos and is found 1.3 km south of the N8 road. Presently, the project area is surrounded by the Modder River, agricultural fields and some open natural areas (Figure 3-1).

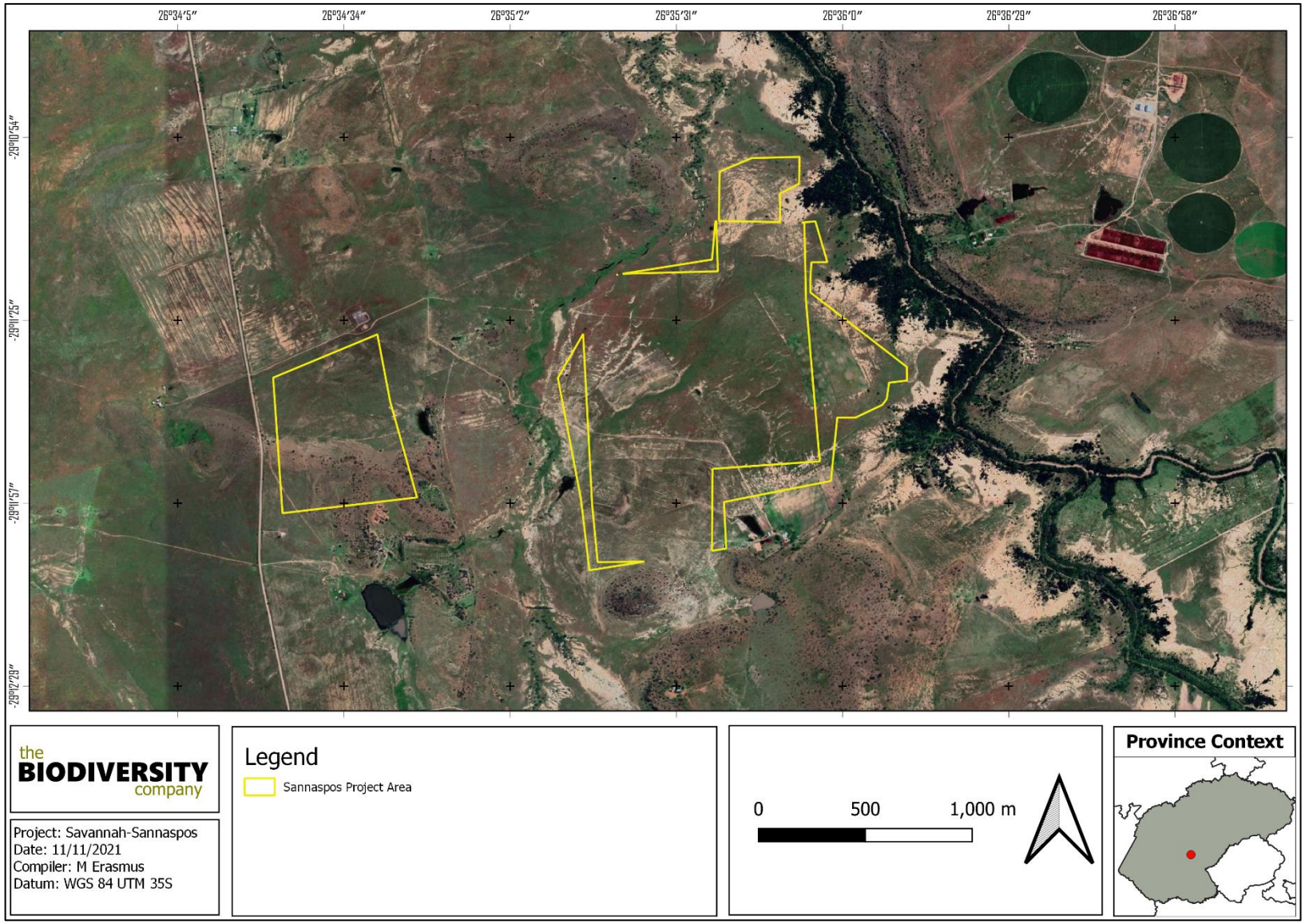

Figure 3-1 Map illustrating the location of the proposed project area

4 Desktop Assessment

The desktop assessment was principally undertaken using a Geographic Information System (GIS) to access the latest available spatial datasets to develop digital cartographs and species lists. These datasets and their date of publishing are provided below.

4.1 Ecologically Important Landscape Features

Existing ecologically relevant data layers were incorporated into a GIS to establish how the proposed project might interact with any ecologically important entities. Emphasis was placed around the following spatial datasets:

- *National Biodiversity Assessment 2018 (Skowno et al, 2019) (NBA)*- The purpose of the NBA is to assess the state of South Africa's biodiversity based on best available science, with a view to understanding trends over time and informing policy and decision-making across a range of sectors. The NBA deals with all three components of biodiversity: genes, species and ecosystems; and assesses biodiversity and ecosystems across terrestrial, freshwater, estuarine and marine environments. The two headline indicators assessed in the NBA are:
    - *Ecosystem Threat Status* – indicator of an ecosystem's wellbeing, based on the level of change in structure, function or composition. Ecosystem types are categorised as Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT) or Least Concern (LC), based on the proportion of the original extent of each ecosystem type that remains in good ecological condition.
    - *Ecosystem Protection Level* – indicator of the extent to which ecosystems are adequately protected or under-protected. Ecosystem types are categorised as Well Protected (WP), Moderately Protected (MP), Poorly Protected (PP), or Not Protected (NP), based on the proportion of the biodiversity target for each ecosystem type that is included within one or more protected areas. NP, PP or MP ecosystem types are collectively referred to as under-protected ecosystems.
- Protected areas:
    - *South Africa Protected Areas Database (SAPAD) (DEA, 2021)* – The (SAPAD) Database contains spatial data for the conservation of South Africa. It includes spatial and attribute information for both formally protected areas and areas that have less formal protection. SAPAD is updated on a continuous basis and forms the basis for the Register of Protected Areas, which is a legislative requirement under the National Environmental Management: Protected Areas Act, Act 57 of 2003.
    - *National Protected Areas Expansion Strategy (NPAES) (SANBI, 2010)* – The NPAES provides spatial information on areas that are suitable for terrestrial ecosystem protection. These focus areas are large, intact and unfragmented and therefore, of high importance for biodiversity, climate resilience and freshwater protection.
- Free State Biodiversity Sector Plan
    - It is important to note that the Critical Biodiversity Areas (CBA) map accounts for terrestrial fauna and flora only. The inclusion of the aquatic component was limited to the Freshwater Ecosystem Priority Areas (FEPA) catchments (included in the cost layer and for the identification of Ecological Support Areas (ESAs)) and wetland clusters (included in the ESAs only).
    - A CBA is considered a significant and ecologically sensitive area and needs to be kept in a pristine or near-natural state to ensure the continued functioning of ecosystems (SANBI, 2017). A CBA represents the best choice for achieving biodiversity targets. ESAs are not essential for achieving targets, but they play a vital role in the continued

functioning of ecosystems and often are essential for proper functioning of adjacent CBAs.

- Important Bird and Biodiversity Areas (IBAs) (BirdLife South Africa, 2015) – IBAs constitute a global network of over 13 500 sites, of which 112 sites are found in South Africa. IBAs are sites of global significance for bird conservation, identified through multi-stakeholder processes using globally standardised, quantitative and scientifically agreed criteria; and
- South African Inventory of Inland Aquatic Ecosystems (SAIIAE) (Van Deventer *et al.,* 2018) – A SAIIAE was established during the NBA of 2018. It is a collection of data layers that represent the extent of river and inland wetland ecosystem types and pressures on these systems.

4.2 Desktop Flora Assessment

The Vegetation of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2006) and SANBI (2019) was used to identify the vegetation type that would have occurred under natural or pre-anthropogenically altered conditions. Furthermore, the Plants of Southern Africa (POSA) database was accessed to compile a list of expected flora species within the project area (Figure 4-1). The Red List of South African Plants (Raimondo *et al.,* 2009; SANBI, 2020) was utilized to provide the most current national conservation status of flora species.

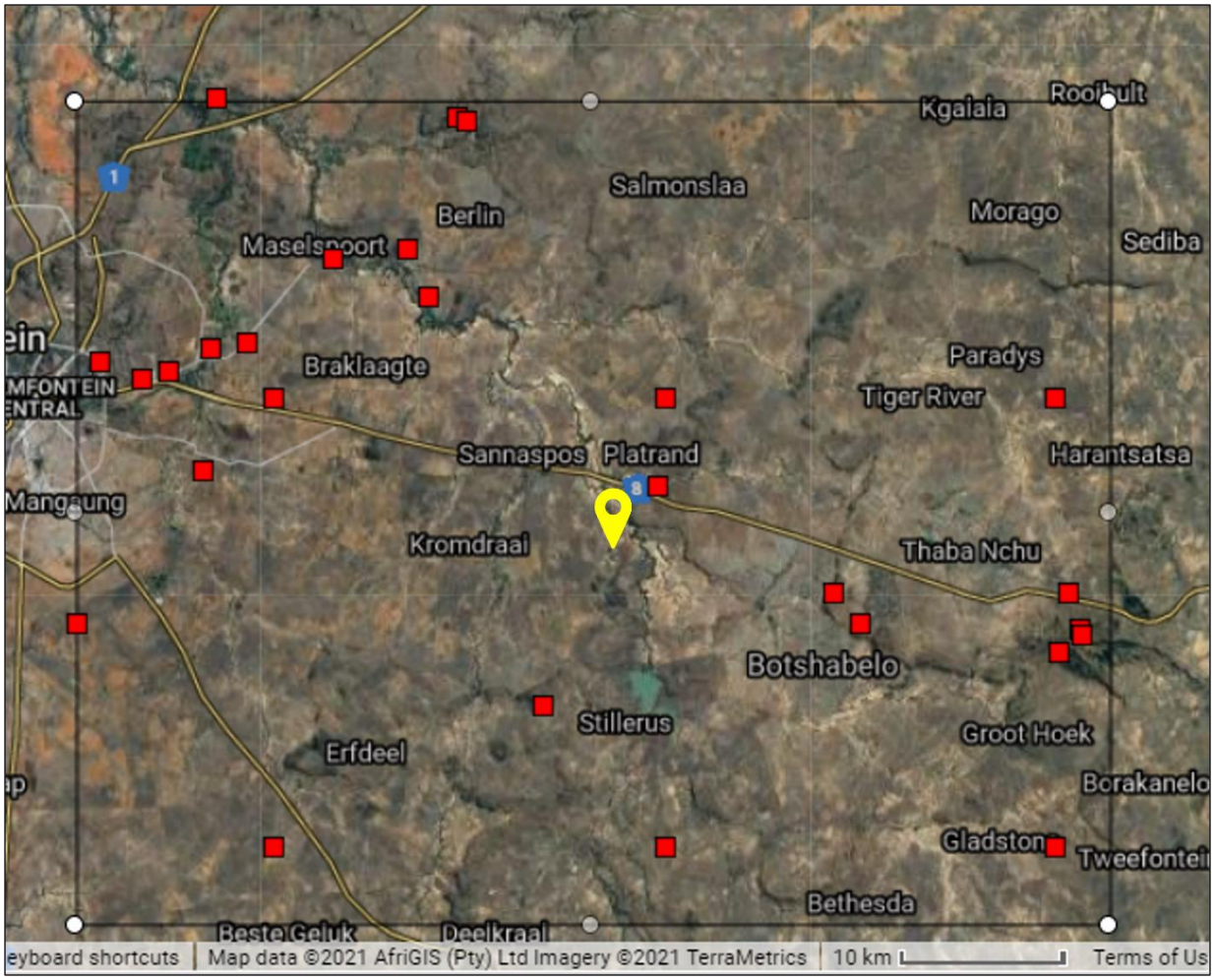

Figure 4-1 ***Map illustrating extent of area used to obtain the expected flora species list from the Plants of South Africa (POSA) database. Yellow icon indicates approximate location of the project area. The red squares are cluster markers of botanical records as per POSA data.***

4.3 Desktop Faunal Assessment

The faunal desktop assessment comprised of the following, compiling an expected:

- Amphibian list, generated from the IUCN spatial dataset (2017) and AmphibianMap database (Fitzpatrick Institute of African Ornithology, 2021a), using the 2926 quarter degree square;
- Reptile list, generated from the IUCN spatial dataset (2017) and ReptileMap database (Fitzpatrick Institute of African Ornithology, 2021b), using the 2926 quarter degree square;
- Avifauna list, generated for the SABAP2 dataset by looking at pentads 2905_2635; 2910_2635; 2915_2635; and
- Mammal list from the IUCN spatial dataset (2017).

4.4 Desktop Wetland Assessment

The following spatial datasets were utilised:

- Aerial imagery (Google Earth Pro);
- Land Type Data (Land Type Survey Staff, 1972 - 2006);
- South African Inventory of Inland Aquatic Ecosystems (Van Deventer *et al*., 2019);
- The National Freshwater Ecosystem Priority Areas (Nel *et al*., 2011);
- Contour data (5m);
- NASA Shuttle Radar Topography Mission Global 1 arc second digital elevation data; and
- South African Inventory of Inland Aquatic Ecosystems (SAIIAE) (Van Deventer *et al*., 2018).

4.5 Assumptions and Limitations

The following assumptions and limitations are applicable for this assessment:

- The assessment area was based on a desktop component only.

5 Results & Discussion

5.1 Desktop Assessment

5.1.1 Ecologically Important Landscape Features

The GIS analysis pertaining to the relevance of the proposed project to ecologically important landscape features are summarised in Table 5-1.

Table 5-1 Summary of relevance of the proposed project to ecologically important landscape features.

Desktop Information Considered	Relevant/Irrelevant
Ecosystem Threat Status	Relevant – Overlaps with a Least Concern ecosystem
Ecosystem Protection Level	Relevant – Overlaps with a Poorly Protected ecosystem
Protected Areas	Irrelevant – 6.2 km from the closest Protected Area (Rustfontein Nature Reserve)
Renewable Energy Development Zones	Irrelevant - The project area falls 66 km from the closest REDZ
National Protected Areas Expansion Strategy	Relevant – The project area overlaps with a NPAES
Important Bird and Biodiversity Areas	Irrelevant – Located 60 km from the Soetdoring Nature Reserve IBA

South African Inventory of Inland Aquatic Ecosystems	Relevant - The project area overlaps with a CR river.
National Freshwater Priority Area	Relevant – The project area overlaps with non FEPA wetlands and a non FEPA river.
Strategic Water Source Areas	Irrelevant- The project area is 86 km from the closest SWSA
South African Renewable Energy EIA Application (REEA)	Relevant – Overlaps with an application that has a status of “Amendment”

5.1.2 Flora Assessment

This section is divided into a description of the vegetation type expected under natural conditions and the expected flora species.

5.1.2.1 Vegetation Type

The project area is situated within the Grassland biome. This biome is centrally located in southern Africa, and adjoins all except the desert, fynbos and succulent Karoo biomes (Mucina & Rutherford, 2006). Major macroclimatic traits that characterise the grassland biome include:

a) Seasonal precipitation; and

b) The minimum temperatures in winter (Mucina & Rutherford, 2006).

The grassland biome is found chiefly on the high central plateau of South Africa, and the inland areas of KwaZulu-Natal and the Eastern Cape. The topography is mainly flat and rolling but includes the escarpment itself. Altitude varies from near sea level to 2 850 m above sea level.

Grasslands are dominated by a single layer of grasses. The amount of cover depends on rainfall and the degree of grazing. The grassland biome experiences summer rainfall and dry winters with frost (and fire), which are unfavourable for tree growth. Thus, trees are typically absent, except in a few localized habitats. Geophytes (bulbs) are often abundant. Frosts, fire and grazing maintain the grass dominance and prevent the establishment of trees.

On a fine-scale vegetation type, the project area overlaps with the Central Free State Grassland (Figure 5-1).

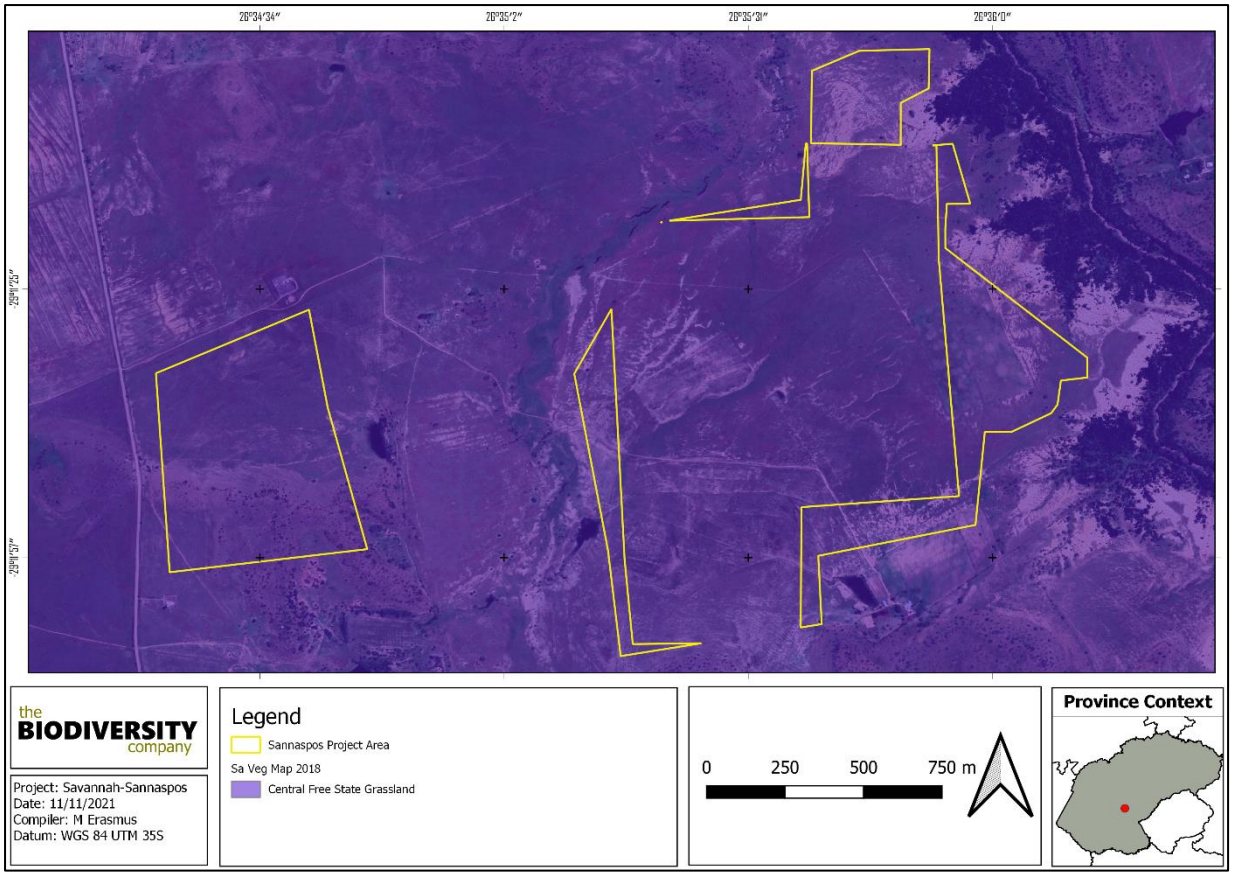

Figure 5-1 Map illustrating the vegetation type associated with the project area

5.1.2.1.1 Central Free State Grassland

Central Free State Grassland is undulating plains supporting short grassland, in natural condition dominated by *Themeda triandra* while *Eragrostis curvula* and *E. chloromelas* become dominant in degraded habitats.

Important taxa:

Important plant taxa are those species that have a high abundance, a frequent occurrence or are prominent in the landscape within a particular vegetation type (Mucina & Rutherford, 2006).

The following species are important in the **Central Free State Grassland** vegetation type (d= dominant species):

Graminoids: *Aristida adscensionis* (d), *A. congesta* (d), *Cynodon dactylon* (d), *Eragrostis chloromelas* (d), *E. curvula* (d), *E. plana* (d), *Panicum coloratum* (d), *Setaria sphacelata* (d), *Themeda triandra* (d), *Tragus koelerioides* (d), *Agrostis lachnantha*, *Andropogon appendiculatus*, *Aristida bipartita*, *A. canescens*, *Cymbopogon pospischilii*, *Cynodon transvaalensis*, *Digitaria argyrograpta*, *Elionurus muticus*, *Eragrostis lehmanniana*, *E. micrantha*, *E. obtusa*, *E. racemosa*, *E. trichophora*, *Heteropogon contortus*, *Microchloa caffra*, *Setaria incrassata*, *Sporobolus discosporus*.

Herbs: *Berkheya onopordifolia* var. *onopordifolia*, *Chamaesyce inaequilatera*, *Conyza pinnata*, *Crabbea acaulis*, *Geigeria aspera* var. *aspera*, *Hermannia depressa*, *Hibiscus pusillus*, *Pseudognaphalium luteo-album*, *Salvia stenophylla*, *Selago densiflora*, *Sonchus dregeanus*.

Geophytic Herbs: *Oxalis depressa*, *Raphionacme dyeri*.

Succulent Herb: *Tripteris aghillana* var. *integrifolia*.

Low Shrubs: *Felicia muricata* (d), *Anthospermum rigidum* subsp. *pumilum*, *Helichrysum dregeanum*, *Melolobium candicans*, *Pentzia globosa*.

Conservation Status of the Vegetation Type

The national conservation target is 24%. Only small portions enjoy statutory conservation (Willem Pretorius, Rustfontein and Koppies Dam Nature Reserves) as well as some protection in private nature reserves. The conservation status of this vegetation community was listed by Mucina and Rutherford (2006) as Vulnerable.

5.1.2.2 Expected Flora Species

The POSA database indicates that 408 species of indigenous plants are expected to occur within the project area. Appendix A provides the list of species and their respective conservation status and endemism. None of the species expected are species of conservation concern (SCC).

5.1.3 Faunal Assessment

5.1.3.1 Amphibians

Based on the IUCN Red List Spatial Data and AmphibianMap, 17 amphibian species are expected to occur within the area (Appendix B). None of the species are SCCs. One of the species are SCCs (Table 5-2).

Table 5-2 Threatened amphibian species that are expected to occur within the project area

Species	Common Name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	**IUCN (2021)**	
Pyxicephalus adspersus	Giant Bullfrog	NT	LC	Moderate

The Giant Bull Frog (*Pyxicephalus adspersus*) is a species of conservation concern that may potentially occur in the project area. The Giant Bull Frog is listed as NT on a regional scale. It is a species of drier savannahs. It is fossorial for most of the year, remaining buried in cocoons. They emerge at the start of the rains, and breed in shallow, temporary waters in pools, pans and ditches (IUCN, 2017). This species may occur in this area, rated as moderate likelihood.

5.1.3.2 Reptiles

Based on the IUCN Red List Spatial Data and the ReptileMAP database, 51 reptile species are expected to occur within the area (Appendix C). One (1) are regarded as threatened (Table 5-3).

Table 5-3 Threatened reptile species that are expected to occur within the project area

Species	Common Name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	**IUCN (2021)**	
Homoroselaps dorsalis	Striped Harlequin Snake	NT	LC	Low

Homoroselaps dorsalis (Striped Harlequin Snake) is partially fossorial and known to inhabit old termitaria in grassland habitat (IUCN, 2017). Most of its range is at moderately high altitudes, reaching 1,800 m in Mpumalanga and Swaziland, but it is also found at elevations as low as about 100 m in KwaZulu-Natal. The likelihood of occurrence was rated as low.

5.1.3.3 Mammals

The IUCN Red List Spatial Data lists 65 mammal species that could be expected to occur within the area (Appendix D). This list excludes large mammal species that are limited to protected areas. Eleven (11) of these expected species are regarded as threatened (Table 5-4), eight of these have a low likelihood of occurrence based on the lack of suitable habitat and food sources in the project area.

Table 5-4 Threatened mammal species that are expected to occur within the project area.

Species	Common Name	Conservation Status		Likelihood of occurrence
		Regional (SANBI, 2016)	**IUCN (2021)**	
Aonyx capensis	Cape Clawless Otter	NT	NT	Moderate
Atelerix frontalis	South Africa Hedgehog	NT	LC	Low
Eidolon helvum	African Straw-colored Fruit Bat	LC	NT	Low
Felis nigripes	Black-footed Cat	VU	VU	Moderate
Hydrictis maculicollis	Spotted-necked Otter	VU	NT	Low
Leptailurus serval	Serval	NT	LC	Moderate
Mystromys albicaudatus	White-tailed Rat	VU	EN	Low
Panthera pardus	Leopard	VU	VU	Low
Parahyaena brunnea	Brown Hyaena	NT	NT	Low
Poecilogale albinucha	African Striped Weasel	NT	LC	Low
Redunca fulvorufula	Mountain Reedbuck	EN	LC	Low

Aonyx capensis (Cape Clawless Otter) is the most widely distributed otter species in Africa (IUCN, 2017). This species is predominantly aquatic, and it is seldom found far from water. Based on the presence of the Modder Rivier on the edge of the project area which provides suitable habitat the species were given a moderate likelihood of occurrence.

Felis nigripes (Black-footed cat) is endemic to the arid regions of southern Africa. This species is naturally rare, has cryptic colouring is small in size and is nocturnal. These factors have contributed to a lack of information on this species. Given that the highest densities of this species have been recorded in the more arid Karoo region of South Africa, the habitat in the project area can be considered to be sub-optimal for the species and the likelihood of occurrence is rated as moderate.

Leptailurus serval (Serval) occurs widely through sub-Saharan Africa and is commonly recorded from most major national parks and reserves (IUCN, 2017). The Serval's status outside reserves is not certain, but they are inconspicuous and may be common in suitable habitat as they are tolerant of farming practices provided there is cover and food available. In sub-Saharan Africa, they are found in habitat with well-watered savanna long-grass environments and are particularly associated with reedbeds and other riparian vegetation types. Large areas of grasslands are present in the project area and as such the likelihood of occurrence is rated as moderate.

5.1.3.4 Avifauna

The SABAP2 Data lists 128 avifauna species that could be expected to occur within the area (Appendix E). None of the species expected are SCCs.

5.1.4 Literature review

In 2014, An EIA was performed by Savannah Environmental Specialists (2014) for the proposed solar facility development on the farms Lejwe 2962 and Besemkop 1808, which is on the same properties as the current project area.

The vegetation on site during the 2014 survey, was found in 4 different associations, the *Themeda triandra – Chrysocoma ciliata* grasslands being the only feasible habitat for the facility. The area contained a high diversity of species, including several protected species. The map below is a snippet from the report indicating the sensitive areas identified (Figure 5-2). A likely limitation regarding the 2014 assessment was that the faunal component was conducted purely from a desktop basis.

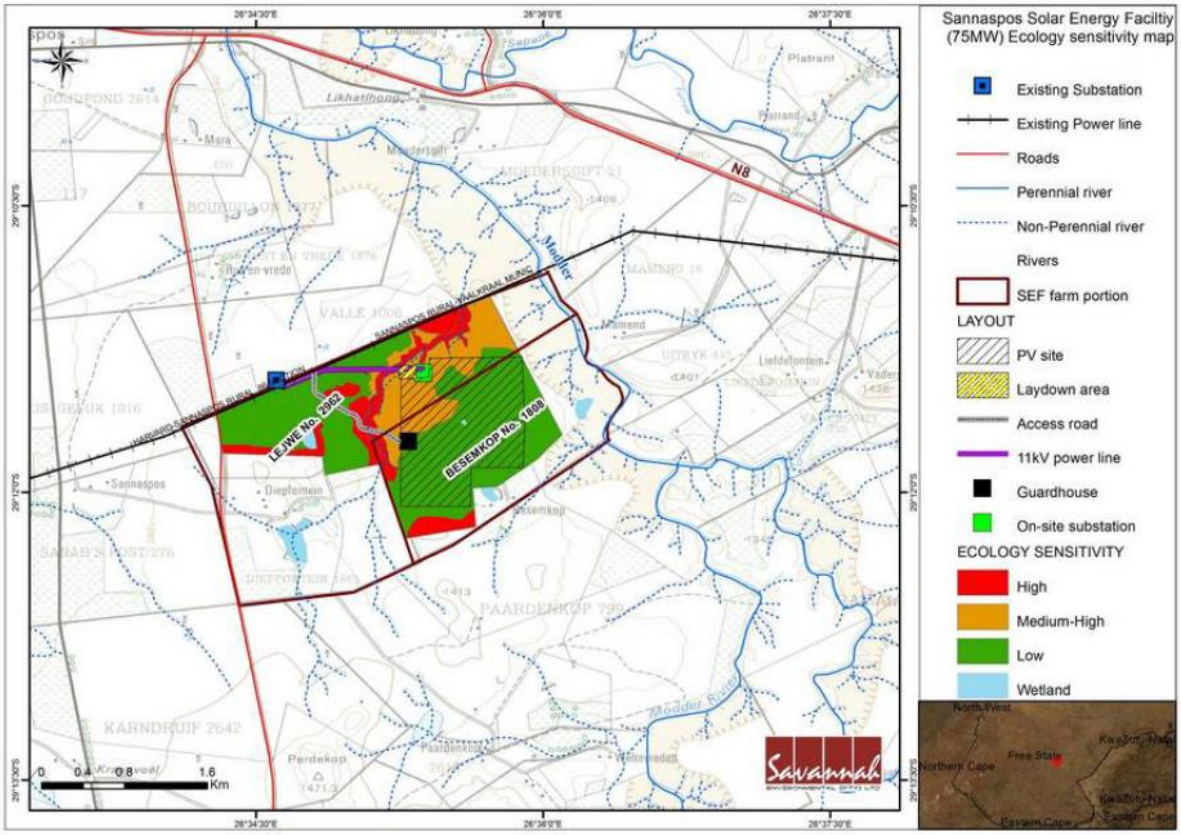

Figure 5-2 Map illustrating the vegetation type associated with the project area

5.2 Site Ecological Importance

The biodiversity theme sensitivity, as indicated in the screening report, was derived to be Very High, mainly due to the project area being with an ESA (Figure 5-3).

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Ecological support area 1
Very High	Ecological support area 2
Very High	Protected Areas Expansion Strategy

Figure 5-3 ***Terrestrial Biodiversity Theme Sensitivity, National Web based Environmental Screening Tool. The outside edges of the project area were used in the screening tool.***

6 Impact Risk Assessment

The section below and associated tables serve to indicate and summarise the significance of perceived impacts on the terrestrial ecology of the project area.

6.1 Biodiversity Risk Assessment

6.1.1 Terrestrial Impact Assessment

Potential impacts were evaluated against the data captured during the desktop assessment to identify relevance to the project area. The relevant impacts associated with the proposed development were then subjected to a prescribed impact assessment methodology which were provided by Savannah Environmental and is available on request. No decommissioning phase was considered based on the nature of the development.

Anthropogenic activities drive habitat destruction causing displacement of fauna and flora and possibly direct mortality. Land clearing destroys local wildlife habitat and can lead to the loss of local breeding grounds, nesting sites and wildlife movement corridors such as rivers, streams and drainage lines, or other locally important features. The removal of natural vegetation may reduce the habitat available for fauna species and may reduce animal populations and species compositions within the area.

6.1.2 Alternatives considered.

No alternatives were provided for the development.

6.1.3 Loss of Irreplaceable Resources

- An ESA and NPAES will be lost; and
- SCCs will also be lost.

6.1.4 Anticipated Impacts

The impacts anticipated for the proposed activities are considered in order to predict and quantify these impacts and assess & evaluate the magnitude on the identified terrestrial biodiversity (Table 6-1).

Table 6-1 Anticipated impacts for the proposed activities on terrestrial biodiversity

Main Impact	Project activities that can cause loss/impacts to habitat (especially with regard to the proposed infrastructure areas):	Secondary impacts anticipated
1. Destruction, fragmentation and degradation of habitats and ecosystems	Physical removal of vegetation, including protected species.	Displacement/loss of flora & fauna (including possible SCC)
	Access roads and servitudes	Increased potential for soil erosion
	Soil dust precipitation	Habitat fragmentation
	Dumping of waste products	Increased potential for establishment of alien & invasive vegetation
	Random events such as fire (cooking fires or cigarettes)	Erosion
Main Impact	**Project activities that can cause the spread and/or establishment of alien and/or invasive species**	**Secondary impacts anticipated**
2. Spread and/or establishment of alien and/or invasive species	Vegetation removal	Habitat loss for native flora & fauna (including SCC)
	Vehicles potentially spreading seed	Spreading of potentially dangerous diseases due to invasive and pest species
	Unsanitary conditions surrounding infrastructure promoting the establishment of alien and/or invasive rodents	Alteration of fauna assemblages due to habitat modification

	Creation of infrastructure suitable for breeding activities of alien and/or invasive birds	
Main Impact	**Project activities that can cause direct mortality of fauna**	**Secondary impacts anticipated**
3. Direct mortality of fauna	Clearing of vegetation	Loss of habitat
		Loss of ecosystem services
	Roadkill due to vehicle collision	
	Pollution of water resources due to dust effects, chemical spills, etc.	Increase in rodent populations and associated disease risk
	Intentional killing of fauna for food (hunting)	
Main Impact	**Project activities that can cause reduced dispersal/migration of fauna**	**Secondary impacts anticipated**
4. Reduced dispersal/migration of fauna	Loss of landscape used as corridor	Reduced dispersal/migration of fauna
		Loss of ecosystem services
	Compacted roads	Reduced plant seed dispersal
	Removal of vegetation	
Main Impact	**Project activities that can cause pollution in watercourses and the surrounding environment**	**Secondary impacts anticipated**
5. Environmental pollution due to water runoff, spills from vehicles and erosion	Chemical (organic/inorganic) spills	Pollution in watercourses and the surrounding environment
	Erosion	Faunal mortality (direct and indirectly)
		Groundwater pollution
		Loss of ecosystem services
Main Impact	**Project activities that can cause disruption/alteration of ecological life cycles due to sensory disturbance.**	**Secondary impacts anticipated**
6.Disruption/alteration of ecological life cycles (breeding, migration, feeding) due to noise, dust and light pollution.	Operation of machinery (Large earth moving machinery, vehicles)	Disruption/alteration of ecological life cycles due to noise
		Loss of ecosystem services
	Project activities that can cause disruption/alteration of ecological life cycles due to dust	Secondary impacts associated with disruption/alteration of ecological life cycles due to dust
	Vehicles	Loss of ecosystem services
Main Impact	**Project activities that can cause staff to interact directly with potentially dangerous fauna**	**Secondary impacts anticipated**
8. Staff and others interacting directly with fauna (potentially dangerous) or poaching of animals	All unregulated/supervised activities outdoors	Loss of SCCs

6.1.5 Identification of Additional Potential Impacts

The impacts are expected for the project, and will be assessed for the impact phase of the process.

Table 6-2 Scoping evaluation table summarising the impacts identified to biodiversity

Impact			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Loss of vegetation (& habitat) within development footprint	Direct impacts: » Disturbance / degradation / loss to vegetation » Destruction of protected plant species Indirect impacts: » Loss of ecosystem services	Regional	Very High to High sensitivity areas

	» Introduction of alien species, especially plants » Displacement of faunal community due to habitat loss, direct mortalities and disturbance		

Description of expected significance of impact

The following potential main impacts on the biodiversity were considered for the construction phase of the proposed development. This phase refers to the period during construction when the proposed features are constructed; and is considered to have the largest direct impact on biodiversity. The following potential impacts to terrestrial biodiversity were considered:

- Destruction, further loss and fragmentation of the of habitats, ecosystems and vegetation community;
- Introduction of alien species, especially plants;
- Destruction of protected plant species; and
- Displacement of faunal community due to habitat loss, direct mortalities and disturbance (road collisions, noise, dust, vibration and poaching).

Gaps in knowledge & recommendations for further study

- This is completed at a desktop level only.
- Identification, delineation and characterisation of vegetation communities.
- Undertake a sensitivity assessment of systems where applicable.
- Determine a suitable buffer width for the resources.

Recommendations with regards to general field surveys

- Field surveys to prioritise the development areas, but also consider the Area of Influence.
- Beneficial to undertake fieldwork during the wet season period.

6.1.5.1 Cumulative Impacts

Cumulative impacts are assessed in context of the extent of the proposed project area; other developments in the area; and general loss and transformation resulting from other activities in the area. The expected post-mitigation risk significance is expected to be low, and the overall cumulative impact is therefore expected to be medium.

Table 6-3 Cumulative Impacts to biodiversity associated with the proposed project

Impact Nature: Cumulative habitat loss within the region		
The development of the proposed infrastructure will contribute to cumulative habitat loss within ESAs and thereby impact the ecological processes in the region.		
	Overall impact of the proposed development considered in isolation	**Cumulative impact of the project and other projects in the area**
Extent	Low	Moderate
Duration	Long term	Long term
Magnitude	Low	Moderate
Probability	Probable	Highly probable
Significance	**Medium**	**Medium**
Status (positive or negative)	Negative	Negative
Reversibility	Moderate	Low
Irreplaceable loss of resources?	No	No
Can impacts be mitigated	To some degree, but most of the impact results from the presence of the various facilities which cannot be well mitigated.	
Mitigation:		
• Ensure that a rehabilitation plan and IAP management plan be compiled for each development and are effectively implemented.		

6.2 Wetland Risk Assessment

The project area is located within a 500 m regulated area, with reference to an unchanneled valley bottom wetlands, which flows in a north-easterly direction into the Modder River. The proposed development is likely to pose an indirect risk to the water resources, especially in terms of Section 21 (c) “Impeding or diverting the flow of water in a watercourse” and (i) “Altering the beds, banks, course or characteristics of a watercourse”. Subsequently, Section 21 (c) and (i) will be triggered by this development.

The proposed Photovoltaic Solar Facility development will most likely have a Low post-mitigation impact (Low Risk) on freshwater resource features and as such only a General Authorisation in terms of Section 39 of the NWA will likely be required. However, this can only be confirmed through a 21 (c) and (i) Risk Assessment (RA).

7 Assessment Approach

7.1 Biodiversity Field Assessment

7.1.1 Flora Survey

The fieldwork and sample sites will be placed within targeted areas (i.e., target sites) perceived as ecologically sensitive based on the preliminary interpretation of satellite imagery (Google Corporation) and GIS analysis (which included the latest applicable biodiversity datasets) available prior to the fieldwork. The focus of the fieldwork is therefore to maximise coverage and navigate to each target site in the field, to perform a rapid vegetation and ecological assessment at each sample site. Emphasis will be placed on sensitive habitats, especially those overlapping with the proposed project area.

Homogenous vegetation units will be subjectively identified using satellite imagery and existing land cover maps. The floristic diversity and search for flora SCC will be conducted through timed meanders within representative habitat units delineated during the scoping fieldwork. Emphasis will be placed mostly on sensitive habitats overlapping with the proposed project areas.

The timed random meander method is highly efficient for conducting floristic analysis, specifically in detecting flora SCC and maximising floristic coverage. In addition, the method is time and cost effective and highly suited for compiling flora species lists and therefore gives a rapid indication of flora diversity. The timed meander search will be performed based on the original technique described by Goff *et al.* (1982). Suitable habitat for SCC were identified according to Raimondo *et al.* (2009) and targeted as part of the timed meanders.

At each sample site notes will be made regarding current impacts (e.g., livestock grazing, erosion etc.), subjective recording of dominant vegetation species and any sensitive features (e.g., wetlands, outcrops etc.). In addition, opportunistic observations were made while navigating through the project area.

7.1.2 Fauna Survey

The faunal assessment within this report pertains to herpetofauna (amphibians and reptiles) and mammals. The faunal field survey will comprise of the following techniques:

- Visual and auditory searches - This typically comprised of meandering and using binoculars to view species from a distance without them being disturbed; and listening to species calls;
- Active hand-searches - are used for species that shelter in or under particular micro-habitats (typically rocks, exfoliating rock outcrops, fallen trees, leaf litter, bark etc.); and
- Utilization of local knowledge.

Relevant field guides and texts consulted for identification purposes include the following:

- Field Guide to Snakes and other Reptiles of Southern Africa (Branch, 1998);
- A Complete Guide to the Snakes of Southern Africa (Marais, 2004);
- Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland (Bates *et al,* 2014);
- A Complete Guide to the Frogs of Southern Africa (du Preez and Carruthers, 2009);
- Smithers' Mammals of Southern Africa (Apps, 2000);
- A Field Guide to the Tracks and Signs of Southern and East African Wildlife (Stuart and Stuart, 2000);
- Book of birds of South Africa, Lesotho and Swaziland (Taylor *et al.,* 2015); and
- Roberts – Birds of Southern Africa (Hockey *et al.,* 2005).

7.2 Terrestrial Site Ecological Importance

The different habitat types within the project area will be delineated and identified based on observations during the field assessment, and available satellite imagery. These habitat types are assigned Ecological Importance (EI) categories based on their ecological integrity, conservation value, the presence of species of conservation concern and their ecosystem processes.

Site Ecological Importance (SEI) is a function of the Biodiversity Importance (BI) of the receptor (e.g., SCC, the vegetation/fauna community or habitat type present on the site) and Receptor Resilience (RR) (its resilience to impacts) as follows.

BI is a function of Conservation Importance (CI) and the Functional Integrity (FI) of the receptor as follows. The criteria for the CI and FI ratings are provided in Table 7-1 and Table 7-2, respectively.

Table 7-1 Summary of Conservation Importance (CI) criteria

Conservation Importance	Fulfilling Criteria
Very High	Confirmed or highly likely occurrence of Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Extremely Rare or CR species that have a global extent of occurrence (EOO) of < 10 km^2. Any area of natural habitat of a CR ecosystem type or large area (> 0.1% of the total ecosystem type extent) of natural habitat of an EN ecosystem type. Globally significant populations of congregatory species (> 10% of global population).
High	Confirmed or highly likely occurrence of CR, EN, VU species that have a global EOO of > 10 km^2. IUCN threatened species (CR, EN, VU) must be listed under any criterion other than A. If listed as threatened only under Criterion A, include if there are less than 10 locations or < 10 000 mature individuals remaining. Small area (> 0.01% but < 0.1% of the total ecosystem type extent) of natural habitat of EN ecosystem type or large area (> 0.1%) of natural habitat of VU ecosystem type. Presence of Rare species. Globally significant populations of congregatory species (> 1% but < 10% of global population).
Medium	Confirmed or highly likely occurrence of populations of Near Threatened (NT) species, threatened species (CR, EN, VU) listed under Criterion A only and which have more than 10 locations or more than 10 000 mature individuals. Any area of natural habitat of threatened ecosystem type with status of VU. Presence of range-restricted species. > 50% of receptor contains natural habitat with potential to support SCC.
Low	No confirmed or highly likely populations of SCC. No confirmed or highly likely populations of range-restricted species. < 50% of receptor contains natural habitat with limited potential to support SCC.
Very Low	No confirmed and highly unlikely populations of SCC. No confirmed and highly unlikely populations of range-restricted species. No natural habitat remaining.

Table 7-2 Summary of Functional Integrity (FI) criteria

Functional Integrity	Fulfilling Criteria

Very High	Very large (> 100 ha) intact area for any conservation status of ecosystem type or > 5 ha for CR ecosystem types. High habitat connectivity serving as functional ecological corridors, limited road network between intact habitat patches. No or minimal current negative ecological impacts, with no signs of major past disturbance.
High	Large (> 20 ha but < 100 ha) intact area for any conservation status of ecosystem type or > 10 ha for EN ecosystem types. Good habitat connectivity, with potentially functional ecological corridors and a regularly used road network between intact habitat patches. Only minor current negative ecological impacts, with no signs of major past disturbance and good rehabilitation potential.
Medium	Medium (> 5 ha but < 20 ha) semi-intact area for any conservation status of ecosystem type or > 20 ha for VU ecosystem types. Only narrow corridors of good habitat connectivity or larger areas of poor habitat connectivity and a busy used road network between intact habitat patches. Mostly minor current negative ecological impacts, with some major impacts and a few signs of minor past disturbance. Moderate rehabilitation potential.
Low	Small (> 1 ha but < 5 ha) area. Almost no habitat connectivity but migrations still possible across some modified or degraded natural habitat and a very busy used road network surrounds the area. Low rehabilitation potential. Several minor and major current negative ecological impacts.
Very Low	Very small (< 1 ha) area. No habitat connectivity except for flying species or flora with wind-dispersed seeds. Several major current negative ecological impacts.

BI can be derived from a simple matrix of CI and FI as provided in Table 7-3.

Table 7-3 Matrix used to derive Biodiversity Importance (BI) from Functional Integrity (FI) and Conservation Importance (CI)

Biodiversity Importance (BI)		Conservation Importance (CI)				
		Very high	**High**	**Medium**	**Low**	**Very low**
Functional Integrity (FI)	**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

The fulfilling criteria to evaluate RR are based on the estimated recovery time required to restore an appreciable portion of functionality to the receptor, as summarised in Table 7-4.

Table 7-4 Summary of Resource Resilience (RR) criteria

Resilience	Fulfilling Criteria
Very High	Habitat that can recover rapidly (~ less than 5 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a very high likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
High	Habitat that can recover relatively quickly (~ 5–10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a high likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
Medium	Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
Low	Habitat that is unlikely to be able to recover fully after a relatively long period: > 15 years required to restore ~ less than 50% of the original species composition and functionality of the receptor functionality, or species that have a low likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.

Very Low	Habitat that is unable to recover from major impacts, or species that are unlikely to: (i) remain at a site even when a disturbance or impact is occurring, or (ii) return to a site once the disturbance or impact has been removed.

Subsequent to the determination of the BI and RR, the SEI can be ascertained using the matrix as provided in Table 7-5.

Table 7-5 Matrix used to derive Site Ecological Importance from Receptor Resilience (RR) and Biodiversity Importance (BI)

Site Ecological Importance		Biodiversity Importance (BI)				
		Very high	**High**	**Medium**	**Low**	**Very low**
Receptor Resilience (RR)	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

Interpretation of the SEI in the context of the proposed project is provided in Table 7-6.

Table 7-6 Guidelines for interpreting Site Ecological Importance 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 Low	Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.

The SEI evaluated for each taxon can be combined into a single multi-taxon evaluation of SEI for the assessment area. Either a combination of the maximum SEI for each receptor should be applied, or the SEI may be evaluated only once per receptor but for all necessary taxa simultaneously. For the latter, justification of the SEI for each receptor is based on the criteria that conforms to the highest CI and FI, and the lowest RR across all taxa.

7.3 Wetland Assessment

7.3.1 Wetland Identification and Mapping

The wetland areas will be delineated in accordance with the DWAF (2005) guidelines, a cross section is presented in Figure 7-1. The outer edges of the wetland areas are identified by considering the following four specific indicators:

- The Terrain Unit Indicator helps to identify those parts of the landscape where wetlands are more likely to occur;
- The Soil Form Indicator identifies the soil forms, as defined by the Soil Classification Working Group (1991), which are associated with prolonged and frequent saturation.

- The soil forms (types of soil) found in the landscape were identified using the South African soil classification system namely; Soil Classification: A Taxonomic System for South Africa (Soil Classification Working Group, 1991);

- The Soil Wetness Indicator identifies the morphological "signatures" developed in the soil profile as a result of prolonged and frequent saturation; and
- The Vegetation Indicator identifies hydrophilic vegetation associated with frequently saturated soils.

Vegetation is used as the primary wetland indicator. However, in practise the soil wetness indicator tends to be the most important, and the other three indicators are used in a confirmatory role.

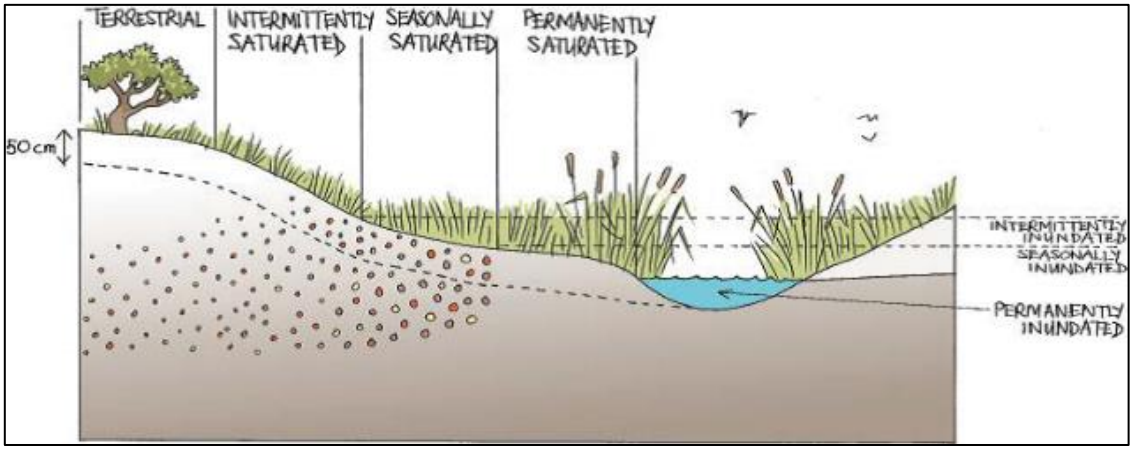

Figure 7-1 Cross section through a wetland, indicating how the soil wetness and vegetation indicators change (Ollis et al. 2013)

7.3.2 Functional Assessment

Wetland Functionality refers to the ability of wetlands to provide healthy conditions for the wide variety of organisms found in wetlands as well as humans. EcoServices serve as the main factor contributing to wetland functionality.

The assessment of the ecosystem services supplied by the identified wetlands will be conducted per the guidelines as described in WET-EcoServices (Kotze et al. 2008). An assessment was undertaken that examines and rates the following services according to their degree of importance and the degree to which the services are provided (Table 7-7).

Table 7-7 Classes for determining the likely extent to which a benefit is being supplied

Score	Rating of likely extent to which a benefit is being supplied
< 0.5	Low
0.6 - 1.2	Moderately Low
1.3 - 2.0	Intermediate
2.1 - 3.0	Moderately High
> 3.0	High

7.3.3 Present Ecological Status

The overall approach is to quantify the impacts of human activity or clearly visible impacts on wetland health, and then to convert the impact scores to a Present Ecological Status (PES) score. This takes the form of assessing the spatial extent of impact of individual activities/occurrences and then

separately assessing the intensity of impact of each activity in the affected area. The extent and intensity are then combined to determine an overall magnitude of impact. The Present State categories are provided in Table 7-8.

Table 7-8 The Present Ecological Status categories (Macfarlane, et al., 2008)

Impact Category	Description	Impact Score Range	PES
None	Unmodified, natural	0 to 0.9	A
Small	Largely Natural with few modifications. A slight change in ecosystem processes is discernible and a small loss of natural habitats and biota may have taken place.	1.0 to 1.9	B
Moderate	Moderately Modified. A moderate change in ecosystem processes and loss of natural habitats has taken place, but the natural habitat remains predominantly intact.	2.0 to 3.9	C
Large	Largely Modified. A large change in ecosystem processes and loss of natural habitat and biota has occurred.	4.0 to 5.9	D
Serious	Seriously Modified. The change in ecosystem processes and loss of natural habitat and biota is great, but some remaining natural habitat features are still recognizable.	6.0 to 7.9	E
Critical	Critical Modification. The modifications have reached a critical level and the ecosystem processes have been modified completely with an almost complete loss of natural habitat and biota.	8.0 to 10	F

7.3.4 Importance and Sensitivity

The importance and sensitivity of water resources is determined in order establish resources that provide higher than average ecosystem services, biodiversity support functions or are particularly sensitive to impacts. The mean of the determinants is used to assign the Importance and Sensitivity (IS) category as listed in Table 7-9.

Table 7-9 Description of Importance and Sensitivity categories

IS Category	Range of Mean	Recommended Ecological Management Class
Very High	3.1 to 4.0	**A**
High	2.1 to 3.0	**B**
Moderate	1.1 to 2.0	**C**
Low Marginal	< 1.0	**D**

7.3.5 Ecological Classification and Description

The National Wetland Classification Systems (NWCS) developed by the South African National Biodiversity Institute (SANBI) will be considered for this study. This system comprises a hierarchical classification process of defining a wetland based on the principles of the hydrogeomorphic (HGM) approach at higher levels, and then also includes structural features at the lower levels of classification (Ollis *et al.,* 2013).

7.3.6 Buffer Requirements

The “Preliminary Guideline for the Determination of Buffer Zones for Rivers, Wetlands and Estuaries” (Macfarlane *et al.,* 2014) will be used to determine the appropriate buffer zone for the proposed activity.

7.3.7 Risk Assessment

The risk assessment will be conducted in accordance with the DWS risk-based water use authorisation approach and delegation guidelines. The significance of the impact is calculated according to Table 7-10.

Table 7-10 Significance ratings matrix

Rating	Class	Management Description

1 – 55	(L) Low Risk	Acceptable as is or consider requirement for mitigation. Impact to watercourses and resource quality small and easily mitigated. Wetlands may be excluded.
56 – 169	M) Moderate Risk	Risk and impact on watercourses are notably and require mitigation measures on a higher level, which costs more and require specialist input. Wetlands are excluded.
170 – 300	(H) High Risk	Always involves wetlands. Watercourse(s)impacts by the activity are such that they impose a long-term threat on a large scale and lowering of the Reserve.

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9 Appendix Items

9.1 Appendix A – Flora species expected to occur in the project area.

Family	*Taxon*	Author	IUCN	Ecology
Achariaceae	*Kiggelaria africana*	L.	LC	Indigenous
Agavaceae	*Chlorophytum fasciculatum*	(Baker) Kativu	LC	Indigenous
Aizoaceae	*Delosperma sp.*	L.Bolus		
Aizoaceae	*Ruschia sp.*			
Aizoaceae	*Stoeberia utilis*	(L.Bolus) Van Jaarsv.		Indigenous
Aizoaceae	*Delosperma floribundum*	L.Bolus	LC	Indigenous; Endemic
Alliaceae	*Tulbaghia leucantha*	Baker	LC	Indigenous
Amaranthaceae	*Guilleminea densa*	(Humb. & Bonpl. ex Schult.) Moq.		Not indigenous; Naturalised; Invasive
Amaranthaceae	*Atriplex semibaccata*	R.Br.		Not indigenous; Naturalised; Invasive
Amaranthaceae	*Salsola kali*	L.		Not indigenous; Naturalised; Invasive
Amaryllidaceae	*Brunsvigia radulosa*	Herb.	LC	Indigenous
Amaryllidaceae	*Boophone disticha*	(L.f.) Herb.	LC	Indigenous
Amaryllidaceae	*Haemanthus humilis subsp. humilis*	Jacq.	LC	Indigenous; Endemic
Anacampserotaceae	*Anacampseros rufescens*	(Haw.) Sweet	LC	Indigenous
Anacardiaceae	*Searsia ciliata*	(Licht. ex Schult.) A.J.Mill.	LC	Indigenous
Anacardiaceae	*Searsia burchellii*	(Sond. ex Engl.) Moffett	LC	Indigenous
Anacardiaceae	*Searsia lancea*	(L.f.) F.A.Barkley	LC	Indigenous
Anacardiaceae	*Searsia erosa*	(Thunb.) Moffett	LC	Indigenous
Anacardiaceae	*Searsia pyroides var. gracilis*	(Burch.) Moffett	LC	Indigenous
Anacardiaceae	*Searsia bolusii*	(Sond. ex Engl.) Moffett	LC	Indigenous
Anacardiaceae	*Searsia dentata*	(Thunb.) F.A.Barkley	LC	Indigenous
Anacardiaceae	*Searsia pyroides var. pyroides*	(Burch.) Moffett	LC	Indigenous
Apiaceae	*Cyclospermum leptophyllum*	(Pers.) Sprague ex Britton & P.Wilson		Not indigenous; Naturalised
Apiaceae	*Heteromorpha arborescens var. abyssinica*	(Spreng.) Cham. & Schltdl.	LC	Indigenous
Apiaceae	*Notobubon laevigatum*	(Aiton) Magee	LC	Indigenous
Apiaceae	*Polemannia simplicior*	Hilliard & B.L.Burtt	LC	Indigenous
Apiaceae	*Bupleurum mundii*	Cham. & Schltdl.	LC	Indigenous
Apiaceae	*Berula thunbergii*	(DC.) H.Wolff	LC	Indigenous
Apocynaceae	*Asclepias sp.*			
Apocynaceae	*Cynanchum viminale subsp. viminale*	(L.) L.		Indigenous
Apocynaceae	*Pachycarpus rigidus*	E.Mey.	LC	Indigenous
Apocynaceae	*Cynanchum virens*	(E.Mey.) D.Dietr.	LC	Indigenous
Apocynaceae	*Brachystelma burchellii var. burchellii*	(Decne.) Peckover	LC	Indigenous
Apocynaceae	*Raphionacme dyeri*	Retief & Venter	LC	Indigenous

Apocynaceae	*Asclepias multicaulis*	(E.Mey.) Schltr.	LC	Indigenous
Apocynaceae	*Stenostelma corniculatum*	(E.Mey.) Bullock	LC	Indigenous
Apocynaceae	*Asclepias gibba var. gibba*	(E.Mey.) Schltr.	LC	Indigenous
Araceae	*Lemna gibba*	L.	LC	Indigenous
Araliaceae	*Cussonia paniculata subsp. sinuata*	Eckl. & Zeyh.	LC	Indigenous
Asparagaceae	*Asparagus laricinus*	Burch.	LC	Indigenous
Asparagaceae	*Asparagus striatus*	(L.f.) Thunb.	LC	Indigenous; Endemic
Asparagaceae	*Asparagus asparagoides*	(L.) W.Wight	LC	Indigenous
Asphodelaceae	*Trachyandra saltii var. saltii*	(Baker) Oberm.	LC	Indigenous
Asphodelaceae	*Trachyandra asperata var. macowanii*	Kunth	LC	Indigenous
Asphodelaceae	*Aristaloe aristata*	(Haw.) Boatwr. & J.C.Manning	LC	Indigenous
Asphodelaceae	*Aloe grandidentata*	Salm-Dyck	LC	Indigenous
Asphodelaceae	*Trachyandra asperata var. asperata*	Kunth	LC	Indigenous
Asphodelaceae	*Bulbine frutescens*	(L.) Willd.	LC	Indigenous
Asphodelaceae	*Kniphofia ritualis*	Codd	LC	Indigenous
Asphodelaceae	*Bulbine narcissifolia*	Salm-Dyck	LC	Indigenous
Aspleniaceae	*Asplenium aethiopicum*	(Burm.f.) Bech.	LC	Indigenous
Aspleniaceae	*Asplenium adiantum-nigrum var. adiantum-nigrum*	L.	LC	Indigenous
Aspleniaceae	*Asplenium trichomanes subsp. quadrivalens*	L.	LC	Indigenous
Asteraceae	*Oedera humilis*	(Less.) N.G.Bergh		Indigenous
Asteraceae	*Xanthium strumarium*	L.		Not indigenous; Naturalised; Invasive
Asteraceae	*Tagetes minuta*	L.		Not indigenous; Naturalised; Invasive
Asteraceae	*Cirsium vulgare*	(Savi) Ten.		Not indigenous; Naturalised; Invasive
Asteraceae	*Sonchus asper subsp. asper*	(L.) Hill		Not indigenous; Naturalised; Invasive
Asteraceae	*Artemisia afra*	Jacq. ex Willd.		Indigenous
Asteraceae	*Arctotis sp.*			
Asteraceae	*Seriphium plumosum*	L.		Indigenous
Asteraceae	*Felicia sp.*			
Asteraceae	*Symphyotrichum squamatum*	(Spreng.) G.L.Nesom		Not indigenous; Naturalised
Asteraceae	*Hilliardiella elaeagnoides*	(DC.) Swelank. & J.C.Manning		Indigenous
Asteraceae	*Hilliardiella capensis*	(Houtt.) H.Rob., Skvarla & V.A.Funk		Indigenous
Asteraceae	*Senecio sp.*			
Asteraceae	*Conyza podocephala*	DC.		Indigenous
Asteraceae	*Helichrysum odoratissimum var. odoratissimum*	(L.) Sweet		Indigenous
Asteraceae	*Gerbera piloselloides*	(L.) Cass.	LC	Indigenous
Asteraceae	*Nidorella anomala*	Steetz	LC	Indigenous
Asteraceae	*Garuleum pinnatifidum*	(Thunb.) DC.	LC	Indigenous; Endemic

Asteraceae	*Berkheya onopordifolia var. onopordifolia*	(DC.) O.Hoffm. ex Burtt Davy	LC	Indigenous
Asteraceae	*Denekia capensis*	Thunb.	LC	Indigenous
Asteraceae	*Eriocephalus tenuifolius*	DC.	LC	Indigenous
Asteraceae	*Helichrysum nudifolium var. pilosellum*	(L.) Less.	LC	Indigenous
Asteraceae	*Gazania krebsiana subsp. serrulata*	Less.	LC	Indigenous
Asteraceae	*Berkheya pinnatifida subsp. pinnatifida*	(Thunb.) Thell.	LC	Indigenous; Endemic
Asteraceae	*Helichrysum rugulosum*	Less.	LC	Indigenous
Asteraceae	*Pegolettia retrofracta*	(Thunb.) Kies	LC	Indigenous
Asteraceae	*Senecio hieracioides*	DC.	LC	Indigenous
Asteraceae	*Felicia muricata subsp. muricata*	(Thunb.) Nees	LC	Indigenous
Asteraceae	*Osteospermum moniliferum subsp. canescens*	L.	LC	Indigenous
Asteraceae	*Felicia petiolata*	(Harv.) N.E.Br.	LC	Indigenous
Asteraceae	*Helichrysum nudifolium var. nudifolium*	(L.) Less.	LC	Indigenous
Asteraceae	*Helichrysum dregeanum*	Sond. & Harv.	LC	Indigenous
Asteraceae	*Senecio polyodon var. polyodon*	DC.	LC	Indigenous
Asteraceae	*Senecio laevigatus var. integrifolius*	Thunb.	LC	Indigenous; Endemic
Asteraceae	*Berkheya discolor*	(DC.) O.Hoffm. & Muschl.	LC	Indigenous
Asteraceae	*Sonchus dregeanus*	DC.	LC	Indigenous
Asteraceae	*Senecio achilleifolius*	DC.	LC	Indigenous
Asteraceae	*Tolpis capensis*	(L.) Sch.Bip.	LC	Indigenous
Asteraceae	*Chrysocoma ciliata*	L.	LC	Indigenous
Asteraceae	*Hertia pallens*	(DC.) Kuntze	LC	Indigenous
Asteraceae	*Pentzia globosa*	Less.	LC	Indigenous
Asteraceae	*Helichrysum melanacme*	DC.	LC	Indigenous
Asteraceae	*Helichrysum argyrosphaerum*	DC.	LC	Indigenous
Asteraceae	*Eriocephalus eximius*	DC.	LC	Indigenous
Asteraceae	*Helichrysum zeyheri*	Less.	LC	Indigenous
Asteraceae	*Cineraria erodioides var. erodioides*	DC.	LC	Indigenous
Asteraceae	*Troglophyton capillaceum subsp. diffusum*	(Thunb.) Hilliard & B.L.Burtt	LC	Indigenous
Asteraceae	*Pseudognaphalium luteoalbum*	(L.) Hilliard & B.L.Burtt	LC	Not indigenous; Cryptogenic
Asteraceae	*Gnaphalium filagopsis*	Hilliard & B.L.Burtt	LC	Indigenous
Asteraceae	*Nolletia ciliaris*	(DC.) Steetz	LC	Indigenous
Asteraceae	*Helichrysum chionosphaerum*	DC.	LC	Indigenous
Asteraceae	*Geigeria filifolia*	Mattf.	LC	Indigenous
Asteraceae	*Schistostephium crataegifolium*	(DC.) Fenzl ex Harv.	LC	Indigenous
Asteraceae	*Pentzia cooperi*	Harv.	LC	Indigenous
Asteraceae	*Senecio cordifolius*	L.f.	LC	Indigenous; Endemic
Asteraceae	*Tarchonanthus minor*	Less.	LC	Indigenous

Asteraceae	*Senecio isatideus*	DC.	LC	Indigenous
Asteraceae	*Helichrysum aureum var. monocephalum*	(Houtt.) Merr.	NE	Indigenous
Asteraceae	*Osteospermum scariosum var. scariosum*	DC.	NE	Indigenous
Bignoniaceae	*Rhigozum obovatum*	Burch.	LC	Indigenous
Blechnaceae	*Blechnum australe subsp. australe*	L.	LC	Indigenous
Boraginaceae	*Anchusa riparia*	A.DC.	LC	Indigenous
Boraginaceae	*Ehretia rigida subsp. nervifolia*	(Thunb.) Druce	LC	Indigenous
Boraginaceae	*Cynoglossum lanceolatum*	Forssk.	LC	Indigenous
Boraginaceae	*Cynoglossum hispidum*	Thunb.	LC	Indigenous
Brassicaceae	*Erucastrum austroafricanum*	Al-Shehbaz & Warwick	LC	Indigenous
Brassicaceae	*Lepidium africanum subsp. divaricatum*	(Burm.f.) DC.	LC	Indigenous
Brassicaceae	*Sisymbrium capense*	Thunb.	LC	Indigenous
Brassicaceae	*Heliophila suavissima*	Burch. ex DC.	LC	Indigenous
Campanulaceae	*Wahlenbergia denticulata var. transvaalensis*	(Burch.) A.DC.	LC	Indigenous; Endemic
Campanulaceae	*Wahlenbergia albens*	(Spreng. ex A.DC.) Lammers	LC	Indigenous
Campanulaceae	*Wahlenbergia undulata*	(L.f.) A.DC.	LC	Indigenous
Campanulaceae	*Craterocapsa tarsodes*	Hilliard & B.L.Burtt	LC	Indigenous
Caryophyllaceae	*Silene burchellii subsp. pilosellifolia*	Otth ex DC.		Indigenous
Caryophyllaceae	*Dianthus micropetalus*	Ser.	LC	Indigenous
Commelinaceae	*Commelina africana var. lancispatha*	L.	LC	Indigenous
Commelinaceae	*Commelina africana var. krebsiana*	L.	LC	Indigenous
Convolvulaceae	*Convolvulus arvensis*	L.		Not indigenous; Naturalised; Invasive
Convolvulaceae	*Convolvulus boedeckerianus*	Peter	LC	Indigenous; Endemic
Convolvulaceae	*Ipomoea oenotheroides*	(L.f.) Raf. ex Hallier f.	LC	Indigenous
Convolvulaceae	*Convolvulus thunbergii*	Roem. & Schult.	LC	Indigenous
Convolvulaceae	*Convolvulus sagittatus*	Thunb.	LC	Indigenous
Convolvulaceae	*Ipomoea oblongata*	E.Mey. ex Choisy	LC	Indigenous
Crassulaceae	*Crassula sp.*			
Crassulaceae	*Crassula vaillantii*	(Willd.) Roth		Not indigenous; Naturalised
Crassulaceae	*Crassula natans var. natans*	Thunb.	LC	Indigenous
Crassulaceae	*Kalanchoe thyrsiflora*	Harv.	LC	Indigenous
Crassulaceae	*Cotyledon orbiculata var. oblonga*	L.	LC	Indigenous
Crassulaceae	*Crassula capitella subsp. capitella*	Thunb.	LC	Indigenous; Endemic
Crassulaceae	*Crassula dependens*	Bolus	LC	Indigenous
Crassulaceae	*Crassula nudicaulis var. nudicaulis*	L.	LC	Indigenous
Crassulaceae	*Cotyledon orbiculata var. dactylopsis*	L.	LC	Indigenous; Endemic

Cucurbitaceae	*Cucumis myriocarpus subsp. myriocarpus*	Naudin	LC	Indigenous
Cyperaceae	*Carex ludwigii*	(Hochst.) Luceno & Martin-Bravo		Indigenous
Cyperaceae	*Fuirena coerulescens*	Steud.	LC	Indigenous
Cyperaceae	*Eleocharis dregeana*	Steud.	LC	Indigenous
Cyperaceae	*Schoenoplectus muricinux*	(C.B.Clarke) J.Raynal	LC	Indigenous
Cyperaceae	*Cyperus congestus*	Vahl	LC	Indigenous
Cyperaceae	*Schoenoplectus decipiens*	(Nees) J.Raynal	LC	Indigenous
Cyperaceae	*Cyperus difformis*	L.	LC	Indigenous
Cyperaceae	*Abildgaardia ovata*	(Burm.f.) Kral	LC	Indigenous
Cyperaceae	*Cyperus esculentus var. esculentus*	L.	LC	Indigenous
Cyperaceae	*Cyperus parvinux*	C.B.Clarke	LC	Indigenous
Cyperaceae	*Kyllinga alata*	Nees	LC	Indigenous
Cyperaceae	*Cyperus obtusiflorus var. flavissimus*	Vahl	LC	Indigenous
Cyperaceae	*Cyperus marginatus*	Thunb.	LC	Indigenous
Cyperaceae	*Ficinia cinnamomea*	C.B.Clarke	LC	Indigenous
Cyperaceae	*Ficinia gracilis*	Schrad.	LC	Indigenous
Cyperaceae	*Cyperus longus var. tenuiflorus*	L.	NE	Indigenous
Dipsacaceae	*Scabiosa columbaria*	L.	LC	Indigenous
Dryopteridaceae	*Polystichum monticola*	N.C.Anthony & Schelpe	LC	Indigenous
Ebenaceae	*Diospyros austroafricana*	De Winter		Indigenous
Ebenaceae	*Diospyros lycioides subsp. lycioides*	Desf.	LC	Indigenous
Ebenaceae	*Diospyros austroafricana var. rubriflora*	De Winter	LC	Indigenous
Ebenaceae	*Diospyros austroafricana var. microphylla*	De Winter	LC	Indigenous
Ericaceae	*Erica maesta var. maesta*	Bolus	LC	Indigenous
Euphorbiaceae	*Euphorbia rhombifolia*	Boiss.	LC	Indigenous
Euphorbiaceae	*Euphorbia pulvinata*	Marloth	LC	Indigenous
Euphorbiaceae	*Acalypha segetalis*	Mull.Arg.	LC	Indigenous
Euphorbiaceae	*Euphorbia clavarioides*	Boiss.	LC	Indigenous
Fabaceae	*Rhynchosia adenodes*	Eckl. & Zeyh.	LC	Indigenous
Fabaceae	*Dichilus strictus*	E.Mey.	LC	Indigenous
Fabaceae	*Melolobium candicans*	(E.Mey.) Eckl. & Zeyh.	LC	Indigenous
Fabaceae	*Indigofera alternans var. alternans*	DC.	LC	Indigenous
Fabaceae	*Argyrolobium molle*	Eckl. & Zeyh.	LC	Indigenous; Endemic
Fabaceae	*Argyrolobium humile*	E.Phillips	LC	Indigenous; Endemic
Fabaceae	*Indigofera cryptantha var. cryptantha*	Benth. ex Harv.	LC	Indigenous
Fabaceae	*Elephantorrhiza elephantina*	(Burch.) Skeels	LC	Indigenous
Fabaceae	*Lotononis laxa*	Eckl. & Zeyh.	LC	Indigenous
Fabaceae	*Crotalaria distans subsp. distans*	Benth.	LC	Indigenous
Fabaceae	*Rhynchosia hirsuta*	Eckl. & Zeyh.	LC	Indigenous

Fabaceae	*Lessertia frutescens subsp. microphylla*	(L.) Goldblatt & J.C.Manning	LC	Indigenous
Fabaceae	*Tephrosia capensis var. angustifolia*	(Jacq.) Pers.	LC	Indigenous; Endemic
Fabaceae	*Melolobium microphyllum*	(L.f.) Eckl. & Zeyh.	LC	Indigenous
Fabaceae	*Lessertia affinis*	Burtt Davy	LC	Indigenous; Endemic
Fabaceae	*Lessertia frutescens subsp. frutescens*	(L.) Goldblatt & J.C.Manning	LC	Indigenous
Fabaceae	*Cullen tomentosum*	(Thunb.) J.W.Grimes	LC	Indigenous
Fabaceae	*Rhynchosia totta var. totta*	(Thunb.) DC.	LC	Indigenous
Fabaceae	*Lessertia depressa*	Harv.	LC	Indigenous
Fabaceae	*Indigofera nigromontana*	Eckl. & Zeyh.	LC	Indigenous
Fabaceae	*Indigastrum fastigiatum*	(E.Mey.) Schrire	LC	Indigenous
Fabaceae	*Lotononis sericophylla*	Benth.	LC	Indigenous
Fabaceae	*Erythrina zeyheri*	Harv.	LC	Indigenous
Fabaceae	*Melolobium canescens*	Benth.	LC	Indigenous
Fabaceae	*Lessertia pauciflora var. pauciflora*	Harv.	LC	Indigenous
Fabaceae	*Melolobium obcordatum*	Harv.	LC	Indigenous
Fabaceae	*Medicago laciniata var. laciniata*	(L.) Mill.	NE	Not indigenous; Naturalised
Fabaceae	*Trifolium africanum var. africanum*	Ser.	NE	Indigenous
Fabaceae	*Lotononis divaricata*	(Eckl. & Zeyh.) Benth.	NE	Indigenous
Fabaceae	*Gleditsia triacanthos*	L.	NE	Not indigenous; Naturalised; Invasive
Fabaceae	*Rhynchosia minima var. prostrata*	(L.) DC.	NE	Indigenous
Fabaceae	*Lessertia perennans var. perennans*	(Jacq.) DC.	NE	Indigenous
Gentianaceae	*Sebaea filiformis*	Schinz	LC	Indigenous
Gentianaceae	*Sebaea leiostyla*	Gilg	LC	Indigenous
Gentianaceae	*Sebaea bojeri*	Griseb.	LC	Indigenous
Gentianaceae	*Sebaea compacta*	A.W.Hill	LC	Indigenous; Endemic
Geraniaceae	*Pelargonium dolomiticum*	R.Knuth	LC	Indigenous
Geraniaceae	*Geranium robustum*	Kuntze	LC	Indigenous
Geraniaceae	*Pelargonium sidoides*	DC.	LC	Indigenous
Geraniaceae	*Pelargonium abrotanifolium*	(L.f.) Jacq.	LC	Indigenous; Endemic
Gunneraceae	*Gunnera perpensa*	L.	LC	Indigenous
Hyacinthaceae	*Drimia elata*	Jacq. ex Willd.	DD	Indigenous
Hyacinthaceae	*Massonia jasminiflora*	Burch. ex Baker	LC	Indigenous
Hyacinthaceae	*Ledebouria luteola*	Jessop	LC	Indigenous
Hyacinthaceae	*Schizocarphus nervosus*	(Burch.) Van der Merwe	LC	Indigenous
Hyacinthaceae	*Albuca virens subsp. arida*	(Ker Gawl.) J.C.Manning & Goldblatt	LC	Indigenous
Hydrocharitaceae	*Lagarosiphon muscoides*	Harv.	LC	Indigenous
Hypericaceae	*Hypericum wilmsii*	R.Keller	LC	Indigenous
Hypodontiaceae	*Hypodontium dregei*	(Hornsch.) Mull.Hal.		Indigenous

Hypoxidaceae	*Hypoxis angustifolia var. angustifolia*	Lam.	LC	Indigenous
Hypoxidaceae	*Hypoxis argentea var. argentea*	Harv. ex Baker	LC	Indigenous
Hypoxidaceae	*Hypoxis rigidula var. rigidula*	Baker	LC	Indigenous
Hypoxidaceae	*Hypoxis argentea var. sericea*	Harv. ex Baker	LC	Indigenous
Hypoxidaceae	*Hypoxis hemerocallidea*	Fisch., C.A.Mey. & Ave-Lall.	LC	Indigenous
Iridaceae	*Dierama sp.*			
Iridaceae	*Crocosmia aurea subsp. aurea*	(Pappe ex Hook.) Planch.	LC	Indigenous
Iridaceae	*Gladiolus permeabilis subsp. edulis*	D.Delaroche	LC	Indigenous
Iridaceae	*Dierama robustum*	N.E.Br.	LC	Indigenous
Iridaceae	*Moraea simulans*	Baker	LC	Indigenous
Iridaceae	*Aristea abyssinica*	Pax	LC	Indigenous
Juncaceae	*Juncus exsertus*	Buchenau	LC	Indigenous
Juncaceae	*Juncus punctorius*	L.f.	LC	Indigenous
Juncaceae	*Juncus inflexus*	L.	LC	Indigenous
Juncaceae	*Juncus oxycarpus*	E.Mey. ex Kunth	LC	Indigenous
Juncaceae	*Juncus rigidus*	Desf.	LC	Indigenous
Lamiaceae	*Salvia repens var. repens*	Burch. ex Benth.	LC	Indigenous
Lamiaceae	*Salvia verbenaca*	L.	LC	Not indigenous; Naturalised; Invasive
Lamiaceae	*Ajuga ophrydis*	Burch. ex Benth.	LC	Indigenous
Lamiaceae	*Stachys hyssopoides*	Burch. ex Benth.	LC	Indigenous
Lamiaceae	*Acrotome inflata*	Benth.	LC	Indigenous
Lamiaceae	*Teucrium trifidum*	Retz.	LC	Indigenous
Lamiaceae	*Stachys aethiopica*	L.	LC	Indigenous
Linaceae	*Linum thunbergii*	Eckl. & Zeyh.	LC	Indigenous
Lobeliaceae	*Lobelia erinus*	L.	LC	Indigenous
Lobeliaceae	*Cyphia triphylla*	E.Phillips	LC	Indigenous
Malvaceae	*Malva pusilla*	Sm.		Not indigenous; Naturalised
Malvaceae	*Sphaeralcea bonariensis*	(Cav.) Griseb.		Not indigenous; Naturalised
Malvaceae	*Malva verticillata var. verticillata*	L.		Not indigenous; Naturalised
Malvaceae	*Grewia occidentalis*	L.		Indigenous
Malvaceae	*Hermannia sp.*			
Malvaceae	*Sida dregei*	Burtt Davy	LC	Indigenous
Malvaceae	*Hermannia cordata*	(E.Mey. ex E.Phillips) De Winter	LC	Indigenous; Endemic
Malvaceae	*Hibiscus pusillus*	Thunb.	LC	Indigenous
Malvaceae	*Hibiscus aethiopicus var. ovatus*	L.	LC	Indigenous
Malvaceae	*Anisodontea julii subsp. julii*	(Burch. ex DC.) D.M.Bates	LC	Indigenous
Malvaceae	*Grewia occidentalis var. occidentalis*	L.	LC	Indigenous
Malvaceae	*Pavonia burchellii*	(DC.) R.A.Dyer	LC	Indigenous
Malvaceae	*Hermannia depressa*	N.E.Br.	LC	Indigenous

Malvaceae	*Hermannia geniculata*	Eckl. & Zeyh.	LC	Indigenous
Malvaceae	*Hermannia oblongifolia*	(Harv.) Hochr.	LC	Indigenous; Endemic
Molluginaceae	*Pharnaceum detonsum*	Fenzl	LC	Indigenous
Molluginaceae	*Psammotropha mucronata var. mucronata*	(Thunb.) Fenzl	LC	Indigenous
Oleaceae	*Olea europaea subsp. cuspidata*	L.		Indigenous
Oleaceae	*Menodora africana*	Hook.	LC	Indigenous
Onagraceae	*Oenothera rosea*	L'Her. ex Aiton		Not indigenous; Naturalised; Invasive
Onagraceae	*Epilobium capense*	Buchinger ex Hochst.	LC	Indigenous
Orobanchaceae	*Harveya pauciflora*	(Benth.) Hiern	LC	Indigenous
Orobanchaceae	*Striga elegans*	Benth.	LC	Indigenous
Orobanchaceae	*Striga bilabiata subsp. bilabiata*	(Thunb.) Kuntze	LC	Indigenous
Oxalidaceae	*Oxalis sp.*			
Oxalidaceae	*Oxalis smithiana*	Eckl. & Zeyh.	LC	Indigenous
Oxalidaceae	*Oxalis depressa*	Eckl. & Zeyh.	LC	Indigenous
Peraceae	*Clutia pulchella var. pulchella*	L.	LC	Indigenous
Phyllanthaceae	*Phyllanthus parvulus var. parvulus*	Sond.	LC	Indigenous
Plantaginaceae	*Veronica anagallis-aquatica*	L.	LC	Indigenous
Poaceae	*Bromus sp.*			
Poaceae	*Trisetopsis imberbis*	(Nees) Roser, A.Wolk & Veldkamp		Indigenous
Poaceae	*Setaria sp.*			
Poaceae	*Aristida adscensionis*	L.	LC	Indigenous
Poaceae	*Eragrostis nindensis*	Ficalho & Hiern	LC	Indigenous
Poaceae	*Triraphis andropogonoides*	(Steud.) E.Phillips	LC	Indigenous
Poaceae	*Festuca scabra*	Vahl	LC	Indigenous
Poaceae	*Eustachys paspaloides*	(Vahl) Lanza & Mattei	LC	Indigenous
Poaceae	*Setaria incrassata*	(Hochst.) Hack.	LC	Indigenous
Poaceae	*Oropetium capense*	Stapf	LC	Indigenous
Poaceae	*Digitaria argyrograpta*	(Nees) Stapf	LC	Indigenous
Poaceae	*Enneapogon scoparius*	Stapf	LC	Indigenous
Poaceae	*Andropogon schirensis*	Hochst. ex A.Rich.	LC	Indigenous
Poaceae	*Panicum maximum*	Jacq.	LC	Indigenous
Poaceae	*Hyparrhenia hirta*	(L.) Stapf	LC	Indigenous
Poaceae	*Eragrostis capensis*	(Thunb.) Trin.	LC	Indigenous
Poaceae	*Eragrostis racemosa*	(Thunb.) Steud.	LC	Indigenous
Poaceae	*Eragrostis stapfii*	De Winter	LC	Indigenous
Poaceae	*Hordeum capense*	Thunb.	LC	Indigenous
Poaceae	*Melica decumbens*	Thunb.	LC	Indigenous
Poaceae	*Koeleria capensis*	(Steud.) Nees	LC	Indigenous

Poaceae	*Stipagrostis zeyheri subsp. sericans*	(Nees) De Winter	LC	Indigenous
Poaceae	*Cynodon dactylon*	(L.) Pers.	LC	Indigenous
Poaceae	*Microchloa kunthii*	Desv.	LC	Indigenous
Poaceae	*Tragus koelerioides*	Asch.	LC	Indigenous
Poaceae	*Aristida congesta subsp. congesta*	Roem. & Schult.	LC	Indigenous
Poaceae	*Setaria verticillata*	(L.) P.Beauv.	LC	Indigenous
Poaceae	*Melica racemosa*	Thunb.	LC	Indigenous
Poaceae	*Eragrostis curvula*	(Schrad.) Nees	LC	Indigenous
Poaceae	*Cymbopogon dieterlenii*	Stapf ex E.Phillips	LC	Indigenous
Poaceae	*Digitaria tricholaenoides*	Stapf	LC	Indigenous
Poaceae	*Melinis repens subsp. repens*	(Willd.) Zizka	LC	Indigenous
Poaceae	*Eragrostis planiculmis*	Nees	LC	Indigenous
Poaceae	*Microchloa caffra*	Nees	LC	Indigenous
Poaceae	*Sporobolus fimbriatus*	(Trin.) Nees	LC	Indigenous
Poaceae	*Eragrostis gummiflua*	Nees	LC	Indigenous
Poaceae	*Tetrachne dregei*	Nees	LC	Indigenous
Poaceae	*Setaria sphacelata var. torta*	(Schumach.) Stapf & C.E.Hubb. ex M.B.Moss	LC	Indigenous
Poaceae	*Urochloa panicoides*	P.Beauv.	LC	Indigenous
Poaceae	*Setaria sphacelata var. sphacelata*	(Schumach.) Stapf & C.E.Hubb. ex M.B.Moss	LC	Indigenous
Poaceae	*Andropogon appendiculatus*	Nees	LC	Indigenous
Poaceae	*Sporobolus discosporus*	Nees	LC	Indigenous
Poaceae	*Panicum coloratum*	L.	LC	Indigenous
Poaceae	*Heteropogon contortus*	(L.) Roem. & Schult.	LC	Indigenous
Poaceae	*Aristida bipartita*	(Nees) Trin. & Rupr.	LC	Indigenous
Poaceae	*Aristida canescens subsp. canescens*	Henrard	LC	Indigenous
Poaceae	*Elionurus muticus*	(Spreng.) Kunth	LC	Indigenous
Poaceae	*Eragrostis micrantha*	Hack.	LC	Indigenous
Poaceae	*Phragmites australis*	(Cav.) Steud.	LC	Indigenous
Poaceae	*Eragrostis plana*	Nees	LC	Indigenous
Poaceae	*Chloris virgata*	Sw.	LC	Indigenous
Poaceae	*Eragrostis obtusa*	Munro ex Ficalho & Hiern	LC	Indigenous
Poaceae	*Eragrostis echinochloidea*	Stapf	LC	Indigenous
Poaceae	*Hyparrhenia dregeana*	(Nees) Stapf ex Stent	LC	Indigenous
Poaceae	*Digitaria eriantha*	Steud.	LC	Indigenous
Poaceae	*Eragrostis cilianensis*	(All.) Vignolo ex Janch.	LC	Indigenous
Poaceae	*Eragrostis trichophora*	Coss. & Durieu	LC	Indigenous
Poaceae	*Agrostis lachnantha var. lachnantha*	Nees	LC	Indigenous
Poaceae	*Setaria nigrirostris*	(Nees) T.Durand & Schinz	LC	Indigenous
Poaceae	*Digitaria sanguinalis*	(L.) Scop.	NE	Not indigenous; Naturalised

Poaceae	*Paspalum dilatatum*	Poir.	NE	Not indigenous; Naturalised; Invasive
Poaceae	*Eragrostis tef*	(Zuccagni) Trotter	NE	Not indigenous; Naturalised
Poaceae	*Bromus catharticus*	Vahl	NE	Not indigenous; Naturalised; Invasive
Polygalaceae	*Polygala hottentotta*	C.Presl	LC	Indigenous
Polygalaceae	*Polygala gymnoclada*	MacOwan	LC	Indigenous
Polygalaceae	*Polygala gracilenta*	Burtt Davy	LC	Indigenous
Polygalaceae	*Polygala ephedroides*	Burch.	LC	Indigenous
Polygonaceae	*Fallopia convolvulus*	(L.) Holub		Not indigenous; Naturalised
Polygonaceae	*Persicaria hystricula*	(J.Schust.) Sojak	LC	Indigenous
Polygonaceae	*Rumex lanceolatus*	Thunb.	LC	Indigenous
Polypodiaceae	*Pleopeltis macrocarpa*	(Bory ex Willd.) Kaulf.	LC	Indigenous
Pottiaceae	*Pseudocrossidium crinitum*	(Schultz) R.H.Zander		Indigenous
Pteridaceae	*Pteris cretica*	L.	LC	Indigenous
Pteridaceae	*Cheilanthes quadripinnata*	(Forssk.) Kuhn	LC	Indigenous
Ranunculaceae	*Ranunculus trichophyllus*	Chaix	LC	Indigenous
Ranunculaceae	*Ranunculus multifidus*	Forssk.	LC	Indigenous
Ranunculaceae	*Thalictrum minus*	L.	LC	Indigenous
Rhamnaceae	*Rhamnus prinoides*	L'Her.	LC	Indigenous
Rhamnaceae	*Ziziphus mucronata subsp. mucronata*	Willd.	LC	Indigenous
Rosaceae	*Rubus ludwigii subsp. ludwigii*	Eckl. & Zeyh.	LC	Indigenous
Rosaceae	*Cliffortia serpyllifolia*	Cham. & Schltdl.	LC	Indigenous
Rosaceae	*Leucosidea sericea*	Eckl. & Zeyh.	LC	Indigenous
Rosaceae	*Rubus rigidus*	Sm.	LC	Indigenous
Rosaceae	*Alchemilla elongata var. elongata*	Eckl. & Zeyh.	NE	Indigenous
Rubiaceae	*Anthospermum rigidum subsp. rigidum*	Eckl. & Zeyh.	LC	Indigenous
Rubiaceae	*Galium capense subsp. capense*	Thunb.	LC	Indigenous
Rubiaceae	*Galium thunbergianum var. thunbergianum*	Eckl. & Zeyh.	LC	Indigenous
Rubiaceae	*Rubia cordifolia subsp. conotricha*	L.	LC	Indigenous
Rubiaceae	*Anthospermum herbaceum*	L.f.	LC	Indigenous
Rubiaceae	*Galium capense subsp. garipense*	Thunb.	NE	Indigenous
Salviniaceae	*Azolla filiculoides*	Lam.	NE	Not indigenous; Naturalised; Invasive
Santalaceae	*Thesium lobelioides*	A.DC.	LC	Indigenous; Endemic
Santalaceae	*Osyris lanceolata*	Hochst. & Steud.	LC	Indigenous
Santalaceae	*Viscum rotundifolium*	L.f.	LC	Indigenous
Scrophulariaceae	*Nemesia sp.*			
Scrophulariaceae	*Jamesbrittenia sp.*			
Scrophulariaceae	*Diascia capsularis*	Benth.	LC	Indigenous

Scrophulariaceae	*Chaenostoma patrioticum*	(Hiern) Kornhall	LC	Indigenous
Scrophulariaceae	*Jamesbrittenia atropurpurea subsp. atropurpurea*	(Benth.) Hilliard	LC	Indigenous
Scrophulariaceae	*Buddleja saligna*	Willd.	LC	Indigenous
Scrophulariaceae	*Zaluzianskya schmitziae*	Hilliard & B.L.Burtt	LC	Indigenous
Scrophulariaceae	*Jamesbrittenia stricta*	(Benth.) Hilliard	LC	Indigenous
Scrophulariaceae	*Hebenstretia dura*	Choisy	LC	Indigenous
Scrophulariaceae	*Gomphostigma virgatum*	(L.f.) Baill.	LC	Indigenous
Scrophulariaceae	*Selago saxatilis*	E.Mey.	LC	Indigenous
Scrophulariaceae	*Jamesbrittenia filicaulis*	(Benth.) Hilliard	LC	Indigenous
Scrophulariaceae	*Chaenostoma halimifolium*	Benth.	LC	Indigenous
Scrophulariaceae	*Selago albida*	Choisy	LC	Indigenous
Scrophulariaceae	*Buddleja salviifolia*	(L.) Lam.	LC	Indigenous
Scrophulariaceae	*Nemesia rupicola*	Hilliard	LC	Indigenous
Scrophulariaceae	*Limosella inflata*	Hilliard & B.L.Burtt	LC	Indigenous
Selaginellaceae	*Selaginella dregei*	(C.Presl) Hieron.	LC	Indigenous
Solanaceae	*Solanum elaeagnifolium*	Cav.		Not indigenous; Naturalised; Invasive
Solanaceae	*Solanum nigrum*	L.		Not indigenous; Naturalised
Solanaceae	*Solanum pseudocapsicum*	L.		Not indigenous; Naturalised; Invasive
Solanaceae	*Solanum lichtensteinii*	Willd.	LC	Indigenous
Solanaceae	*Lycium hirsutum*	Dunal	LC	Indigenous
Solanaceae	*Solanum retroflexum*	Dunal	LC	Indigenous
Solanaceae	*Lycium cinereum*	Thunb.	LC	Indigenous
Stilbaceae	*Halleria lucida*	L.	LC	Indigenous
Thymelaeaceae	*Lasiosiphon kraussianus var. kraussianus*	(Meisn.) Meisn.		Indigenous
Thymelaeaceae	*Gnidia wikstroemiana*	Meisn.	LC	Indigenous; Endemic
Thymelaeaceae	*Lasiosiphon polycephalus*	(E.Mey. ex Meisn.) H.Pearson	LC	Indigenous
Thymelaeaceae	*Lasiosiphon capitatus*	(L.f.) Burtt Davy	LC	Indigenous
Thymelaeaceae	*Gnidia gymnostachya*	(C.A.Mey.) Gilg	LC	Indigenous
Thymelaeaceae	*Passerina montana*	Thoday	LC	Indigenous
Vahliaceae	*Vahlia sp.*			
Verbenaceae	*Verbena bonariensis*	L.		Not indigenous; Naturalised; Invasive
Verbenaceae	*Lantana rugosa*	Thunb.	LC	Indigenous
Vitaceae	*Rhoicissus tridentata subsp. cuneifolia*	(L.f.) Wild & R.B.Drumm.	NE	Indigenous

9.2 Appendix B – Amphibian species expected to occur in the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2021)
Amietia delalandii	Delalande's River Frog	LC	Unlisted
Amietia fuscigula	Common River Frog	LC	LC
Cacosternum boettgeri	Common Caco	LC	LC
Kassina senegalensis	Bubbling Kassina	LC	LC
Phrynobatrachus natalensis	Snoring Puddle Frog	LC	LC
Poyntonophrynus vertebralis	Southern Pygmy Toad	LC	LC
Pyxicephalus adspersus	Giant Bullfrog	NT	LC
Sclerophrys capensis	Raucous Toad	LC	LC
Sclerophrys gutturalis	Guttural Toad	LC	LC
Sclerophrys poweri	Power's Toad	LC	LC
Semnodactylus wealii	Rattling Frog	LC	LC
Strongylopus grayii	Clicking Stream Frog	LC	LC
Tomopterna cryptotis	Tremelo Sand Frog	LC	LC
Tomopterna tandyi	Tandy's Sand Frog	LC	LC
Vandijkophrynus gariepensis	Karoo toad	LC	LC
Vandijkophrynus gariepensis gariepensis	Karoo Toad	Not listed	Not listed
Xenopus laevis	Common Platanna	LC	LC

9.3 Appendix C – Reptile species expected to occur in the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2021)
Acontias gracilicauda	Thin-tailed Legless Skink	LC	LC
Afroedura nivaria	Drankensberg Flat Gecko	LC	LC
Agama aculeata distanti	Eastern Ground Agama	LC	LC
Agama atra	Southern Rock Agama	LC	LC
Aparallactus capensis	Black-headed Centipede-eater	LC	LC
Atractaspis bibronii	Bibron's Stiletto Snake	LC	Unlisted
Bitis arietans arietans	Puff Adder	LC	Unlisted
Boaedon capensis	Brown House Snake	LC	LC
Chamaeleo dilepis	Common Flap-neck Chameleon	LC	LC
Chondrodactylus bibronii	Bibron's Gecko	LC	Unlisted
Crotaphopeltis hotamboeia	Red-lipped Snake	LC	Unlisted
Dasypeltis scabra	Rhombic Egg-eater	LC	LC
Duberria lutrix	Common Slug-eater	LC	LC
Elapsoidea sundevallii	Sundevall's Garter Snake	LC	Unlisted
Gerrhosaurus flavigularis	Yellow-throated Plated Lizard	LC	Unlisted
Hemachatus haemachatus	Rinkhals	LC	LC
Homopus femoralis	Greater Dwarf Tortoise	LC	LC
Homoroselaps dorsalis	Striped Harlequin Snake	NT	LC
Karusasaurus polyzonus	Southern Karusa Lizard	LC	LC
Lamprophis aurora	Aurora House Snake	LC	LC
Lamprophis guttatus	Spotted Rock Snake	LC	LC
Leptotyphlops scutifrons	Peters' Thread Snake	LC	Unlisted
Lycodonomorphus rufulus	Brown Water Snake	LC	Unlisted
Lycophidion capense capense	Cape Wolf Snake	LC	Unlisted
Lygodactylus capensis	Cape dwarf gecko	LC	LC
Monopeltis capensis	Cape Worm Lizard	LC	LC
Naja nivea	Cape Cobra	LC	Unlisted
Nucras holubi	Holub's Sandveld Lizard	LC	Unlisted
Pachydactylus capensis	Cape Gecko	LC	Unlisted
Pachydactylus mariquensis	Common Banded Gecko	LC	LC
Panaspis wahlbergii	Wahlberg's Snake-eyed Skink	LC	Unlisted
Pedioplanis lineoocellata lineoocellata	Spotted Sand Lizard	LC	Unlisted
Pelomedusa galeata	South African Marsh Terrapin	Not evaluated	Unlisted
Prosymna sundevallii	Sundevall's Shovel-snout	LC	LC
Psammobates oculifer	Serrated Tent Tortoise	LC	Unlisted
Psammophis crucifer	Cross-marked Grass Snake	LC	LC

Psammophis notostictus	Karoo Sand Snake	LC	Unlisted
Psammophis trinasalis	Fork-marked Sand Snake	LC	Unlisted
Psammophylax rhombeatus	Spotted Grass Snake	LC	Unlisted
Psammophylax tritaeniatus	Striped Grass Snake	LC	LC
Pseudaspis cana	Mole Snake	LC	Unlisted
Pseudocordylus melanotus melanotus	Common Crag Lizard	LC	LC
Rhinotyphlops lalandei	Delalande's Beaked Blind Snake	LC	Unlisted
Stigmochelys pardalis	Leopard Tortoise	LC	LC
Trachylepis capensis	Cape Skink	LC	Unlisted
Trachylepis punctatissima	Speckled Rock Skink	LC	LC
Trachylepis punctulata	Speckled Sand Skink	LC	Unlisted
Trachylepis varia	Variable Skink	LC	LC
Varanus albigularis albigularis	Southern Rock Monitor	LC	Unlisted
Varanus niloticus	Water Monitor	LC	Unlisted
Xenocalamus bicolor bicolor	Bicoloured Quill-snouted Snake	LC	Unlisted

9.4 Appendix D – Mammal species expected to occur within the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2021)
Aethomys ineptus	Tete Veld Rat	LC	LC
Aethomys namaquensis	Namaqua rock rat	LC	LC
Aonyx capensis	Cape Clawless Otter	NT	NT
Atelerix frontalis	South Africa Hedgehog	NT	LC
Atilax paludinosus	Water Mongoose	LC	LC
Canis mesomelas	Black-backed Jackal	LC	LC
Caracal caracal	Caracal	LC	LC
Crocidura cyanea	Reddish-grey Musk Shrew	LC	LC
Crocidura fuscomurina	Tiny Musk Shrew	LC	LC
Cryptomys hottentotus	Common Mole-rat	LC	LC
Cynictis penicillata	Yellow Mongoose	LC	LC
Desmodillus auricularis	Short-tailed Gerbil	LC	LC
Eidolon helvum	African Straw-colored Fruit Bat	LC	NT
Elephantulus myurus	Eastern Rock Sengi	LC	LC
Eptesicus hottentotus	Long-tailed Serotine Bat	LC	LC
Felis nigripes	Black-footed Cat	VU	VU
Felis silvestris	African Wildcat	LC	LC
Genetta genetta	Small-spotted Genet	LC	LC
Gerbilliscus brantsii	Highveld Gerbil	LC	LC
Gerbilliscus leucogaster	Bushveld Gerbil	LC	LC
Herpestes pulverulentus	Cape Grey Mongoose	LC	LC
Herpestes sanguineus	Slender Mongoose	LC	LC
Hydrictis maculicollis	Spotted-necked Otter	VU	NT
Hystrix africaeaustralis	Cape Porcupine	LC	LC
Ichneumia albicauda	White-tailed Mongoose	LC	LC
Ictonyx striatus	Striped Polecat	LC	LC
Leptailurus serval	Serval	NT	LC
Lepus capensis	Cape Hare	LC	LC
Lepus saxatilis	Scrub Hare	LC	LC
Lepus victoriae	African Savanna Hare	LC	LC
Malacothrix typica	Gerbil Mouse	LC	LC
Mastomys coucha	Multimammate Mouse	LC	LC
Mellivora capensis	Honey Badger	LC	LC
Mus musculus	House Mouse	Unlisted	LC
Mus orangiae	Free State Pygmy Mouse	NE	Unlisted
Myotis welwitschii	Welwitsch's Hairy Bat	LC	LC

Mystromys albicaudatus	White-tailed Rat	VU	EN
Neoromicia capensis	Cape Serotine Bat	LC	LC
Neoromicia zuluensis	Aloe Bat	LC	LC
Orycteropus afer	Aardvark	LC	LC
Otocyon megalotis	Bat-eared Fox	LC	LC
Otomys irroratus	Vlei Rat (Fynbos type)	LC	LC
Otomys saundersiae	Saunder's vlei rat	LC	LC
Panthera pardus	Leopard	VU	VU
Papio ursinus	Chacma Baboon	LC	LC
Parahyaena brunnea	Brown Hyaena	NT	NT
Pedetes capensis	Springhare	LC	LC
Phacochoerus africanus	Common Warthog	LC	LC
Poecilogale albinucha	African Striped Weasel	NT	LC
Procavia capensis	Rock Hyrax	LC	LC
Pronolagus rupestris	Smith's Red Rock Hare	LC	LC
Pronolagus saundersiae	Natal Red Rock Rabbit	LC	LC
Proteles cristata	Aardwolf	LC	LC
Raphicerus campestris	Steenbok	LC	LC
Rattus rattus	House Rat	Exotic (Not listed)	LC
Redunca fulvorufula	Mountain Reedbuck	EN	LC
Rhabdomys pumilio	Xeric Four-striped Mouse	LC	LC
Rhinolophus clivosus	Geoffroy's Horseshoe Bat	LC	LC
Rhinolophus darlingi	Darling's Horseshoe Bat	LC	LC
Scotophilus dinganii	Yellow House Bat	LC	LC
Suncus varilla	Lesser Dwarf Shrew	LC	LC
Suricata suricatta	Suricate	LC	LC
Tadarida aegyptiaca	Egyptian Free-tailed Bat	LC	LC
Vulpes chama	Cape Fox	LC	LC
Xerus inauris	Cape Ground Squirrel	LC	LC

9.5 Appendix E -Avifauna Species expected to occur within the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2021)
Acrocephalus baeticatus	Reed-warbler, African	Unlisted	Unlisted
Acrocephalus gracilirostris	Swamp-warbler, Lesser	Unlisted	LC
Actitis hypoleucos	Sandpiper, Common	Unlisted	LC
Afrotis afraoides	Korhaan, Northern Black	Unlisted	LC
Alopochen aegyptiaca	Goose, Egyptian	LC	LC
Amadina erythrocephala	Finch, Red-headed	Unlisted	LC
Anas erythrorhyncha	Teal, Red-billed	Unlisted	LC
Anas sparsa	Duck, African Black	Unlisted	LC
Anas undulata	Duck, Yellow-billed	Unlisted	LC
Anhinga rufa	Darter, African	Unlisted	LC
Anthus cinnamomeus	Pipit, African	Unlisted	LC
Anthus nicholsoni	Nicholson's pipit	Unlisted	Unlisted
Apus affinis	Swift, Little	Unlisted	LC
Apus caffer	Swift, White-rumped	Unlisted	LC
Ardea alba	Egret, Great	Unlisted	LC
Ardea cinerea	Heron, Grey	Unlisted	LC
Ardea melanocephala	Heron, Black-headed	Unlisted	LC
Bostrychia hagedash	Ibis, Hadeda	Unlisted	LC
Bubulcus ibis	Egret, Cattle	Unlisted	LC
Burhinus capensis	Thick-knee, Spotted	Unlisted	LC
Buteo buteo	Buzzard, Common (Steppe)	Unlisted	LC
Calandrella cinerea	Lark, Red-capped	Unlisted	LC
Calidris pugnax	Ruff	Unlisted	LC
Cecropis cucullata	Swallow, Greater Striped	Unlisted	LC
Cecropis semirufa	Swallow, Red-breasted	Unlisted	LC
Cercotrichas coryphoeus	Scrub-robin, Karoo	Unlisted	LC
Cercotrichas paena	Scrub-robin, Kalahari	Unlisted	LC
Charadrius pecuarius	Plover, Kittlitz's	Unlisted	LC
Charadrius tricollaris	Plover, Three-banded	Unlisted	LC
Chersomanes albofasciata	Lark, Spike-heeled	Unlisted	LC
Chrysococcyx caprius	Cuckoo, Diderick	Unlisted	LC
Cinnyris talatala	Sunbird, White-bellied	Unlisted	LC
Cisticola aridulus	Cisticola, Desert	Unlisted	LC
Cisticola fulvicapilla	Neddicky, Neddicky	Unlisted	LC
Cisticola juncidis	Cisticola, Zitting	Unlisted	LC
Cisticola textrix	Cisticola, Cloud	Unlisted	LC

Cisticola tinniens	Cisticola, Levaillant's	Unlisted	LC
Colius colius	Mousebird, White-backed	Unlisted	LC
Colius striatus	Mousebird, Speckled	Unlisted	LC
Columba guinea	Pigeon, Speckled	Unlisted	LC
Corvus albus	Crow, Pied	Unlisted	LC
Cossypha caffra	Robin-chat, Cape	Unlisted	LC
Coturnix coturnix	Quail, Common	Unlisted	LC
Creatophora cinerea	Starling, Wattled	Unlisted	LC
Crithagra atrogularis	Canary, Black-throated	Unlisted	LC
Crithagra flaviventris	Canary, Yellow	Unlisted	LC
Curruca subcoerulea	Tit-babbler, Chestnut-vented	Unlisted	Unlisted
Dendrocygna viduata	Duck, White-faced Whistling	Unlisted	LC
Egretta garzetta	Egret, Little	Unlisted	LC
Elanus caeruleus	Kite, Black-shouldered	Unlisted	LC
Emberiza capensis	Bunting, Cape	Unlisted	LC
Emberiza tahapisi	Bunting, Cinnamon-breasted	Unlisted	LC
Eremopterix leucotis	Sparrowlark, Chestnut-backed	Unlisted	LC
Estrilda astrild	Waxbill, Common	Unlisted	LC
Euplectes afer	Bishop, Yellow-crowned	Unlisted	LC
Euplectes orix	Bishop, Southern Red	Unlisted	LC
Euplectes progne	Widowbird, Long-tailed	Unlisted	LC
Falco naumanni	Kestrel, Lesser	Unlisted	LC
Falco rupicoloides	Kestrel, Greater	Unlisted	LC
Falco rupicolus	Kestrel, Rock	Unlisted	LC
Fulica cristata	Coot, Red-knobbed	Unlisted	LC
Gallinula chloropus	Moorhen, Common	Unlisted	LC
Haliaeetus vocifer	Fish-eagle, African	Unlisted	LC
Himantopus himantopus	Stilt, Black-winged	Unlisted	LC
Hirundo albigularis	Swallow, White-throated	Unlisted	LC
Hirundo rustica	Swallow, Barn	Unlisted	LC
Indicator indicator	Honeyguide, Greater	Unlisted	LC
Jynx ruficollis	Wryneck, Red-throated	Unlisted	LC
Lamprotornis bicolor	Starling, Pied	Unlisted	LC
Lamprotornis nitens	Starling, Cape Glossy	Unlisted	LC
Lanius collaris	Fiscal, Common (Southern)	Unlisted	LC
Macronyx capensis	Longclaw, Cape	Unlisted	LC
Melaenornis silens	Flycatcher, Fiscal	Unlisted	LC
Melaniparus cinerascens	Tit, Ashy	Unlisted	LC
Melierax canorus	Goshawk, Southern Pale Chanting	Unlisted	LC

Merops apiaster	Bee-eater, European	Unlisted	LC
Merops bullockoides	Bee-eater, White-fronted	Unlisted	LC
Microcarbo africanus	Cormorant, Reed	Unlisted	LC
Mirafra africana	Lark, Rufous-naped	Unlisted	LC
Mirafra fasciolata	Lark, Eastern Clapper	Unlisted	LC
Motacilla capensis	Wagtail, Cape	Unlisted	LC
Myrmecocichla formicivora	Chat, Anteating	Unlisted	LC
Numida meleagris	Guineafowl, Helmeted	Unlisted	LC
Oena capensis	Dove, Namaqua	Unlisted	LC
Oenanthe familiaris	Chat, Familiar	Unlisted	LC
Ortygospiza atricollis	Quailfinch, African	Unlisted	LC
Passer diffusus	Sparrow, Southern Grey-headed	Unlisted	LC
Passer domesticus	Sparrow, House	Unlisted	LC
Passer melanurus	Sparrow, Cape	Unlisted	LC
Petrochelidon spilodera	Cliff-swallow, South African	Unlisted	LC
Phoeniculus purpureus	Wood-hoopoe, Green	Unlisted	LC
Phylloscopus trochilus	Warbler, Willow	Unlisted	LC
Platalea alba	Spoonbill, African	Unlisted	LC
Plectropterus gambensis	Goose, Spur-winged	Unlisted	LC
Plegadis falcinellus	Ibis, Glossy	Unlisted	LC
Plocepasser mahali	Sparrow-weaver, White-browed	Unlisted	LC
Ploceus velatus	Masked-weaver, Southern	Unlisted	LC
Prinia flavicans	Prinia, Black-chested	Unlisted	LC
Pternistis swainsonii	Spurfowl, Swainson's	Unlisted	LC
Ptyonoprogne fuligula	Martin, Rock	LC	LC
Pycnonotus nigricans	Bulbul, African Red-eyed	Unlisted	LC
Quelea quelea	Quelea, Red-billed	Unlisted	LC
Rhinopomastus cyanomelas	Scimitarbill, Common	Unlisted	LC
Rhinoptilus africanus	Courser, Double-banded	Unlisted	LC
Riparia cincta	Martin, Banded	Unlisted	LC
Riparia paludicola	Martin, Brown-throated	Unlisted	LC
Saxicola torquatus	Stonechat, African	Unlisted	LC
Scleroptila gutturalis	Francolin, Orange River	Unlisted	LC
Spatula smithii	Shoveler, Cape	LC	LC
Spilopelia senegalensis	Dove, Laughing	Unlisted	LC
Spizocorys conirostris	Lark, Pink-billed	Unlisted	LC
Stenostira scita	Flycatcher, Fairy	Unlisted	LC
Streptopelia capicola	Turtle-dove, Cape	Unlisted	LC
Streptopelia semitorquata	Dove, Red-eyed	Unlisted	LC

Tachybaptus ruficollis	Grebe, Little	Unlisted	LC
Telophorus zeylonus	Bokmakierie, Bokmakierie	Unlisted	LC
Threskiornis aethiopicus	Ibis, African Sacred	Unlisted	LC
Trachyphonus vaillantii	Barbet, Crested	Unlisted	LC
Tricholaema leucomelas	Barbet, Acacia Pied	Unlisted	LC
Turdus smithi	Thrush, Karoo	Unlisted	LC
Tyto alba	Owl, Barn	Unlisted	LC
Upupa africana	Hoopoe, African	Unlisted	LC
Urocolius indicus	Mousebird, Red-faced	Unlisted	LC
Vanellus armatus	Lapwing, Blacksmith	Unlisted	LC
Vanellus coronatus	Lapwing, Crowned	Unlisted	LC
Vidua macroura	Whydah, Pin-tailed	Unlisted	LC
Zosterops pallidus	White-eye, Orange River	Unlisted	LC
Zosterops virens	White-eye, Cape	Unlisted	LC